



## 5.5 NOISE

The purpose of this Section is to analyze Project-related noise source impacts on-site and to surrounding land uses. This Section evaluates short-term construction related impacts, as well as future buildout conditions. Mitigation measures are also recommended to avoid or lessen the Project's noise impacts. Information in this Section was obtained from the *City of Rancho Palos Verdes General Plan* and the *City of Rancho Palos Verdes Municipal Code*. For the purposes of mobile source noise modeling and contour distribution, traffic information contained in the *Project Traffic Impact Analysis* (RBF Consulting, July 27, 2007) was utilized; refer to [Section 5.3, \*Traffic and Circulation\*](#).

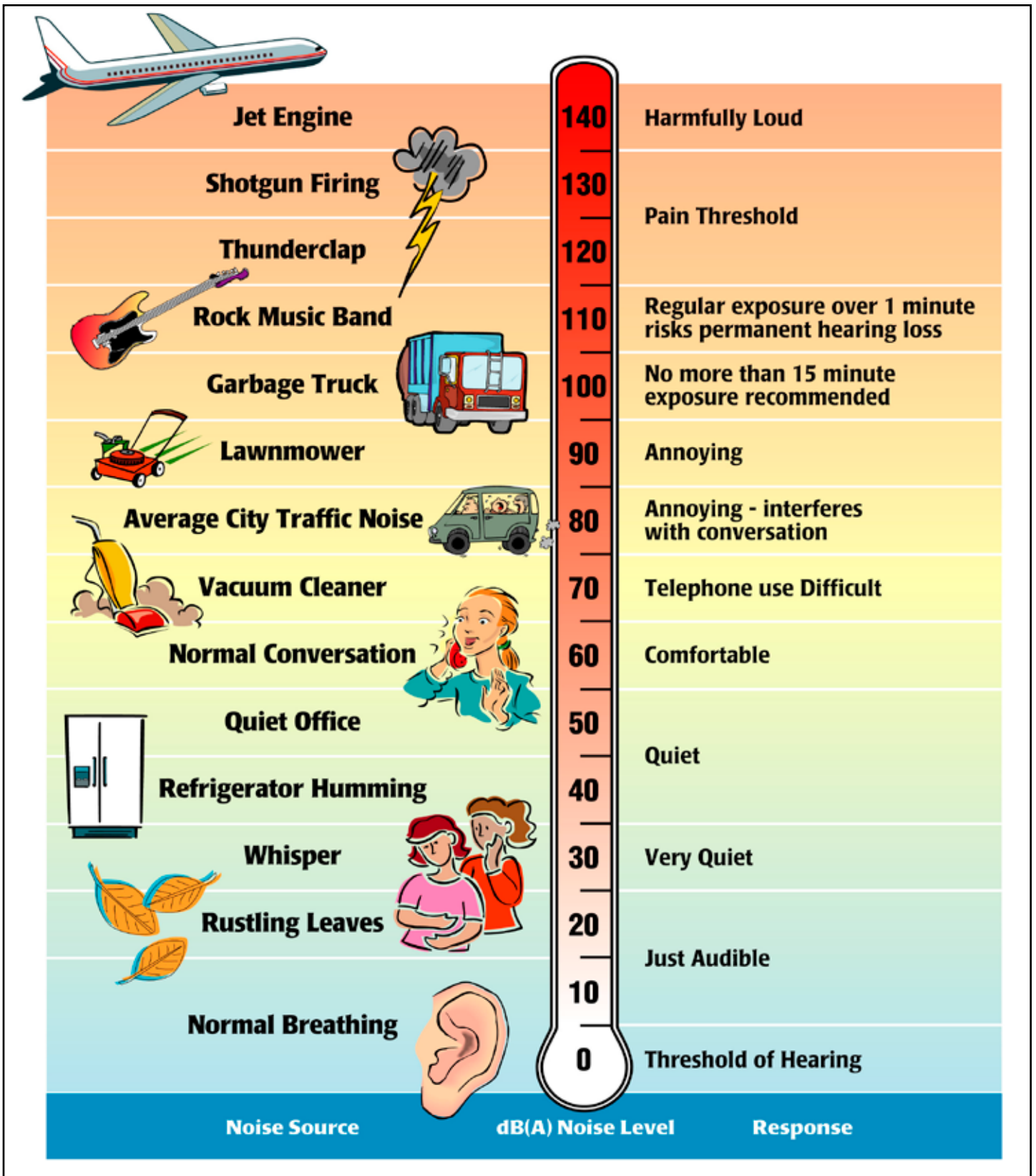
### 5.5.1 EXISTING CONDITIONS

#### NOISE SCALES AND DEFINITIONS

Human response to sound is highly individualized. Annoyance is the most common issue regarding community noise. The percentage of people claiming to be annoyed by noise will generally increase with the environmental sound level. However, many factors will also influence people's response to noise. The factors can include the character of the noise, the variability of the sound level, the presence of tones or impulses and the time of day of the occurrence. Additionally, non-acoustical factors, such as the person's opinion of the noise source, the ability to adapt to the noise, the attitude towards the source and those associated with it, and the predictability of the noise, will influence people's response. As such, response to noise varies widely from one person to another and with any particular noise, individual responses will range from "highly annoyed" to "not annoyed."

Sound is described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dBA higher than another is judged to be twice as loud, 20 dBA higher is four times as loud and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Examples, of various sound levels in different environments are illustrated on [Exhibit 5.5-1, \*Sound Levels and Human Response\*](#).



Source: Melville C. Branch and R. Dale Beland, *Outdoor Noise in the Metropolitan Environment*, 1970.  
 Environmental Protection Agency, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (EPA/ONAC 550/9-74-004), March 1974.

ENVIRONMENTAL IMPACT REPORT  
 MARYMOUNT COLLEGE FACILITIES EXPANSION PROJECT  
**Sound Levels and Human Response**



Many methods have been developed for evaluating community noise to account for, among other things:

- The variation of noise levels over time;
- The influence of periodic individual loud events; and
- The community response to changes in the community noise environment.

Numerous methods have been developed to measure sound over a period of time. Table 5.5-1, *Noise Descriptors*, provides a listing of methods to measure sound.

**Table 5.5-1  
Noise Descriptors**

Term	Definition
Decibel (dB)	The unit for measuring the volume of sound equal to 10 times the logarithm (base 10) of the ratio of the pressure of a measured sound to a reference pressure (20 micropascals).
A-Weighted Decibel (dBA)	A sound measurement scale that adjusts the pressure of individual frequencies according to human sensitivities. The scale accounts for the fact that the region of highest sensitivity for the human ear is between 2,000 and 4,000 cycles per second (hertz).
Equivalent Sound Level ( $L_{eq}$ )	The sound level containing the same total energy as a time varying signal over a given time period. The $L_{eq}$ is the value that expresses the time averaged total energy of a fluctuating sound level.
Maximum Sound Level ( $L_{max}$ )	The highest individual sound level (dBA) occurring over a given time period.
Minimum Sound Level ( $L_{min}$ )	The lowest individual sound level (dBA) occurring over a given time period.
Community Noise Equivalent Level (CNEL)	A rating of community noise exposure to all sources of sound that differentiates between daytime, evening and nighttime noise exposure. These adjustments are +5 dBA for the evening (7:00 PM to 10:00 PM) and +10 dBA for the night (10:00 PM to 7:00 AM).
Day/Night Average ( $L_{dn}$ )	The $L_{dn}$ is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. It is based on a measure of the average noise level over a given time period called the $L_{eq}$ . The $L_{dn}$ is calculated by averaging the $L_{eq}$ 's for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10:00 PM to 7:00 AM), by 10 dBA to account for the increased sensitivity of people to noises that occur at night.
$L_{01}$ , $L_{10}$ , $L_{50}$ , $L_{90}$	The fast A-weighted noise levels equaled or exceeded by a fluctuating sound level for 1 percent, 10 percent, 50 percent and 90 percent of a stated time period.

Source: Cyril M. Harris, *Handbook of Noise Control*, 1979.

## HEALTH EFFECTS OF NOISE

Human response to sound is highly individualized. Annoyance is the most common issue regarding community noise. The percentage of people claiming to be annoyed by noise generally increases with the environmental sound level. However, many



factors also influence people's response to noise. The factors can include the character of the noise, the variability of the sound level, the presence of tones or impulses, and the time of day of the occurrence. Additionally, non-acoustical factors, such as the person's opinion of the noise source, the ability to adapt to the noise, the attitude towards the source and those associated with it, and the predictability of the noise, all influence people's response. As such, response to noise varies widely from one person to another and with any particular noise, individual responses will range from "not annoyed" to "highly annoyed."

When the noise level of an activity rises above 70 dBA, the chance of receiving a complaint is possible, and as the noise level rises, dissatisfaction among the public steadily increases. However, an individual's reaction to a particular noise depends on many factors, such as the source of the sound, its loudness relative to the background noise, and the time of day. The reaction to noise can also be highly subjective; the perceived effect of a particular noise can vary widely among individuals in a community.

The effects of noise are often only transitory, but adverse effects can be cumulative with prolonged or repeated exposure. The effects of noise on the community can be organized into six broad categories:

- Noise-Induced Hearing Loss;
- Interference With Communication;
- Effects of Noise on Sleep;
- Effects on Performance and Behavior;
- Extra-Auditory Health Effects; and
- Annoyance.

