IX NOISE ELEMENT

Adopted September 2018

Source: Migulski, Bogdan. 2007. “Rancho-Palos-Verdes-Lighthouse.” Flickr. Accessed at https://flic.kr/p/5UWaw9. July 14, 2007.

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IX Noise Element

The Noise Element is intended to identify existing and potential future sources of noise within the community, and to identify strategies to limit the exposure of the community to excessive noise levels.

1 Goal

1. Through proper land use planning and regulations, to provide for a quiet and serene residential community with a minimum of restriction on citizen activity.

This chapter identifies the fundamentals of noise and its effects upon human beings. The methods for measuring existing noise levels and projecting future noise levels in the community are then discussed. From these discussions, mitigation measures are identified to minimize the exposure of community residents to excessive levels of noise. Finally, this element enumerates the City of Rancho Palos Verdes' (City's) noise policies.

2 Policies

Transportation Noise

1. Encourage through traffic to existing arterials and collectors so that local roads are not used as by-passes or shortcuts, in order to minimize noise.
2. Control traffic flows of heavy construction vehicles en route to and from construction sites to minimize noise.
3. Encourage the state and federal governments to actively control and reduce vehicle noise emissions.
4. Encourage state law enforcement agencies to vigorously enforce all laws that call for the control and/or reduction of noise emissions.

Community Noise

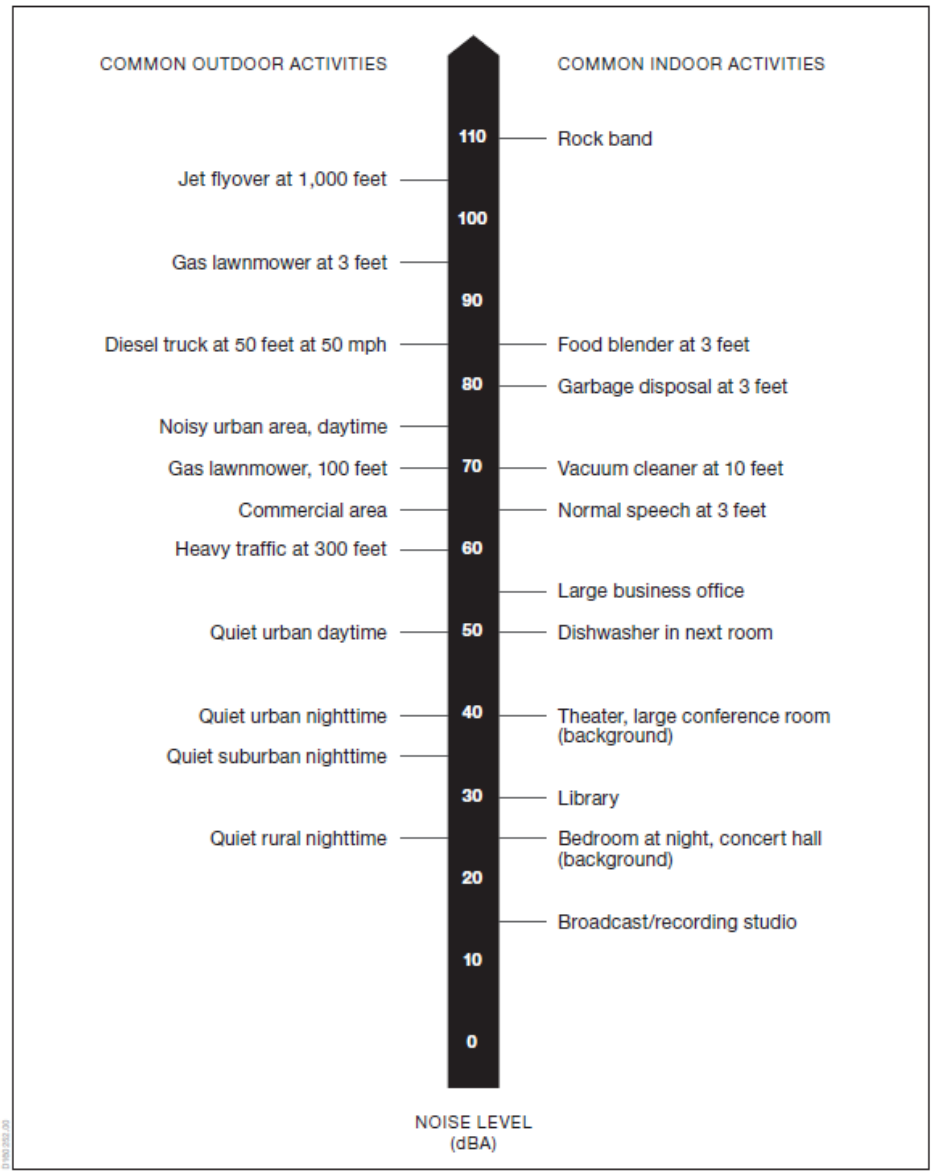
5. Develop an ordinance to control noise commensurate with local ambiance.
6. Maintain current and up-to-date information on noise control measures, on both fixed-point and vehicular noise sources.
7. Coordinate with all public agencies, especially our adjoining jurisdictions to study and/or control noise emissions.

Land Use Planning and Noise Control

8. Mitigate impacts generated by steady state noise intrusion (e.g., with land strip buffers, landscaping, and site design.
9. Regulate land use so that there is a minimal degree of noise impact on adjacent land uses.
10. Require strict noise attenuation measures where appropriate.
11. Review noise attenuation measures applicable to home, apartment, and office building construction, make appropriate proposals for the City zoning ordinance, and make appropriate recommendations for modifying the Los Angeles County Building Code as it applies to the City.
12. Require the minimization of noise emissions from commercial activities by screening and buffering techniques.

3 Fundamentals of Noise

For the purposes of this section of the General Plan, noise means any loud sound. Sound has physical properties that are not only heard but can be measured and felt. The decibel (dB) is a conventional unit for measuring the amplitude of sound, as it accounts for the large variations in sound pressure amplitude, and reflects the way people perceive changes in sound. When describing sound and its effect on humans, A-weighted (dBA) sound levels are typically used to account for the response of the human ear. The term "A-weighted" refers to a filtering of the noise signal in a manner corresponding to the way the human ear perceives sound. Some representative common outdoor and indoor noise sources and their corresponding A-weighted noise levels are shown in the figure to the right.



4 Measurement of Noise within the City

Pursuant to Section 65302(f) of the Government Code, a noise contour map was created to characterize the existing ambient noise environment throughout the City (Figure 1). ESA conducted 24 short-term (15-minute duration) ambient noise measurements at various residences along various roadways. Average noise levels range from 58 to 74.2 dBA L_{eq}. The dominant noise source in the City is traffic noise disseminating from the roadways. Other noise sources include yard equipment, car alarms, construction activity, emergency vehicle sirens, airplane and helicopter flyovers, and air conditioning units.

In creating the noise contour map, the Federal Highway Administration (FHWA) highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate highway traffic-related noise conditions along major arterials within City limits. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the community noise equivalent level (CNEL) values. Traffic noise would be considered low if the 70, 65, and 60 dBA CNEL contours are all confined within the roadway right-of-way; moderate if the 70 dBA CNEL contour is confined within the roadway right-of-way but the 65 and 60 dBA CNEL contours extend to beyond the right-of-way; and high if the 70, 65, and 60 dBA CNEL contours all extend beyond the roadway right-of-way. As depicted in the noise contour map (Figure 1), traffic noise along the major arterials within the City range from moderate (Highridge Road, Indian Peak Road, Miraleste Drive, Palos Verdes Drive East, Palos Verdes Drive South, Palos Verdes Drive West, Silver Spur Road, Crest Road, Crestridge Road, and a portion of Crenshaw Boulevard and Hawthorne Boulevard) to high (Hawthorne Boulevard, the majority of Crenshaw Boulevard, and Western Avenue).

5 Current Noise Levels in the City

In urbanized areas such as the City of Rancho Palos Verdes, the noise environment generally includes two major components: transportation noise and community noise sources. Sensitive noise receptors include residences, schools, medical facilities, and similar uses. In general, the City's residential communities are spread throughout the entire City. These sensitive land uses, along with schools, medical buildings, nursing homes, and churches, may be potentially affected by the noise associated with increased traffic on the City's major arterial roadways, as well as the construction and operation of future development projects in the community. Finally, the transmission of sound and vibration through the common walls and/or floors of condominiums, apartments, hotel rooms, and other non-detached single-family structures are critical components of the enjoyment of quiet interior environments.