Although noise-induced hearing loss often causes discomfort and sometimes pain, it usually takes years to develop. Noise-induced hearing loss can impair the quality of life through a reduction in the ability to hear important sounds and to communicate with family and friends. Hearing loss is one of the most obvious and easily quantified effects of excessive exposure to noise. While the loss may be temporary at first, it could become permanent after continued exposure. When combined with hearing loss associated with aging, the amount of hearing loss directly caused by the environment is difficult to quantify. Although the major cause of noise-induced hearing loss is occupational, substantial damage can be caused by non-occupational sources.

According to the United States Public Health Service, nearly ten million of the estimated 21 million Americans with hearing impairments owe their losses to noise exposure. Noise can mask important sounds and disrupt communication between individuals in a variety of settings. This process can cause anything from a slight irritation to a serious safety hazard, depending on the circumstance. Noise can disrupt face-to-face communication and telephone communication, and the enjoyment of music and television in the home. It can also disrupt effective communication between teachers and pupils in schools, and can cause fatigue and vocal strain in those who need to communicate in spite of the noise.



Interference with communication has proven to be one of the most important components of noise-related annoyance. Noise-induced sleep interference is one of the critical components of community annoyance. Sound level, frequency distribution, duration, repetition, and variability can make it difficult to fall asleep and may cause momentary shifts in the natural sleep pattern or level of sleep. It can produce short-term adverse effects on mood changes and job performance, with the possibility of more serious effects on health if it continues over long periods. Noise can cause adverse effects on task performance and behavior at work, and non-occupational and social settings. These effects are the subject of some controversy, since the presence and degree of effects depends on a variety of intervening variables. Most research in this area has focused mainly on occupational settings, where noise levels must be sufficiently high and the task sufficiently complex for effects on performance to occur.

Recent research indicates that more moderate noise levels can produce disruptive after-effects, commonly manifested as a reduced tolerance for frustration, increased anxiety, decreased incidence of “helping” behavior, and increased incidence of “hostile” behavior. Noise has been implicated in the development or exacerbation of a variety of health problems, ranging from hypertension to psychosis. As with other categories, quantifying these effects is difficult due to the amount of variables that need to be considered in each situation. As a biological stressor, noise can influence the entire physiological system. Most effects seem to be transitory, but with continued exposure some effects have been shown to be chronic in laboratory animals.

Annoyance can be viewed as the expression of negative feelings resulting from interference with activities, as well as the disruption of one’s peace of mind and the enjoyment of one’s environment. Field evaluations of community annoyance are useful for predicting the consequences of planned actions involving highways, airports, road traffic, railroads, or other noise sources. The consequences of noise-induced annoyance are privately held dissatisfaction, publicly expressed complaints to authorities, and potential adverse health effects, as discussed above. In a study conducted by the United States Department of Transportation, the effects of annoyance to the community were quantified. In areas where noise levels were consistently above 60 dBA CNEL, approximately nine percent of the community is highly annoyed. When levels exceed 65 dBA CNEL, that percentage rises to 15 percent. Although evidence for the various effects of noise have differing levels of certainty, it is clear that noise can affect human health. Most of the effects are, to a varying degree, stress related.

## **GROUND-BORNE VIBRATION**

Vibration is an oscillatory motion through a solid medium in which the motion’s amplitude can be described in terms of displacement, velocity or acceleration. The peak particle velocity (PPV) or the root mean square (RMS) velocity is usually used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak or vibration signal, while RMS is defined as the square root of the average of the squared amplitude of the signal. PPV is typically used for evaluating potential building damage, whereas RMS is typically more suitable for evaluating human response. Typically, ground-borne vibration, generated by man-made activities



attenuates rapidly with distance from the source of vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 500 feet or less) from the source.

Both construction and operation of development projects can generate ground-borne vibration. In general, demolition of structures preceding construction generates the highest vibrations. Construction equipment such as vibratory compactors or rollers, pile drivers and pavement breakers can generate perceptible vibration during construction activities. Heavy trucks can also generate ground-borne vibrations that vary depending on vehicle type, weight and pavement conditions.

## **LAWS, ORDINANCES, REGULATIONS AND STANDARDS**

This section summarizes the laws, ordinances, regulations and standards that are applicable to institutional (educational) developments and the Project. Regulatory requirements related to environmental noise are typically promulgated at the local level. However, federal and state agencies provide standards and guidelines to the local jurisdictions.

### **STATE OF CALIFORNIA GUIDELINES**

#### **California Environmental Quality Act**

CEQA was enacted in 1970 and requires that all known environmental effects of a project be analyzed, including environmental noise impacts. Under CEQA, a project has a potentially significant impact if the project exposes people to noise levels in excess of standards established in the local general plan or noise ordinance. Additionally, under CEQA, a project has a potentially significant impact if the project creates a substantial increase in the ambient noise levels in the project vicinity above levels existing without the project. If a project has a potentially significant impact, mitigation measures must be considered. If mitigation measures to reduce the impact to less than significant are not feasible due to economic, social, environmental, legal or other conditions, the most feasible mitigation measures must be considered.

#### **California Government Code**

California Government Code Section 65302(f) mandates that the legislative body of each county and city adopt a noise element as part of their comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services, as indicated in Table 5.5-2, *Land Use Compatibility for Community Noise Environments*.

The guidelines rank noise land use compatibility in terms of “normally acceptable”, “conditionally acceptable” and “clearly unacceptable” noise levels for various land use types. Single-family homes are “normally acceptable” in exterior noise environments up to 60 CNEL and “conditionally acceptable” up to 70 CNEL. Multiple-family residential uses are “normally acceptable” up to 65 CNEL and “conditionally acceptable” up to 70 CNEL. Schools, libraries and churches are “normally acceptable” up to 70 CNEL, as are office buildings and business, commercial and professional uses.



**Table 5.5-2  
California Land Use Compatibility Noise Guidelines**

Land Use Category	Community Noise Exposure (Ldn Or CNEL, DBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential - Low Density, Single-Family, Duplex, Mobile Homes	50 – 60	55 – 70	70-75	75-85
Residential - Multiple Family	50 – 65	60 – 70	70 – 75	70 - 85
Transient Lodging - Motel, Hotels	50 – 65	60 – 70	70 – 80	80 - 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 70	60 – 70	70 – 80	80 - 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 – 70	NA	65 - 85
Sports Arenas, Outdoor Spectator Sports	NA	50 – 75	NA	70 - 85
Playgrounds, Neighborhood Parks	50 – 70	NA	67.5 – 75	72.5 - 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 – 70	NA	70 – 80	80 - 85
Office Buildings, Business Commercial and Professional	50 – 70	67.5 - 77.5	75 – 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 – 75	70 - 80	75 – 85	NA
Source: General Plan Guidelines, Office of Planning and Research, California, October 2003.				
NA: Not Applicable				
Notes:				
<u>Normally Acceptable</u> - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.				
<u>Conditionally Acceptable</u> - New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.				
<u>Normally Unacceptable</u> - New Construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.				
<u>Clearly Unacceptable</u> - New construction or development should generally not be undertaken.				

## CITY OF RANCHO PALOS VERDES

### General Plan

The *City of Rancho Palos Verdes General Plan* Urban Environment Element (Page 187) identifies the following relevant noise policies:

*It is the policy of the City to:*

1. *Mitigate impacts generated by steady state noise intrusion (e.g., land strip buffers, landscaping, site design).*
  
3. *Regulate land use so that there is a minimal degree of noise impact on adjacent land uses.*
  
6. *Control traffic flows of heavy construction vehicles en route to or from construction sites to minimize noise.*

### Municipal Code

Often communities will implement noise ordinances or standards for noise abatement and attenuation, in order to reduce potential health hazards associated



with high noise levels. Noise ordinances are typically directed at controlling noise from stationary sources and its intrusion onto adjacent properties. It is noted that Federal and State laws regulate noise from transportation sources on a CNEL basis; refer to Table 5.5-2. Although the City of Rancho Palos Verdes does not have a noise ordinance, the City has adopted provisions in the *Municipal Code* to regulate excessive and offensive noise. As discussed in Section 5.2, *Land Use and Relevant Planning*, the Project site is situated within the Institutional (I) Zoning District. Accordingly, the Project is subject to the provisions of Code Section 17.26.040.F, *General Development Standards (Deliveries and Mechanical Equipment)*, which notes the following:

*Where an institutional district abuts a residential district, all deliveries of goods and supplies; trash pick-up, including the use of parking lot trash sweepers; and the operation of machinery or mechanical equipment, which emits noise levels in excess of sixty-five dBA, as measured from the closest property line to the equipment, shall only be allowed between the hours of 7:00 a.m. and 7:00 p.m., Monday through Sunday, unless otherwise specified in an approved conditional use permit or other discretionary approval.*

The Project is subject to the provisions of Code Section 17.56.020, *Conduct of Construction and Landscaping Activities (Hours of Operation)*, which notes the following:

*It is unlawful to carry on construction, grading or landscaping activities or to operate heavy equipment except between the hours of seven a.m. and seven p.m. Monday through Saturday. No such activity shall be permitted on Sunday or legal holidays, unless a special construction permit is obtained from the director.*

The Project is also subject to the provisions of Code Chapter 8.16, *Weed and Debris*, which notes the following:

*It is unlawful for any person to use or operate a mechanical blower before eight a.m. or after five p.m. Monday through Friday, or before nine a.m. or after four p.m. on Saturday or at any time on Sundays, or national holidays. It is further unlawful for any person operating any type of mechanical blower to blow cuttings, refuse or debris onto a neighboring property or into a street, gutter or drain. A mechanical blower shall include any device used, designed or operated to produce a current of air by fuel, electricity or other means to push, propel or blow cuttings, refuse or debris.*

## **NOISE MODELING**

### **FEDERAL HIGHWAY ADMINISTRATION TRAFFIC NOISE MODEL**

The existing and future roadway noise levels within the vicinity of the proposed Project were projected using the Federal Highway Administration's Highway Noise Prediction Model (FHWA RD-77-108) together with several roadway and site parameters. These parameters determine the projected impact of vehicular traffic noise and include the roadway cross-section (e.g., number of lanes), roadway width,



average daily traffic, vehicle travel speed, percentages of auto and truck traffic, roadway grade, angle-of-view and site conditions (“hard” or “soft”). The model does not account for ambient noise levels (i.e., noise from adjacent land uses) or topographical differences between the roadway and adjacent land uses. Noise projections are based on modeled vehicular traffic, as derived from the Project Traffic Impact Analysis; refer to [Appendix 13.2, \*Traffic Impact Analysis\*](#). A 35 to 65 mile per hour (mph) average vehicle speed was assumed for existing conditions (varies depending on roadway) based on empirical observations and posted maximum speeds along the adjacent roadways.

## **EXISTING NOISE ENVIRONMENT**

### **NOISE SENSITIVE RECEPTORS**

Certain land uses are particularly sensitive to noise, including schools, hospitals, rest homes, long-term medical and mental care facilities, and parks and recreation areas. Residential areas are also considered noise sensitive, especially during the nighttime hours. In the vicinity of the Project site, existing noise sensitive receptors include Mira Catalina Elementary School and the single-family residential communities situated north, northeast, south and west of the Project site. More specifically, the San Ramon community is situated immediately adjacent to the Project site’s northeastern boundary. The Crestmont and Mira Catalina communities are situated beyond Palos Verdes Drive East, north of the Project site. The Mediterranean community is situated beyond Palos Verdes Drive East south and west of the Project site. Additionally, three residences on Vista del Mar (Seacliff Hills tract) are situated immediately southeast of the existing athletic field.

### **STATIONARY NOISE SOURCES**

The primary sources of stationary noise in the Project vicinity are campus-related activities (i.e., mechanical equipment, parking areas, conversations [normal to loud] and recreational areas) and residential activities (i.e., air conditioners and pool/spa equipment). The noise associated with these sources may represent a single event noise occurrence, short-term or long-term/continuous noise

### **AMBIENT NOISE MEASUREMENTS**

In order to quantify existing ambient noise levels in the Project area, RBF Consulting conducted noise measurements on January 25, 2006; refer to [Table 5.5-3, \*Noise Measurements\*](#). Noise monitoring equipment used for the ambient noise survey consisted of a Larson Davis Laboratories Model LDL 820 sound level analyzer equipped with a Larson Davis Random Incidence Model 2561 microphone. The instrumentation was calibrated prior to use with a Larson Davis Model CAL250 acoustical calibrator to ensure the accuracy of the measurements and in compliance with applicable requirements of the American National Standards Institute for Type I (precision) sound level meters.

The noise measurement sites indicated in [Table 5.5-3](#) are representative of typical existing noise exposure within and immediately adjacent to the Project site. Additionally, a measurement of a soccer game representative of events that would



occur on campus was taken. Ten-minute measurements were taken at each site, between 9:00 AM and 12:00 PM.<sup>1</sup> Meteorological conditions were typical, with light wind speeds (0 to 5 miles per hour), low humidity and clear skies. The results of the field measurements are indicated in [Appendix 13.4, Noise Data](#). Existing measured noise levels on site range from approximately 48.8 Leq to 52.7 Leq. The highest on-site noise level measurement (52.7 dBA) was taken south of the existing church. The highest overall noise level measurement (58.4 dBA) was taken at a soccer game.

**Table 5.5-3  
Noise Measurements**

Site No.	Location	Leq (dBA)	Time
1	On campus, south side of church	52.7	9:45 AM
2	31135 Palos Verdes Drive East	51.5	10:05 AM
3	3303 Narino Road	49.2	10:45 AM
4	31054 Hawksmoor Drive	48.8	11:05 AM
5	2750 San Ramon Drive (back yard)	50.8	11:30 AM
6	Event Noise (Soccer Game) <sup>1,2</sup>	58.4	9:35 AM

Notes:  
1. Example event noise measurement was taken at an Orange County Women's Soccer League game on June 2, 2007.  
2. Noise monitoring equipment used for Measurement Site No. 6 (soccer game) consisted of a Brüel & Kjær Hand-held Analyzer Type 2250 equipped with a 4189 pre-polarized free-field microphone. This monitoring equipment complies with applicable requirements of the American National Standards Institute for Type I (precision) sound level meters.

Source: Noise Monitoring Survey conducted by RBF Consulting, January 2006.

## MOBILE NOISE SOURCES

In order to assess the potential for mobile source noise impacts, it is necessary to determine the noise currently generated by vehicles traveling through the Project area. The existing roadway noise levels in the vicinity of the Project site were estimated. Noise models were run using the FHWA-RD-77-108 noise model to determine existing vehicular noise impacts along adjacent roadway segments. The daytime noise standards for the City of Rancho Palos Verdes are 65 dBA for exterior locations for residential uses. Existing weekday modeled traffic noise levels are provided in [Table 5.5-4, Existing Weekday Without Project Scenario](#), and weekend noise levels can be found in [Table 5.5-5, Existing Weekend Without Project Scenario](#).

## EXISTING OFF-SITE NOISE CONDITIONS

In accordance with the *Project Traffic Impact Analysis*, mobile source noise impacts on the surrounding street network were modeled for the Existing Weekday Without Project and the Existing Weekend Without Project scenarios. These scenarios were

<sup>1</sup> Measurements are based on industry-accepted practices. The difference between short- and long-term measurements would be negligible, as the objective was to determine the "equivalent continuous sound level" or Leq, which is the essential average parameter to correlate to levels of annoyance.



modeled to demonstrate the Project's net acoustical increase over future ambient without project) conditions.

### Existing Weekday Without Project Scenario

In Table 5.5-4, *Existing Weekday Without Project Scenario*, the noise level (dBA at 100 feet from centerline) depicts what would typically be heard 100 feet perpendicular to the roadway centerline. This is the typical distance to the midpoint of a rear yard for a receptor adjacent to a roadway. As indicated in Table 5.5-4, noise levels at a distance of 100 feet from centerline would range from approximately 53.7 dBA to 68.2 dBA under the Existing Weekday Without Project scenario. The highest noise levels under these conditions would occur along Western Avenue (Capitol Drive to Crestwood Street).

**Table 5.5-4  
Existing Weekday Without Project Scenario**

Roadway Segment	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway to Centerline (Feet):		
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour
<b>Palos Verdes Drive East</b>					
Via Colinita to Crest Drive	7,699	56.7	64	30	14
Crest Drive to Palos Verdes Drive South	3,873	53.7	40	19	9
<b>Miraleste Drive</b>					
Palos Verdes Drive East to Via Colinita	12,635	58.5	111	52	24
Via Colinita to First Street*	9,805	57.4	94	44	20
First Street to Western Avenue	7,446	57.6	78	36	17
<b>Western Avenue</b>					
Toscanini Drive to Capitol Drive	34,768	68.1	778	246	78
Capitol Drive to Crestwood Street	36,211	68.2	809	256	81
Crestwood Street to First Street*	30,913	64.6	247	115	53
First Street to Ninth Street	25,362	63.8	217	101	47
Ninth Street to West Twenty-Fifth Street	27,331	64.2	228	106	49
<b>First Street</b>					
Miraleste Drive to Western Avenue	5,547	55.2	51	24	11
<b>Palos Verdes Drive South</b>					
Palos Verdes Drive East to Western Avenue	10,895	59.1	101	47	22
ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level					
* Existing ADT calculated from peak hour volumes					
Traffic modeling is based upon data contained within the <i>Traffic Impact Analysis</i> (RBF Consulting, July 27, 2007).					

### Existing Weekend Without Project Scenario

As indicated in Table 5.5-5, *Existing Weekend Without Project Scenario*, noise levels at a distance of 100 feet from centerline would range from approximately 53.1 dBA to 68.0 dBA under the Existing Weekend Without Project scenario. The highest noise



levels under these conditions would occur along Western Avenue (Toscanini Drive to Capitol Drive).

**Table 5.5-5  
Existing Weekend Without Project Scenario**

Roadway Segment	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (Feet)		
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour
<b>Palos Verdes Drive East</b>					
Via Colinita to Crest Drive	5,766	55.4	53	24	11
Crest Drive to Palos Verdes Drive South	3,326	53.1	36	17	8
<b>Miraleste Drive</b>					
Palos Verdes Drive East to Via Colinita	11,103	58.0	102	47	22
Via Colinita to First Street*	5,880	55.2	67	31	14
First Street to Western Avenue	5,798	56.5	66	31	14
<b>Western Avenue</b>					
Toscanini Drive to Capitol Drive	34,038	68.0	761	241	76
Capitol Drive to Crestwood Street	33,493	67.9	748	237	75
Crestwood Street to First Street**	27,121	64.1	227	105	49
First Street to Ninth Street	20,749	62.9	190	88	41
Ninth Street to West Twenty-Fifth Street	25,726	63.9	219	102	47
<b>First Street</b>					
Miraleste Drive to Western Avenue	4,616	54.4	45	21	10
<b>Palos Verdes Drive South</b>					
Palos Verdes Drive East to Western Avenue	12,444	59.7	110	51	24
ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level					
*Existing ADT calculated from peak hour volumes					
** Existing ADT assumed to be the average of the segment to the north and the segment to the south.					
Traffic modeling is based upon data contained within the <i>Traffic Impact Analysis</i> (RBF Consulting, July 27, 2007).					