The following is a discussion of the three major components of the noise environments within the City: transportation noise sources, community noise sources, and structural transmission of sound and vibration.

5.1 Transportation Noise Sources

Primary Arterials and Major Local Streets

Transportation noise sources include automobiles, trucks, motorcycles, buses, trains, helicopters, and planes. Rancho Palos Verdes has no railroad lines either in or abutting the City. The predominant noise sources in the City include roadway traffic noise on major arterials, such as Hawthorne Blvd., Crenshaw Blvd., Palos Verdes Drive, Crest Road, Crestridge Road, Silver Spur Road, Western Ave., Highridge Road, Indian Peak Road, Miraleste Drive, and

Montemalaga Drive. Secondary noise sources include activities related to the operation of commercial businesses in the area including loading area/delivery truck activities, trash compaction, and refuse collection. Table 3 of ESA's Noise and Vibration Study Technical Report provides the existing traffic noise levels 50 feet from the centerline of the outermost lane of 36 roadway segments with average daily traffic volumes provided in the Traffic Impact Analysis (Translutions, August 15, 2017). These noise levels represent the worst-case scenario, which assumes that no shielding is provided between the traffic and the adjacent properties. The existing land uses along certain roadways are potentially exposed to existing traffic noise levels. The effect of vehicular noise as emitted from the City's arterials and major collectors are reflected in the noise contour map (Figure 1).

Railroad and Rapid Transit Systems

The City has no passenger or freight railroad operations within or abutting the City. Rail traffic in the Port of Los Angeles may be audible at times to residents on the east side of the City, but does not pose a substantial impediment to residents' quiet enjoyment of their property.

Rancho Palos Verdes is served by three regularly scheduled regional and sub-regional transit providers: the Los Angeles Metropolitan Transit Authority (Metro or MTA), the Palos Verdes Peninsula Transit Authority (PVPTA), and the Los Angeles Department of Transportation (LADOT). The routes and services provided by these transit agencies are discussed in detail in Chapter 4, Circulation Element. Marymount College Palos Verdes also operates shuttle buses between its Palos Verdes Drive East campus and its two off-campus housing complexes in San Pedro.

Airport Operations

There are no airport operations in the City or designated airport take-off or jet approach paths over the City. The three airports nearest to the City are Los Angeles International Airport (LAX – 8 miles), Long Beach Daugherty Field (LGB – 11 miles), and Torrance Zamperini Field (TOA – 1.5 miles). The City is outside of the 60 dBA CNEL contours for all of the airports. However, over the years, the City's residents have increasingly reported noise complaints regarding commercial and general aviation aircraft flying over and just off-shore from the Palos Verdes Peninsula. This includes commercial turbopropeller freight aircraft departing LAX for points east over the Peninsula; high altitude commercial jets departing LAX and "looping" counterclockwise around the Peninsula to head east, but are vectored from their flight path over the Peninsula; small planes towing advertising banners; pilot training (i.e. LA County Sherriff, LAPD, Coast Guard), test flights, and aerobatics; small planes carrying tourists; WWII vintage planes; and ultralight "flying lawnmotor" aircrafts. Table 1 below summarizes average daily operations at several nearby airfields.

TABLE 1
NEARBY PUBLIC AIRFIELD OPERATIONS

Airfield	Average Daily Operations (Annual)			
	Total	Commercial	General Aviation	Other
Los Angeles (LAX)	1,745	89%	4%	7%
Long Beach (LGB)	808	8%	89%	3%

TABLE 1
NEARBY PUBLIC AIRFIELD OPERATIONS

Airfield	Average Daily Operations (Annual)			
	Total	Commercial	General Aviation	Other
Torrance (TOA)	326	<1%	99%	<1%
Hawthorne (HHR)	220	0%	99%	1%
Compton (CPM)	181	0%	100%	0%
Catalina (AVX)	45	0%	86%	14%

Notes: Average daily operations based upon data reported for a 12-month period, ending November 30, 2016. "Other operations" include military aircraft and air taxi services.

Source: AirNav LLC 2018.