## 5.5.2 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

### SIGNIFICANCE CRITERIA

Appendix G, of the *CEQA Guidelines* contains analysis guidelines related to the assessment of noise impacts. These guidelines have been utilized as thresholds of significance for this analysis. As stated in Appendix G, a project would create a significant environmental impact if it would:

- Expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Expose persons to or generate excessive ground borne vibration or ground borne noise levels.



- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; refer to Section 8.0, *Effects Found Not To Be Significant*.
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels; refer to Section 8.0, *Effects Found Not To Be Significant*.

### **SIGNIFICANCE OF CHANGES IN AMBIENT NOISE LEVELS**

A project is considered to have a significant noise impact when it causes an adopted noise standard to be exceeded for a project site or for adjacent sensitive receptors. In addition to concerns regarding the absolute increase in noise level that might occur when a new source is introduced into an area, it is also important to consider the existing ambient noise environment.

If the ambient noise environment is quiet and the new noise source greatly increases the noise exposure, an impact may occur even though a criterion level might not be exceeded. Lacking adopted standards for evaluating such impacts, a general standard for community noise environments is that an increase of over 5 dBA, regardless of the ambient noise level without a project, is readily noticeable and is therefore considered a significant impact; refer to Table 5.5-6, *Significance of Changes in Cumulative Noise Exposure*.

**Table 5.5-6  
Significance of Changes in Cumulative Noise Exposure**

Ambient Noise Level Without Project (Ldn or CNEL)	Significant Impact Is Assumed To Occur if the Project Increases Ambient Noise Levels by:
< 60 dBA	5.0 dBA or more
60 – 65 dBA	3.0 dBA or more
> 65 dBA	1.5 dBA or more

dBA = A-weighted decibel; CNEL = community noise equivalent level; Ldn = day/night average noise level.  
Source: U.S. Environmental Protection Agency Office of Noise Abatement and Control, *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise*, October 1979 (revised July 1981).

Based on acoustical industry standards and guidelines provided by the California Department of Transportation (Caltrans), in areas where the ambient noise level without a project is 60 dBA to 65 dBA, some individuals may notice an increase in the ambient noise level of greater than 3 dBA and any such increase would be a significant impact. In areas where the ambient noise level is greater than 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a



significant impact because the increase would contribute to an existing noise deficiency.

Stationary noise associated with the operation of any facility within a project area is considered significant if it would create, maintain, cause or allow the sound level, when measured on any other property, to exceed the allowable sound levels outlined in Table 5.5-2. Additionally, stationary noise associated with the operation of any facility within a project area is considered significant if it would create, maintain, cause or allow the sound level, when measured on any other property, to exceed the allowable sound levels within Section 17.26.040.F of the *Municipal Code* or the California Land Use Compatibility Noise Guidelines presented in Table 5.5-2.

Potential impacts are grouped below according to topic. The numbered mitigation measures at the end of this Section directly correspond with the numbered impact statements.

### **5.5.3 IMPACTS AND MITIGATION MEASURES**

#### **5.5.3.1 SHORT-TERM CONSTRUCTION NOISE**

- GRADING AND CONSTRUCTION WITHIN THE PROJECT AREA COULD RESULT IN TEMPORARY NOISE AND/OR VIBRATION LEVELS IN EXCESS OF THE CITY'S ESTABLISHED STANDARDS.**

**Impact Analysis:** Construction activities generally occur in a short and temporary duration, lasting from a few days to a period of months. Groundborne noise and other types of construction-related noise impacts would typically occur during the initial site preparation, which can create the highest levels of noise. Generally, site preparation has the shortest duration of all construction phases. Activities that occur during this phase include demolition, earthmoving and soils compaction. High groundborne noise levels and other miscellaneous noise levels can be created during this phase due to the operation of heavy-duty trucks, backhoes and front-end loaders.

In addition to construction noise generated at the Project site, the construction periods would also cause increased traffic noise along access routes to the site due to the movement of equipment, materials and construction workers (approximately 100 workers) to the site (i.e., delivery of materials, supplies, concrete trucks, etc.). The primary heavy construction equipment/vehicles are expected to be moved on site during the initial construction period for three months during Phase I and would have a less than significant short-term noise impact on nearby roadways. Daily transportation of construction workers is not expected to cause a significant impact on nearby roadways, based on the following:

- Construction workers are estimated to generate approximately 200 average daily trips, which would not constitute a substantial percentage of current daily volumes in the area, thus, would not be anticipated to increase traffic



noise levels by more than 3.0 dBA.<sup>2</sup> This is due to the fact that traffic volumes would have to double in order to result in a 3.0-dBA increase. At most, construction worker trips would increase traffic volumes by approximately 5.0 percent. An increase of 3.0 dBA or less is not noticeable in the outdoor environment and is not considered a significant impact.<sup>3</sup>

- For certain phases of construction, construction would occur during the summer when school is not in session or during breaks in the academic calendar, thereby, reducing construction worker related trips.
- Construction workers may be instructed to park at the PV North Facility and take the shuttle to the campus, thereby, reducing construction worker related trips.

Additionally, cut and fill would be balanced on the Project site. No import/export of soil material would be required, with the exception of select fill. As a result, the transport of soil and additional truck trips would not be required.

Construction activities generally have a short and temporary duration. Ground-borne noise and other types of construction-related noise impacts typically occur during the initial site preparation and rough grading, which can create the highest levels of noise but is also generally the shortest of all construction phases. High ground-borne noise levels and other miscellaneous noise levels can be created by the operation of heavy-duty trucks, backhoes, bulldozers, excavators, front-end loaders, compactors, scrapers, and other heavy-duty construction equipment. Table 5.5-7, Maximum Noise Levels Generated By Construction Equipment, indicates the anticipated equipment noise levels during the construction period. Operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). It is noted that Table 5.5-7 provides a conservative depiction of noise levels by using an attenuation rate of 6.0 dBA per doubling of distance. This rate is typically applied to “hard sites,” which are highly urbanized and consist of reflective surfaces. Because the Project site is mostly located on a vegetated hillside, consisting of absorptive surfaces, it is considered a “soft site” and distance attenuation would be greater (i.e., 7.5 dBA per doubling of distance).

Table 5.5-8, Construction Average Leq (dBA) Noise Levels By Distance and Construction Phase, provides a description of construction noise levels during specific construction phases. The average noise levels presented in Table 5.5-8 are based on the quantity, type, and usage factors for each type of equipment that would be used during each construction phase. As described in Section 3.0, Project Description, construction is proposed to occur in three phases. Phase 1 would include mostly demolition activities with rough grading and construction of the parking lot, athletic field, and tennis courts. Construction equipment utilized during

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<sup>2</sup> California Department of Transportation, *Technical Noise Supplement – A Supplement to the Traffic Noise Analysis Protocol*, October 1998.

<sup>3</sup> K. Kryter, *Effects of Noise on Man*, Academic Press, 1980.



this phase would include a bulldozer, grader, industrial saw, tractor, loader/backhoe, and crushing/processing equipment. Phase 2 and Phase 3 would involve mostly construction and fine grading activities and would utilize a grader, crane, generator set, off highway trucks, trencher, and tractor. A reasonable worst-case assumption is that the three loudest pieces of equipment would operate simultaneously and continuously over at least one hour within a focused area of 15 yards of each other.<sup>4</sup>

**Table 5.5-7  
Maximum Noise Levels Generated By Typical Construction Equipment**

Type of Equipment	Sound Levels at Maximum Engine Power with Mufflers at Indicated Distance (dBA)			
	25 Feet	50 Feet	100 Feet	200 Feet
Air Compressor	87	81	75	69
Backhoe	91	85	79	73
Concrete Mixer	91	85	79	73
Crane, Mobile	89	83	77	71
Bulldozer	86	80	74	68
Grader	91	85	79	73
Jack Hammer	94	88	82	76
Loader	85	79	73	67
Paver	95	89	83	77
Pneumatic Tool	91	85	79	73
Pump	82	76	70	64
Roller	80	74	68	62
Saw	84	78	72	66
Scraper	94	88	82	76
Truck	97	91	85	79
Impact Pile Driver (peak)	107	101	95	89

Note: Assumes a drop-off rate of 6 dBA per doubling of distance, which is appropriate for use in characterizing point-source (such as construction equipment) sound attenuation over a hard surface propagation path.  
Source: EPA, Bolt, Beranek, and Newman, *Noise Control for Buildings and Manufacturing Plants*, 1987.

**Table 5.5-8  
Construction Average L<sub>eq</sub> (dBA) Noise Levels By Distance and Construction Phase**

Construction Phase	Sound Level in dBA (Leq) at Indicated Distance				
	25 Feet	50 Feet	100 Feet	150 Feet	200 Feet
Demolition	94	88	82	79	76
Grading	98	92	86	83	80
Building (Foundations, Structural, Finishing)	94	88	82	79	76

Note: Assumes a hard surface propagation path drop-off rate of 6 dB per doubling of distance, which is appropriate for use in characterizing point-source (such as construction equipment) sound attenuation.  
Source: EPA, Bolt, Beranek, and Newman, *Noise Control for Buildings and Manufacturing Plants*, 1987.

<sup>4</sup> These assumptions are conservative and consistent with industry-accepted practices for similar construction projects. Further, assumptions were field tested and verified.