Since 2010, the City has also been involved with issues related to helicopter routes to and from Torrance airport. In 2011, the so-called "South Crenshaw" helicopter route was approved by the Torrance City Council, based in part upon input from the City. This route avoids subjecting sensitive receptors—such as the Terranea Resort, Abalone Cove Shoreline Park, and residences in the Portuguese Bend community—to helicopter noise.

Industrial Plants

The City does not have industrial operations in the City, including, but not limited to, railroad classification yards.

5.2 Community Noise Sources

Community noise has two basic components: steady state or constant level noise, and intermittent, single-event noise. These two types of noise affect the outdoor noise level, causing it to rise above the ambient noise level. Ambient noise is the all-encompassing noise within a given environment. Ambient noise levels range from approximately 58 to 74 dBA Leq near residential properties (ESA 2017 Noise and Vibration Report).

Steady State Noise

In Rancho Palos Verdes, steady state noise would include noise generated from traffic flows, activities around service stations, shopping centers , and other non-residential uses in the community. A neighbor's air conditioner or pool equipment might also be considered as contributors to steady state or quasi-steady state noise intruders.

For the most part, the impact of these steady state noise intruders can be mitigated through the use of land strip buffers, landscaping, berms, and site design. These solutions would be quite effective in mitigating noise intrusion for both traffic and non-residential steady state noise generators.

Controlling noise intrusion emitted by residential steady state noise producers will require an ordinance that will prescribe setbacks and quantifiable permissible noise-level limits.

Single-Event or Intermittent Noise

Although of shorter duration, the intermittent or single-event noises are often more annoying than the steady state constant level noise. These include such noise as a plane flying overhead, a neighbor with the stereo or television turned up too loud, barking dogs, a roaring motorcycle, and special events permitted by the City.

The annoyance caused by intermittent sources is heightened because of the difficulty in controlling such noise intrusion. The intermittent nature of the noise makes the enforcement of noise control ordinances extremely difficult. Even after the development of a noise ordinance, which could set quantifiable permissible noise-level limits, it can only be enforced if the enforcing official is present at the time the permissible noise level is being exceeded.

Although the industry component of noise is inapplicable to Rancho Palos Verdes, it should be noted that noise from the construction of new homes is definitely industry-related. Unlike other single-event noises, construction noises tend to be steady-state noise. The operation of bulldozers, heavy trucks, and the non-rhythmic pounding of hammers present a continuous noise intrusion violating the peace, quiet, and serene nature of any community in Rancho Palos Verdes.

The City controls construction noise by setting constraints and guidelines in the building permit process. Some methods to accomplish this include: (1) Controlling hours of operation; (2) Designating the routes trucks and other construction-related vehicles are to use in traveling to and from the various project sites; and (3) In some areas, where several parcels are involved in close proximity to existing residents, temporary screening measures should be considered.

Military Installations

Military installation means a base, camp, post, station, yard, center, homeport facility for any ship, or other activity under the jurisdiction of the United States Department of Defense. The United States Coast Guard is located next to the Point Vicente Interpretive Center. The U.S. Coast Guard often utilize the coastal cliffs, Point Vicente Interpretative Center, and City Hall to conduct training exercises.

5.3 Sound and Vibration

Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration (e.g., construction equipment and heavy trucks). Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration sensitive equipment (e.g., electronic equipment) . The effects of ground-borne vibration include rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction.

Aside from periodic construction work, other sources of ground-borne vibration in the City include heavy-duty vehicular travel (e.g., refuse trucks and delivery trucks) on local roadways. Truck traffic at a distance of 50 feet typically generates ground-born vibration velocity levels of approximately 63 VdB. The abbreviation "VdB" is used for vibration decibels to reduce the potential for confusion with sound decibels. These levels could reach 72 VdB where trucks pass over irregularities in the road surface. In residential areas, the background vibration velocity level is usually around 50 VdB, which is below the vibration velocity level threshold of perception for humans of

approximately 65 VdB. A vibration velocity level of approximately 75 VdB is considered to be the approximately dividing line between barely perceptible and distinctly perceptible levels for many people.

Sound Transmission Control Standards in the California Administrative Code, Title 24, Building Standards, Chapter 2.5, outline noise insulation performance standards for new hotels, motels, apartment houses, and dwellings other than detached single-family units. For projects near noise sources (airports, major roads, and industrial areas), an acoustical analysis may be required to show compliance with these standards.

The Rancho Palos Verdes Development Code also establishes development standards for attached dwelling units. These standards include minimum requirements for the sound transmission class and impact insulation class of common wall and floor assemblies, as well as the appropriate insulation of plumbing fixtures and water and drainage lines within these assemblies.

Figure 1: Existing Noise Contour Map

Figure 1

6 Projected Noise Growth and Measures to Reduce Potential Noise Effects

The General Plan calls for a slight population increase though General Plan build-out. The bulk of this increase will be reflected in low-density residential development and therefore would not require the extensive and ongoing use of heavy trucks that commercial, industrial, or other land uses might induce. Heavy trucks are a major contributor to increased noise levels in the environment.

In addition to the low-density residential growth that will continue to characterize Rancho Palos Verdes' future development, the State of California has set noise standards for motor vehicles. Since the state regulates noise emissions from motor vehicles, a major source of noise in Rancho Palos Verdes, the City is pre-empted from passing any laws or ordinances that call for stricter regulations or enforcement related to vehicle noise emissions. For this reason, the City is highly dependent on the state for the control and the enforcement in this area. Therefore, the City encourages the State Legislature and the state law enforcement agencies, such as the California Highway Patrol, to actively pursue legislation to reduce and control vehicle noise emissions and to vigorously enforce all such laws.

Active enforcement on the part of state agencies and the County, coupled with a viable City ordinance controlling community noise, will ensure that Rancho Palos Verdes' future environment will be free of abusive sound and unnecessary noise.

The following is a discussion of the four major components of future noise growth within the City and the corresponding measures needed to reduce these noise effects: traffic noise impacts, construction noise impacts, steady state noise impacts, and aircraft and train noise impacts.

6.1 Traffic Noise Impacts

After General Plan build-out, future traffic noise levels along the major arterials and collector roads within the City would add 0.2 to 0.7 dBA CNEL to corresponding existing traffic noise levels along arterials and major collector roads within the City. This range of traffic noise level change is not considered significant and thus no significant growth-related traffic noise impacts would occur on existing uses throughout the City. Future (2040) roadway noise contours are shown in Figure 2. In comparison with the existing noise contour map in Figure 1, the land uses along following roadways would be potentially exposed to future traffic noise exceeding 65 dBA CNEL:

- Palos Verdes Drive East between the North City Limit and Miraleste Drive
- Miraleste Drive between Palos Verdes Drive East and Via Colinita

Based on the Land Use Element and Circulation Element of the General Plan, it is anticipated that development would occur on parcels along the City's major arterial roadways before General Plan build-out in 2040. To reduce potential noise impacts to these vacant parcels, one of the City's existing noise policies requires residential uses in the 70 dBA location range to provide regulatory screening or some other noise-inhibiting agent to ensure compliance with the noise ordinance.

Outdoor Active-Use Areas

The noise contour map (Figure 1) shows that the 65 dBA CNEL noise contour along arterials and major collector roads would potentially affect the outdoor active use areas such as backyards, patios, or balconies along these roads. To address these noise effects, outdoor active-use areas proposed within the impact zone of the 65 dBA CNEL should require a sound wall to ensure that the 65 dBA CNEL exterior noise standard is not exceeded. Therefore, outdoor active-use areas, such as backyards, patios, or balconies proposed on vacant parcels that are within the 65 dBA CNEL contour may require mitigation measures, such as stand-alone sound barriers (along the property line for the backyards or along the perimeter of the patios and/or balconies), to reduce the exterior traffic noise to 65 dBA CNEL or lower. If there are substantial differences between the elevations of the noise-generating roadway segment and the private outdoor active-use areas, sound barriers are most effective when constructed at the side with higher elevation.

Interior Noise Levels

The vehicle traffic generated on roadways from the General Plan build-out can potentially impact the 45 dBA CNEL interior noise level standard. A typical, unmodified dwelling can provide 25 dB of noise level reduction for interior receptors, which is applied to the projected exterior CNEL value to estimate the projected interior CNEL. Therefore, homes exposed to exterior traffic noise levels lower than 70 dBA CNEL (45 + 25 = 70 dBA) would not have their interior noise level exceeding the 45 dBA CNEL standard with windows closed. Residential homes without any natural or manmade barriers providing shielding would be potentially exposed to traffic noise levels exceeding 70 dBA CNEL and would require mitigation measures such as building façade upgrades (double-paned windows, solid-core wood doors, etc.).