For construction noise, a “substantial” noise increase can be defined as interference with activities during the day and night. One indicator that construction noise could interfere with daytime activities would be speech interference. In addition to determining whether the construction noise exceeds the acceptable standard of 65 dBA, this analysis uses the following criteria to define the significance of potential noise impacts:

- Speech Interference. Speech interference is an indicator of impact on typical daytime and evening activities. A speech interference criterion, in the context of impact duration and time of day, is used to identify substantial increases in noise from temporary construction activities. Noise peaks generated by construction equipment could result in speech interference in adjacent buildings if the noise level in the interior of the building exceeds 45 to 60 dBA.<sup>5</sup> A typical building can reduce noise levels by 20 dBA with the windows closed.<sup>6</sup> This noise reduction could be maintained only on a temporary basis in some cases, since it assumes windows would remain closed at all times. Assuming a 20-dBA reduction with the windows closed, an exterior noise level of 70 dBA (Leq) at receptors would maintain an acceptable interior noise environment of 50 dBA. It is noted that such noise levels would be sporadic rather than continuous in nature, because different types of construction equipment would be used throughout the construction process.

Short-term construction-related noise impacts would be anticipated during the three phases of construction; refer to Table 5.5-9, Summary of Estimated Construction Noise. The analysis of construction-related noise impacts has concluded the following:

- Phase 1. Construction-related noise impacts are anticipated during demolition (i.e., View Room/Hall, Maintenance/Photo Lab, Bookstore/Health Center, Arts, Preschool, Library and Pool Equipment buildings), rough grading and parking lot construction that would occur over three months in Phase I. Construction noise would expose adjacent receptors to peak noise levels of 78 to 98 decibels; refer to Table 5.5-9. Construction noise associated with these improvements would expose surrounding receptors to construction noise levels in excess of the speech interference standard (70 dBA) during Phase I.
- Phase 2. Construction noise impacts are anticipated to be less than significant during construction of the proposed Faculty and Student Union additions, and proposed Maintenance and Athletic Facilities, which would occur intermittently during Phase II. Potentially significant construction-related noise impacts are anticipated during construction of the proposed Library, which would occur intermittently during Phase II. Construction noise would expose adjacent receptors to peak noise levels of 66 to 80 decibels;

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<sup>5</sup> For indoor noise environments, the highest noise level that permits relaxed conversation with 100 percent intelligibility throughout the room is 45 dBA. Speech interference is considered to become intolerable when normal conversation is precluded at 3 feet, which occurs when background noise levels exceed 60 dBA. For outdoor environments, the highest noise level that permits normal conversation at 3 feet with 95 percent sentence intelligibility is 66 dBA.

<sup>6</sup> Environmental Protection Agency, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, Washington D.C. (EPA/ONAC 550/9-74-004), 1974.



refer to Table 5.5-9. Therefore, construction noise associated with the proposed Library would expose surrounding receptors to the north and east to construction noise levels in excess of the speech interference standard (70 dBA) during Phase II.

- Phase 3. Similar to Phase II, construction noise impacts are anticipated to be significant during construction of the proposed Auditorium and Administration Building additions, and proposed Residence Halls and Gallery, which would occur intermittently during Phase III. Construction noise would expose adjacent receptors to peak noise levels of 66 to 76 decibels; refer to Table 5.5-9. Construction noise associated with these improvements would expose surrounding receptors to the north, south, and east to construction noise levels in excess of the speech interference standard (70 dBA) during Phase III.

**Table 5.5-9  
Summary of Estimated Construction Noise**

Description	Receptor Locations		Estimated Construction Noise Level <sup>2</sup>	Threshold <sup>3</sup>	Exceed Threshold?
	Direction	Distance <sup>1</sup>			
<b>Phase I</b>					
Demolition/Grading, Parking Lot Construction	North	125	84 dBA	70 dBA	Yes
	South	250	78 dBA	70 dBA	Yes
	East	25	98 dBA	70 dBA	Yes
	West	165	82 dBA	70 dBA	Yes
<b>Phase II</b>					
Construction Of Faculty And Student Union Additions, New Library, Maintenance And Athletic Facility	North	215	75 dBA	70 dBA	Yes
	South	450	69 dBA	70 dBA	No
	East	125	80 dBA	70 dBA	Yes
	West	650	66 dBA	70 dBA	No
<b>Phase III</b>					
Auditorium And Administration Additions, New Residence Halls and Gallery	North	375	70 dBA	70 dBA	Yes
	South	315	72 dBA	70 dBA	Yes
	East	190	76 dBA	70 dBA	Yes
	West	600	66 dBA	70 dBA	No
Notes:					
1 Distance is an approximation to the nearest sensitive land use adjacent to an active construction zone.					
2 Estimated construction noise level is calculated by applying a 6-dBA reduction per doubling distance to the noise profiles identified in <u>Table 5.5-8</u> . More precisely, the formula is as follows: $dBA2 = dBA1 + 10\log_{10} (d1/d2)^2$ where: dBA2 = Estimated Construction Noise Level; dBA1 = Reference noise level at 25 feet (from <u>Table 5.5-8</u> ); d1 = reference distance of 25 feet; d2 = Approximate Receptor Location Distance					
3 Threshold based upon the 70-dBA speech interference criteria.					

Excessive noise levels resulting from construction activities generally would occur in the daytime hours only, because Code Section 17.56.020, *Conduct of Construction and Landscaping Activities (Hours of Operation)*, prohibits construction, grading or landscaping activities, or the operation of heavy equipment, except between the



hours of 7:00 AM and 7:00 PM, Monday through Saturday, or on legal holidays and Sundays. Construction activity is restricted to the aforementioned time periods unless a special construction permit is issued by the Director of Planning, Building and Code Enforcement. Said permit must be requested at least forty-eight hours before such work is to begin.

Construction noise, which would occur during the proposed three phases of construction, would occur periodically throughout the duration of construction, although it would be most noticeable (i.e., significant and unavoidable) during the periods of demolition and site-intensive grading (over three months during Phase I). Also, noise sensitive receptors in proximity to the construction site would experience excessive noise levels intermittently during construction activities from Phase I through Phase III; refer also to Exhibit 3-8, Construction Phasing Schedule.

Construction activities would be restricted pursuant to Code requirements and would cease upon completion of the grading/construction phase. To further lessen construction-related noise impacts, a Noise Mitigation and Monitoring Program (NMMP) would be prepared that would require the muffling/placement of construction equipment and would place the stockpiling/ staging areas for construction vehicles away from sensitive receptors. Additionally, the NMMP would require the provision for a Noise Disturbance Coordinator whose responsibility would be to respond to any local complaints about construction noise, as well as provide noticing to all owners and occupants within a 0.25-mile radius of the Project site regarding construction the construction schedule. Furthermore, construction activities are prohibited from taking place between the hours of 7:00 PM and 7:00 AM, Monday through Saturday, and 7:00 PM and 10:00 AM on Sunday. However, due to the construction related noise impacts identified above, short-term construction impacts would be significant and unavoidable and remain so, despite compliance with the recommended mitigation and Code requirements.

### **Mitigation Measures:**

NOI-1 Prior to issuance of any Grading Permit, the Applicant shall provide, to the satisfaction of the Director of Planning, Building and Code Enforcement, a Noise Mitigation and Monitoring Program. Such plan would ensure that the proposed project shall provide the following:

- Construction contracts specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices.
- Property owners and occupants located within 0.25-mile of the Project construction site shall be sent a notice, at least 15 days prior to commencement of construction of each phase, regarding the construction schedule of the proposed Project. A sign, legible at a distance of 50 feet shall also be posted at the Project construction site. All notices and signs shall be reviewed and approved by the Director of Planning, Building and Code Enforcement, prior to mailing or posting and shall indicate the dates and duration of construction activities, as well as provide a contact name and a telephone number



where residents can inquire about the construction process and register complaints.

- The Applicant shall provide, to the satisfaction of the Director of Planning, Building and Code Enforcement, a qualified “Noise Disturbance Coordinator.” The Disturbance Coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the Disturbance Coordinator shall notify the City within 24-hours of the complaint and determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the Director of Planning, Building and Code Enforcement. All notices that are sent to residential units within 0.25-mile of the construction site and all signs posted at the construction site shall include the contact name and the telephone number for the Disturbance Coordinator.
- Prior to issuance of each Grading or Building Permit, the Applicant shall demonstrate to the satisfaction of the City’s Building Official how construction noise reduction methods such as shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied residential areas, and electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.

**Level of Significance:** Significant and Unavoidable Impact.

### 5.5.3.2 LONG-TERM MOBILE NOISE

- ❑ PROJECT GENERATED TRAFFIC COULD CONTRIBUTE TO EXISTING TRAFFIC NOISE LEVELS, THEREBY, EXCEEDING THE CITY’S ESTABLISHED NOISE STANDARDS.

#### OFF-SITE NOISE CONDITIONS

**Impact Analysis:** In accordance with the Project *Traffic Impact Analysis*, mobile source noise impacts on the surrounding street network were modeled for the following scenarios:<sup>7</sup>

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<sup>7</sup> The analysis of long-term mobile noise sources conducted for the proposed Project is based on 2,252 total weekday vehicle trips, whereas, the traffic impact analysis (*Section 5.3, Traffic and Circulation*) is based on 1,561 total weekday vehicle trips. This distinction is due to completion of the noise analysis prior to finalizing the traffic impact analysis. Thus, the noise analysis contained in this section is conservatively based on slightly higher traffic volumes. Notwithstanding, long-term impacts from mobile noise sources were concluded to be less than significant.



- Existing Weekday With Project;
- Existing Weekend With Project;
- Future (2012) Weekday Without Project;
- Future (2012) Weekday With Project;
- Future (2012) Weekend Without Project; and
- Future (2012) Weekend With Project.

Along with the Existing Weekday Without Project and Existing Weekend Without Project scenarios (refer to the *Existing Conditions* section), these scenarios were modeled to demonstrate the Project's net acoustical increase over future ambient (no Project) conditions. Although the Project proposes to be constructed in three phases with a completion date of 2015, the analysis based on 2012 volumes is conservative, because Project-related traffic would remain the same and background traffic volumes would be lower.

As detailed in [Table 5.5-6](#), Project-related activities would be considered significant if activities would result in an increase of: 5.0 dBA or greater when the "No Project" noise level is less than 60 dBA CNEL; 3.0 dBA or greater when the "No Project" noise level is between 60 and 65 dBA CNEL; and 1.5 dBA or greater when the "No Project" noise level is greater than 65 dBA CNEL.

#### **Existing Weekday With Project Scenario**

As indicated in [Table 5.5-10](#), *Existing Weekday With Project Scenario*, noise levels at a distance of 100 feet from centerline would range from approximately 53.7 dBA to 68.2 dBA under the Existing Weekday With Project scenario. The highest noise levels under this scenario would occur along Western Avenue (Capitol Drive to Crestwood Street). Noise levels along this roadway segment under the Existing Weekday With Project scenario would be 68.2 dBA at 100 feet from the roadway centerline.

[Table 5.5-10](#) also compares the Existing Weekday With Project scenario to the Existing Weekday Without Project scenario. The highest noise increase would occur along Palos Verdes Drive East (Via Colinita to Crest Drive), which would experience a noise increase of approximately 0.9 dBA. Under the Existing Weekday Without Project scenario, this roadway segment is estimated at 56.7 dBA at 100 feet from the roadway centerline. Because the No Project conditions are below 60 dBA CNEL, a noise level increase of less than 5.0 dBA (i.e., 0.9 dBA) is considered a less than significant noise impact along this roadway segment.

#### **Existing Weekend With Project Scenario**

As indicated in [Table 5.5-11](#), *Existing Weekend With Project Scenario*, noise levels at a distance of 100 feet from centerline would range from approximately 53.8 dBA to 68.1 dBA under the Existing Weekend With Project scenario. The highest noise levels under this scenario would occur along Western Avenue (Toscanini Drive to Capitol Drive). Noise levels along this roadway segment under the Existing Weekend With Project scenario would be 68.1 dBA at 100 feet from the roadway centerline.



**Table 5.5-10  
Existing Weekday With Project Scenario**

Roadway Segment	Existing		Existing With Project		Difference in dBA @ 100 Feet from Roadway	Significant Impact?
	ADT	dBA @ 100 Feet from Roadway Centerline	ADT	dBA @ 100 Feet from Roadway Centerline		
<b>Palos Verdes Drive East</b>						
Via Colinita to Crest Drive	7,699	56.7	9,388	57.6	0.9	No
Crest Drive to Palos Verdes Drive South	3,873	53.7	4,436	54.3	0.6	No
<b>Miraleste Drive</b>						
Palos Verdes Drive East to Via Colinita	12,635	58.5	14,099	59.0	0.5	No
Via Colinita to First Street*	9,805	57.4	10,368	57.7	0.3	No
First Street to Western Avenue	7,446	57.6	7,559	57.7	0.1	No
<b>Western Avenue</b>						
Toscanini Drive to Capitol Drive	34,768	68.1	35,669	68.2	0.1	No
Capitol Drive to Crestwood Street	36,211	68.2	36,549	68.3	0.1	No
Crestwood Street to First Street*	30,913	64.6	31,251	64.7	0.1	No
First Street to Ninth Street	25,362	63.8	25,362	63.8	0	No
Ninth Street to West Twenty-Fifth Street	27,331	64.2	27,331	64.2	0	No
<b>First Street</b>						
Miraleste Drive to Western Avenue	5,547	55.2	5,997	55.6	0.4	No
<b>Palos Verdes Drive South</b>						
Palos Verdes Drive East to Western Avenue	10,895	59.1	11,345	59.3	0.2	No
ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level						
* Existing ADT calculated from peak hour volumes.						
Traffic modeling is based upon data contained within the <i>Traffic Impact Analysis</i> (RBF Consulting, July 27, 2007).						

**Table 5.5-11  
Existing Weekend With Project Scenario**

Roadway Segment	Existing		Existing With Project		Difference in dBA @ 100 Feet from Roadway	Significant Impact?
	ADT	dBA @ 100 Feet from Roadway Centerline	ADT	dBA @ 100 Feet from Roadway Centerline		
<b>Palos Verdes Drive East</b>						
Via Colinita to Crest Drive	5,766	55.4	7,544	56.6	1.2	No
Crest Drive to Palos Verdes Drive South	3,326	53.1	3,919	53.8	0.7	No
<b>Miraleste Drive</b>						
Palos Verdes Drive East to Via Colinita	11,103	58.0	12,644	58.5	0.5	No
Via Colinita to First Street*	5,880	55.2	6,473	55.6	0.4	No
First Street to Western Avenue	5,798	56.5	5,917	56.6	0.1	No
<b>Western Avenue</b>						
Toscanini Drive to Capitol Drive	34,038	68.0	34,986	68.1	0.1	No
Capitol Drive to Crestwood Street	33,493	67.9	33,849	67.9	0	No
Crestwood Street to First Street*	27,121	64.1	27,477	64.1	0	No
First Street to Ninth Street	20,749	62.9	20,749	62.9	0	No
Ninth Street to West Twenty-Fifth Street	25,726	63.9	25,726	63.9	0	No
<b>First Street</b>						
Miraleste Drive to Western Avenue	4,616	54.4	5,090	54.9	0.5	No
<b>Palos Verdes Drive South</b>						
Palos Verdes Drive East to Western Avenue	12,444	59.7	12,918	59.9	0.2	No
ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level						
* Existing ADT calculated from peak hour volumes.						
Traffic modeling is based upon data contained within the <i>Traffic Impact Analysis</i> (RBF Consulting, July 27, 2007).						



Table 5.5-11 also compares the Existing Weekend With Project scenario to the Existing Weekend Without Project scenario. The highest noise increase would occur along Palos Verdes Drive East (Via Colinita to Crest Drive), which would experience a noise increase of approximately 1.2 dBA. Under the Existing Weekend Without Project scenario, this roadway segment is estimated at 55.4 dBA at 100 feet from the roadway centerline. Because the No Project conditions are below 60 dBA CNEL, a noise level increase of less than 5.0 dBA (i.e., 1.2 dBA) is considered a less than significant noise impact along this roadway segment.

### Future Weekday Without Project Scenario

As indicated in Table 5.5-12, *Future (2012) Weekday Scenarios*, noise levels at a distance of 100 feet from centerline would range from approximately 53.9 dBA to 69.0 dBA under the Future (2012) Weekday Without Project scenario. The highest noise levels under this scenario would occur along Western Avenue (Capitol Drive to Crestwood Street). Noise levels along this roadway segment under the Future Weekday Without Project scenario would be 69.0 dBA at 100 feet from the roadway centerline.

**Table 5.5-12  
Future (2012) Weekday Scenarios**

Roadway Segment	Future		Future With Project		Difference in dBA @ 100 Feet from Roadway	Significant Impact?
	ADT	dBA @ 100 Feet from Roadway Centerline	ADT	dBA @ 100 Feet from Roadway Centerline		
<b>Palos Verdes Drive East</b>						
Via Colinita to Crest Drive	8,063	56.9	9,752	57.7	0.8	No
Crest Drive to Palos Verdes Drive South	4,041	53.9	4,604	54.5	0.6	No
<b>Miraleste Drive</b>						
Palos Verdes Drive East to Via Colinita	13,195	58.7	14,659	59.2	0.5	No
Via Colinita to First Street*	10,085	57.5	10,648	57.8	0.3	No
First Street to Western Avenue	7,586	57.7	7,699	57.7	0	No
<b>Western Avenue</b>						
Toscanini Drive to Capitol Drive	41,170	68.8	42,071	68.9	0.1	No
Capitol Drive to Crestwood Street	42,941	69.0	43,279	69.0	0	No
Crestwood Street to First Street*	36,763	65.4	37,101	65.4	0	No
First Street to Ninth Street	29,360	64.4	29,360	64.4	0	No
Ninth Street to West Twenty-Fifth Street	30,488	64.7	30,488	64.7	0	No
<b>First Street</b>						
Miraleste Drive to Western Avenue	6,021	55.6	6,471	55.9	0.3	No
<b>Palos Verdes Drive South</b>						
Palos Verdes Drive East to Western Avenue	15,515	60.7	15,965	61.7	1.0	No
ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level						
* Existing ADT calculated from peak hour volumes						
Traffic modeling is based upon data contained within the <i>Traffic Impact Analysis</i> (RBF Consulting, July 27, 2007).						

### Future Weekday With Project Scenario

As indicated in Table 5.5-12, noise levels at a distance of 100 feet from centerline would range from approximately 54.5 dBA to 69.0 dBA under the Future Weekday



With Project scenario. The highest noise levels under these conditions would occur along Western Avenue (Capitol Drive to Crestwood Street). Noise levels along this roadway segment under the Future Weekday With Project scenario would be 69.0 dBA at 100 feet from the roadway centerline.

Table 5.5-12 also compares the Future Weekday With Project scenario to the Future Weekday Without Project scenario. The highest noise increase would occur along Palos Verdes Drive South (Palos Verdes Drive East to Western Avenue), which would experience a noise increase of approximately 1.0 dBA. Under the Future Weekday Without Project scenario, this roadway segment would be 60.7 dBA at 100 feet from the roadway centerline. Because the No Project conditions would be below 65 dBA CNEL, a noise level increase of less than 3.0 dBA (i.e., 1.0 dBA) is considered a less than significant noise impact along this roadway segment.