Measures to Reduce Potential Traffic Noise Impacts

Outdoor Land Uses: All outdoor active-use areas (backyard, patio, or balcony, etc.) proposed within the following distances from the roadway centerline should consider, to the extent practicable, building a wall with a minimum wall height of 5 feet to reduce the exterior noise level to 65 dBA CNEL or lower for residential or other noise-sensitive land uses:

- Crenshaw Boulevard between the North City limit and Indian Peak Road: 244 feet;
- Crenshaw Boulevard between Indian Peak Road and Crest Road: 123 feet;
- Crest Road between Ganado Drive and Northern City Limits, 173 feet;
- Crest Road between Palos Verdes Drive East and Ganado Drive, 123 feet;
- Hawthorn Boulevard between the North City Limit and Blackhorse Road: 198 feet;
- Hawthorn Boulevard between Blackhorse Road and Silver Spur Road: 189 feet;
- Hawthorn Boulevard between Silver Spur Road and Grayslake Road/Highridge Road: 269 feet;
- Hawthorn Boulevard between Grayslake Road/Highridge Road and Granvia Atlamira/Ridgegate Drive: 179 feet;
- Hawthorn Boulevard between Granvia Atlamira/Ridgegate Drive and Eddinghill Drive/Seamount Drive: 134 feet;
- Hawthorn Boulevard between Eddinghill Drive/Seamount Drive and Crest Road: 108 feet;

- Hawthorne Boulevard between Crest Road and Vallon Drive, 114 feet;
- Hawthorn Boulevard Vallon Drive and Palos Verdes Drive West: 108 feet
- Miraleste Drive between Palos Verdes Drive East and Via Colinita: 53 feet;
- Palos Verdes Drive East between north City limit and Miraleste Drive, 51 feet;
- Palos Verdes Drive West between north City limit and Hawthorne Boulevard, 85.7 feet;
- Palos Verdes Drive West between Hawthorne Boulevard and Palos Verdes Drive South, 98.9 feet;
- Palos Verdes Drive South between Palos Verdes Drive West and Crestmont Lane/Terranea Way: 104 feet;
- Palos Verdes Drive South between Crestmont Lane/Terranea Way and Narcissa Drive: 91 feet;
- Palos Verdes Drive South between Narcissa Drive and Palos Verdes Drive East: 77 feet;
- Palos Verdes Drive South between Palos Verdes Drive East and the East City Limit: 73 feet;
- Silver Spur Road between Hawthorne Boulevard and Dry Bank Road: 153 feet;
- Western Avenue between the North City Limit and Dilasonde Drive: 256 feet;
- Western Avenue between Dilasonde Drive and Trudie Drive: 269 feet;
- Western Avenue between Trudie Drive and South City Limit: 283 feet.

Interior Noise: To meet the state's 45 dBA CNEL interior-noise standard and to achieve the indoor air-exchange ventilation requirements specified in Chapter 35 of the Uniform Building Code, all residential structures along the following roadway segments proposed within the following distances from the roadway centerline on the vacant parcels and without shielding from natural or manmade barriers should have mechanical ventilation to ensure that windows can remain closed for a prolonged period of time.

- Crenshaw Boulevard between the North City limit and Indian Peak Road: 67 feet;
- Hawthorne Boulevard between Silver Spur Road and Grayslake Road/Highridge Road: 70 feet;
- Western Avenue between the North City Limit and Dilasonde Drive: 65 feet;
- Western Avenue between Dilasonde Drive and Trudie Drive: 70 feet;
- Western Avenue between Trudie Drive and South City Limit: 74 feet.

6.2 Construction Noise Impacts

Short-term noise impacts are associated with excavation, grading, and erecting of buildings during construction. Construction-related short-term noise levels are higher than existing ambient noise levels but would cease once construction of the individual project is completed.

Two types of short-term noise impacts can occur during the construction of a project. First, construction crew commutes and the transport of construction equipment and materials to the individual construction site would incrementally increase noise levels on access roads leading to that individual site. There will be a relatively high

single-event noise exposure potential at a maximum level of 87 dBA with trucks passing at 50 feet. However, the projected construction traffic will be small when compared to the existing traffic volumes on affected streets in the vicinity, and its associated long-term noise level change will not be perceptible. Therefore, short-term construction-related worker commutes and equipment transport noise impacts would not be substantial.