**Future (2012) Weekend Without Project Scenario**

As indicated in Table 5.5-13, *Future (2012) Weekend Scenarios*, noise levels at a distance of 100 feet from centerline would range from approximately 53.4 dBA to 68.7 dBA under the Future (2012) Weekend Without Project scenario. The highest noise levels under this scenario would occur along Western Avenue (Toscanini Drive to Capitol Drive and Capitol Drive to Crestwood Street). Noise levels along these roadway segments under the Future (2012) Weekend Without Project scenario would be 68.7 dBA at 100 feet from the roadway centerline.

**Table 5.5-13  
Future (2012) Weekend Noise Scenario**

Roadway Segment	Future		Future With Project		Difference in dBA @ 100 Feet from Roadway	Significant Impact?
	ADT	dBA @ 100 Feet from Roadway Centerline	ADT	dBA @ 100 Feet from Roadway Centerline		
<b>Palos Verdes Drive East</b>						
Via Colinita to Crest Drive	6,282	55.8	8,060	56.9	1.1	No
Crest Drive to Palos Verdes Drive South	3,574	53.4	4,167	54.0	0.6	No
<b>Miraleste Drive</b>						
Palos Verdes Drive East to Via Colinita	11,887	58.3	13,428	58.8	0.5	No
Via Colinita to First Street*	6,272	55.5	6,865	55.9	0.4	No
First Street to Western Avenue	5,994	56.6	6,113	56.7	0.1	No
<b>Western Avenue</b>						
Toscanini Drive to Capitol Drive	40,650	68.7	41,598	68.8	0.1	No
Capitol Drive to Crestwood Street	40,529	68.7	40,885	68.8	0.1	No
Crestwood Street to First Street*	33,382	65.0	33,738	65.0	0	No
First Street to Ninth Street	25,320	63.8	25,320	63.8	0	No
Ninth Street to West Twenty-Fifth Street	28,784	64.4	28,784	64.4	0	No
<b>First Street</b>						
Miraleste Drive to Western Avenue	5,262	55.0	5,736	55.4	0.4	No
<b>Palos Verdes Drive South</b>						
Palos Verdes Drive East to Western Avenue	15,998	60.8	16,472	61.8	1	No
ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level						
* Existing ADT calculated from peak hour volumes						
Traffic modeling is based upon data contained within the <i>Traffic Impact Analysis</i> (RBF Consulting, July 27, 2007).						



### Future (2012) Weekend With Project Scenario

As indicated in [Table 5.5-13](#), noise levels at a distance of 100 feet from centerline would range from approximately 54.0 dBA to 68.8 dBA under the Future (2012) Weekend With Project scenario. The highest noise levels under this scenario would occur along Western Avenue (Toscanini Drive to Capitol Drive and Capitol Drive to Crestwood Street). Noise levels along these roadway segments under the Future (2012) Weekend With Project scenario would be 68.8 dBA at 100 feet from the roadway centerline.

[Table 5.5-13](#) also compares the Future (2012) Weekend With Project scenario to the Future (2012) Weekend Without Project scenario. The highest noise increase would occur along Palos Verdes Drive East (Via Colinita to Crest Drive), which would experience a noise increase of approximately 1.1 dBA. Under the Future (2012) Weekend Without Project scenario, this roadway segment would be 55.8 dBA at 100 feet from the roadway centerline. Because the No Project conditions would be below 60 dBA CNEL, a noise level increase of less than 5.0 dBA (i.e., 1.1 dBA) is considered a less than significant noise impact along this roadway segment.

This noise study has included the noise monitoring of ambient conditions in the vicinity of the proposed Project, a review of local agency requirements and an analysis of existing and future roadway noise impacts. [Table 5.5-6](#) outlines the established thresholds for increases in ambient noise levels. The projected noise level increases along the studied roadway segments, occurring as a result of the proposed Project, would not exceed established thresholds. Based upon this analysis, the Project would not have result in a significant impact to off-site noise levels along study area roadways or other noise sensitive land uses currently located in the area.

### ON-SITE NOISE CONDITIONS

As indicated in [Table 5.5-14, Future \(2012\) On-Site Noise Levels](#), the 65 and the 70 CNEL contours would extend onto the Project site (along Palos Verdes Drive East) a maximum of 35 feet. The proposed institutional (educational) and dormitory uses would be setback from the roadway at distances greater than 35 feet. Therefore, the proposed institutional and dormitory uses would not be adversely impacted by mobile noise sources. A less than significant impact would occur in this regard.

**Table 5.5-14  
Future (2012) On-Site Noise Levels**

Roadway Segment	Future With Project				
	ADT	dBA @ 100 Feet from Roadway Centerline	Distance from Roadway Centerline to: (feet)		
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour
<b>Palos Verdes Drive East</b>					
Via Colinita to Crest Drive	9,752	57.7	75	35	16
Crest Drive to Palos Verdes Drive South	4,604	54.5	45	21	10
ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level					
* Existing ADT calculated from peak hour volumes					
Traffic modeling is based upon data contained within the <i>Traffic Impact Analysis</i> (RBF Consulting, July 27, 2007).					



**Mitigation Measures:** No mitigation measures are required.

**Level of Significance:** Less Than Significant Impact.

### 5.5.3.3 LONG-TERM STATIONARY NOISE IMPACTS

- ❑ OPERATIONS ASSOCIATED WITH THE PROPOSED PROJECT COULD RESULT IN THE GENERATION OF ON-SITE NOISE ASSOCIATED WITH STATIONARY SOURCES THAT WOULD EXCEED THE CITY'S ESTABLISHED NOISE STANDARDS.

**Impact Analysis:** Project implementation would both create new noise sources and would eliminate/relocate existing noise sources. The major noise sources associated with the proposed Project that may impact nearby residences include the following:

- Mechanical equipment (i.e., trash compactors, air conditioners, etc.);
- Slow moving delivery/supply trucks on the Project site, approaching and leaving the loading docks;
- Activities at the loading docks (i.e., maneuvering and idling trucks, banging and clanging of equipment);
- Parking lots (i.e., car door slamming, car radios, engine start-up and car pass-by);
- Landscape maintenance;
- Residence Halls (i.e., TV's, stereos, social gatherings and shouting);
- Athletic field (i.e., practices, games and athletic tournaments);
- Tennis courts; and
- Outdoor pool.

Although several noise sources would be introduced, many of them would operate for only very brief time periods, such as delivery truck movements, trash compactors and parking lot sweepers. These types of sources usually do not operate concurrently. Other noise sources, such as air conditioning equipment, parking lot traffic and loading dock activities, operate for comparatively longer periods of time. Further, it is noted that the projected noise levels presented below do not account for any noise attenuation due to existing walls, berms, intervening structures or topography. It should also be noted that the analyses presented below are not applied against the criteria presented within Table 5.5-6, as those standards are directly related to mobile noise sources (i.e., vehicular traffic) and not stationary sources.



## MECHANICAL EQUIPMENT

Mechanical equipment, such as generators, trash compactors, heating, ventilation and air conditioning units would be included as part of the proposed improvements. Typically, equipment noise is 55 dBA at 50 feet from the source.

The San Ramon residences are the nearest sensitive receptors to the Project site, located immediately adjacent to the campus' northeastern boundary. The proposed library would be located approximately 72 feet from the property line of the nearest residence. Using the standard 7.5 dBA per doubling of distance attenuation rate for soft sites,<sup>8</sup> mechanical noise levels at the property line of these residences would be approximately 50 dBA. Noise generated by mechanical equipment at the proposed library would not exceed the City's 65 dBA noise standard for mechanical equipment and a less than significant impact would occur in this regard.

At the westerly extent of the campus, the Project proposes removal of four buildings and the construction of a new Athletic Facility. Approximately 218 feet would exist between the proposed Athletic Facility and the property lines of the nearest residences to the north. Using the standard attenuation rate for a soft site, mechanical noise levels (including pool equipment) at the property line of these residences would be approximately 40 dBA. Noise generated by mechanical equipment at the proposed Athletic Facility building would not exceed the City's 65 dBA noise standard and a less than significant impact would occur in this regard.

Approximately 280 feet would exist between the proposed Residence Halls and the property line of the nearest residences situated to the south in the Mediterranean tract (across Palos Verdes Drive East and the frontage road). Using the standard attenuation rate for a soft site, mechanical noise levels at the property line of these residences would be approximately 39 dBA. Therefore, noise generated by mechanical equipment at the proposed Residence Halls would not exceed the City's 65 dBA noise standard and a less than significant impact would occur in this regard.

Approximately 192 feet would exist between proposed Residence Hall #2 and the property line of the nearest residence situated to the southeast, along Vista del Mar. Using the standard attenuation rate for a soft site, mechanical noise levels at the property line of this residence would be approximately 44 dBA. Therefore, noise generated by mechanical equipment at Residence Hall #2 would not exceed the City's 65 dBA noise standard and a less than significant impact would occur in this regard.

Notwithstanding the above analysis, the Project would be subject to the provisions of Code Section 17.26.040.F, which restricts the operation of mechanical equipment that emits noise levels in excess of 65 dBA (as measured from the closest property line to the equipment) to between the hours of 7:00 AM and 7:00 PM, Monday through Sunday. Noise levels from mechanical equipment would be further minimized with the implementation of mitigation requiring the orientation of the

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<sup>8</sup> The attenuation rate for a hard site is 6.0 dBA per doubling of distance. The attenuation rate for a soft site is 7.5 dBA per doubling of distance. A soft site consists of an absorptive ground surface, such as dirt, grass or scattered bushes and trees. As the College site is located on and around a soft site consisting of grass and scattered bushes and trees, it is considered a soft site for purposes of the noise analysis.



equipment away from any sensitive receptors, proper selection of equipment and installation of equipment with proper acoustical shielding. With implementation of the recommended mitigation and compliance with Code provisions, impacts from mechanical equipment would be further minimized.