The second type of short-term noise impact is related to noise generated during excavation, grading, and/or construction. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases may change the character of the noise generated on the site. Therefore, the noise levels vary as construction progresses. Average construction noise levels at various construction stages range from approximately 71 to 80 dBA L_{eq} at 100 feet and approximately 65 to 74 dBA L_{eq} at 200 feet from construction activities.

Measures to Reduce Potential Construction Noise Impacts

Construction will be limited in accordance with the City's Municipal Code requirements.

The following measures can be implemented to reduce potential construction noise impacts on sensitive receptors adjacent to a project development area:

1. Use noise attenuating shields, shrouds, or portable barriers or encloses to reduce operating noise of noise producing equipment, such as jackhammers and pavement breakers.
2. Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site. Non-noise producing equipment, such as trailers, may be located as a sound barrier between the stationary noise sources and sensitive receptors.
3. Locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors during all project construction.
4. Construct a temporary sound barrier/wall. The temporary construction barriers can use particle boards or gypsum boards, with no gaps or holes in them that could potentially deteriorate the noise attenuation effect.
5. Unless safety provisions require otherwise, adjust all audible back-up alarms at the lowest volume appropriate for safety purposes.
6. Include sound-deadening material (e.g., apply wood or rubber liners to metal bin impact surfaces) to line or cover hoppers, storage bins, and chutes.
7. During demolition, construction and/or grading operations, trucks shall not park, queue and/or idle at the project site or in the adjoining street rights-of-way in accordance with the permitted hours of construction.
8. When feasible to do so, the construction contractor shall provide staging areas on-site to minimize off-site transportation of heavy construction equipment. These areas shall be located to maximize the distance between staging activities and neighboring properties.

6.3 Stationary Noise Impacts

Future residents of proposed projects would generate and would be exposed to on-site noise sources typical of residential neighborhood related activities including; air conditioning units, lawn care equipment, radio/stereos systems, domestic animals, etc. These noise sources contribute to the ambient noise levels experienced in all similarly-developed areas and typically do not exceed the noise standards for the types of land uses proposed on the project site. In addition, these noise sources are consistent with the planned developments adjacent to the project site. Therefore, residential-related on-site stationary noise impacts would be less than significant.

6.4 Aircraft and Train Noise Impacts

The Federal Aviation Administration (FAA) began implementing the Southern California Metroplex in 2017. The Metroplex redesigned some jet flight paths over Southern California to improve the efficiency and safety of air travel, as well as minimizing adverse impacts to affected communities. According to the Metroplex, there are currently no regularly scheduled flight paths over the City from Los Angeles International and Long Beach airports, which are major airports serving the greater Los Angeles area. However, there is a history of jet flights over the City that deviate from the FAA's jet departure flight paths resulting in impacts to the City. In response, the City has been an active member of LAX's Community Noise Roundtable since 2000 to address jet overflight noise impacts to ensure a continued serene quality of life for its City's residents. The LAX Community Noise Roundtable is a forum that provides a mechanism that attempts to ensure cooperation between the FAA, Los Angeles World Airports (LAWA) and local impacted communities in achieving noise impact reduction to those communities. The City is developing a long-term, cooperative and direct relationship with the FAA, LAWA, other public agencies, and local airport facility managers to mitigate noise impacts from jets and low flying aircrafts (i.e. light sport, ultralights, banner planes) over the City particularly residential neighborhoods, public parks, the Palos Verdes Nature Preserve, and the shoreline.

The City is also involved with issues related to helicopter routes to and from Torrance Airport. In 2011, the "South Crenshaw" helicopter route was approved by the Torrance City Council, based in part upon input from the City. This route avoids subjecting sensitive receptors—such as the Terranea Resort, Abalone Cove Shoreline Park, and residences in the Portuguese Bend community—to helicopter noise. The City plans to continue working with other Roundtables, public agencies, and airport facility managers (i.e. Hawthorne Airport, Torrance Airport) to mitigate noise impacts from civilian-operated helicopters over the City, particularly residential neighborhoods, public parks, the Palos Verdes Nature Preserve, and the shoreline.

The City has no railroad lines either in or abutting the City.

7 References Cited

AirNav LLC. 2015. Average Daily Operations. Accessed September 2015. http://www.airnav.com.

Environmental Science Associates (ESA). *City of Rancho Palos Verdes General Plan Update Noise and Vibration Technical Report*. November 2017.

Figure 2: Future Noise Contour Map

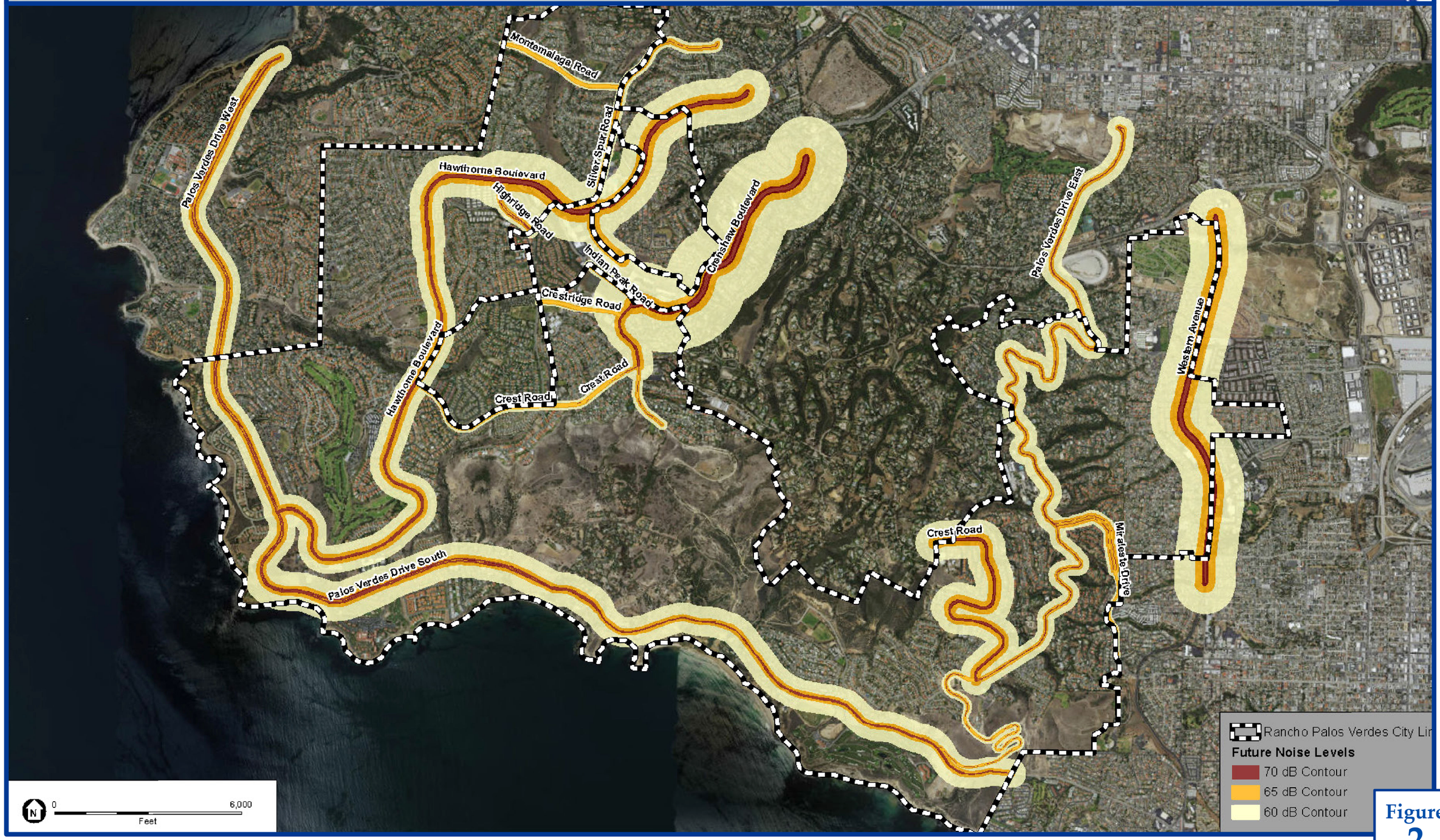


Figure 2