### **SLOWLY MOVING TRUCKS (DELIVERIES)**

After implementation of the proposed Project, all regular deliveries for food and supplies would take place at the central circular driveway or at the loading docks adjacent to the Student Union. No other regular large deliveries would be made at any of the other facilities. Small deliveries, such as mail and daily supplies, would be delivered from the loading areas to the applicable buildings via a golf cart. Regular food deliveries would continue to occur approximately five times per week during the school year (fewer or not at all during other times of the year) Monday through Friday, between 7:00 AM and 5:00 PM.

Delivery trucks would access the College at the main entry and proceed south through the campus circle, then west to the proposed service yard. Smaller delivery trucks would access the College at the main entry and proceed south to the loading spaces in the campus circle. The maximum noise levels of slow moving heavy and small trucks range between 73 and 70 dBA, respectively, at 50 feet.

The distance from the delivery truck travel route to the property lines of the nearest residences situated to the north (across Palos Verdes Drive East) is approximately 190 feet. Using the standard attenuation rate for a soft site, delivery truck noise levels at the property line of residences to the north would be approximately 62 dBA. Noise generated by delivery trucks on the Project site would not exceed the City's 65 dBA noise standard and a less than significant impact would occur in this regard. Additionally, it is noted that this noise projection does not account for the noise attenuation that would be achieved by the existing wall that borders the residences to the north and the intervening vegetation and topography. Notwithstanding, delivery truck noise impacts would be further minimized through compliance with the provisions of Code Section 17.26.040.F, which restricts all deliveries of goods and supplies to between the hours of 7:00 AM and 7:00 PM, Monday through Sunday. It is noted that delivery truck traffic is not of sufficient volume to exceed community noise standards that are based on a time averaged scale such as the CNEL scale. The CNEL is most useful where the noise is more or less continuous, such as traffic noise.

### **LOADING DOCKS**

Noise sources at loading docks may include maneuvering and idling trucks, truck refrigeration units, fork lifts, banging and clanging of equipment (i.e., hand carts and roll-up doors), noise from public address (PA) systems and voices of truck drivers and employees. The noise level associated with loading docks is typically 65.8 dBA at 50 feet.<sup>9</sup> All regular deliveries, such as food and supplies, would take place at

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<sup>9</sup> Based on loading dock noise measurements taken by RBF Consulting, *National City Costco Acoustical Analysis*, October 2006.



the central circular driveway or at the loading docks adjacent to the Student Union. No other regular large deliveries would be made at any of the other facilities.

The distance from the proposed loading dock to the property lines of the nearest residences situated to the north (across Palos Verdes Drive East) would be approximately 280 feet. Using the standard attenuation rate for a soft site, loading dock noise levels at the property line of these residences would be approximately 62 dBA. Noise generated by the proposed loading dock would not exceed the 65 dBA State noise standard used by the City. Additionally, in consideration of the noise attenuation from existing walls that border residences to the north and the intervening buildings (i.e., student union), vegetation and topography, a less than significant impact would occur in this regard. Loading dock noise impacts would be further minimized through compliance with the provisions of Code Section 17.26.040.F, which restricts all deliveries of goods and supplies to between the hours of 7:00 AM and 7:00 PM, Monday through Sunday.

## **PARKING LOTS**

Traffic associated with parking lots is not of sufficient volume to exceed community noise standards that are based on a time averaged scale such as the CNEL scale. Also, noise would primarily remain on site and would be intermittent (during peak-events). However, the instantaneous maximum sound levels generated by a car door slamming, car radios, an engine starting-up and cars passing by may be an annoyance to adjacent sensitive receptors. Parking lot noise can also be considered a “stationary” noise source and may occur after 10:00 PM with the 24-hour operation of the Residence Halls.

Typical noise levels generated by parking areas are an estimated 70 dBA ( $L_{max}$ ) at 50 feet from the source during peak events (this is an “instantaneous” or peak noise level). Parking lot noise would also be partially masked by background noise from adjacent roads and typical community noise sources. Conversations in parking areas may also be an annoyance to adjacent sensitive receptors. Sound levels of speech typically range from 33 dBA at 48 feet for normal speech to 50 dBA at 50 feet for very loud speech.<sup>10</sup> For purposes of this analysis, a maximum noise level generated by parking lots of 70 dBA at 50 feet was used.

Existing parking areas are situated in two general areas: along the north/northeastern property boundary (i.e., along Palos Verdes Drive East and the San Ramon residences) and along the top of the south-facing slope. A total of 343 on-site parking spaces are currently provided on the campus for faculty, staff and students. Under existing conditions (i.e., from the existing northeasterly parking lot), 8 of the 11 San Ramon lots may be currently experiencing noise levels in excess of 65 dBA at their property lines due to existing parking lot noise. The three most easterly lots are presently not experiencing excessive parking lot noise, because their property lines do not abut an existing parking lot.

The Project proposes reconfiguration of the existing parking area and the addition of 120 spaces (a total of 463 parking spaces); refer to Exhibit 3-5, *Proposed Master*

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<sup>10</sup> Cyril M. Harris, *Handbook of Noise Control*, 1979.



Site Plan. In general, the proposed parking plan would extend the existing north and northeasterly parking lots in the respective westerly and easterly directions. Parking would be removed from the top of the south-facing slope and a new parking area would be provided in the area currently occupied by the tennis and hardball courts.

The distance from the proposed northerly parking area to the property lines of the nearest residences situated to the north (across Palos Verdes Drive East) would be approximately 110 feet. Using the standard attenuation rate for a soft site, parking lot noise levels at the property line of these residences would be approximately 61 dBA, which would be below the City's threshold. Therefore, noise generated by the northerly parking area would not exceed the 65 dBA State noise standard used by the City and a less than significant impact would occur in this regard. Also, it is noted that the noise attenuation from the existing wall that borders the residences to the north and the intervening vegetation and topography, would further lessen impacts in this regard.

The San Ramon residences are the nearest noise sensitive receptors to the College's proposed northeasterly parking lot with 11 residential lots sharing a common property line with the Project site. The noise survey taken in the backyard of Lot 27 (2750 San Ramon Drive) indicates a noise level of 50.8 dBA;<sup>11</sup> refer to Table 5.5-5. The noise survey taken on the College's existing northeasterly parking lot (opposite Lot 27) indicates a noise level of 52.7 dBA; refer to Table 5.5-5. Based on these noise measurements, the existing noise level is considered normally acceptable.

The Project proposes to extend the existing northeasterly parking lot approximately 225 feet to the east and provide a new parking lot in the eastern portion of the Project site, in the area currently occupied by the tennis and hardball courts. As a result, the three most easterly lots on San Ramon Drive (Lots 26, 27 and 28) currently not impacted by parking lot noise are anticipated to experience an increase in noise levels at their property lines.

Most of the noise generated in the parking lot would be at a distance of 50 feet or more from the source. However, the closest a noise could occur would be within 15 feet of the property line or 35 feet from the residences on Lots 26, 27 and 28. Estimates of the maximum noise levels associated with some parking lot activities are presented in Table 5.5-15, Maximum ( $L_{max}$ ) Noise Levels Generated by Parking Lots. A range is given to reflect the irregularity of noise generated by various automobile types and driving styles.

As indicated in Table 5.5-15, the maximum noise level anticipated at the nearest residence from the proposed parking lot would be approximately 73 dBA  $L_{max}$ . Almost continuous activity would be needed in the parking lot directly adjacent to the existing residences from 7:00 AM until 2:00 AM to begin approaching the 75 dBA in the CNEL noise scale. A CNEL measurement is time averaged over 24 hours and is appropriate for continuous noise sources such as traffic. Conversely, parking lot noise is more appropriately analyzed per  $L_{max}$ ,  $L_{eq}$  or  $L_n$ ; refer to Table 5.5-1. As a result, although parking lots may result in peak noise instances of 73 dBA  $L_{max}$ , the

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<sup>11</sup> This noise measurement is considered representative of the noise levels experienced in each of the backyards that abut the College parking lot.



continuous noise level is not anticipated exceed the City's 65 dBA CNEL noise standard. Noise from parking lot activities would be attenuated primarily by grade separation of approximately five feet and intervening vegetation (existing and proposed) that would partially block the line of sight of the parking lot from the adjacent residential uses. It is noted that the receptors to the north presently experience noise from activities at the existing parking lot and athletic facilities. Additionally, Mitigation Measure NOI-5 requires that the Marymount College Code of Conduct, which includes provisions for Parking Lots, designate parking lot "Quiet Hours" between 10:00 PM and 7:00 AM. Such mitigation would limit activities during these times. This mitigation measure would be enforced through a private security program to be implemented on the campus that would enforce the Project's Conditions of Approval and the Marymount College Code of Conduct. With mitigation, parking lot noise impacts would be reduced to a less than significant level.

**Table 5.5-15**  
**Maximum ( $L_{max}$ ) Noise Levels Generated by Parking Lots**

Noise Source	$L_{max}$ @ 50 feet (dBA)	$L_{max}$ @ 35 feet (dBA)
Door Slam	60 to 70	63 to 73
Car Alarm Activation	65 to 70	68 to 73
Engine Start-Up	60 to 70	63 to 73
Car Pass-By	55 to 70	58 to 73
Radio <sup>1</sup>	67.5	71.4

Source: Mestre Greve Associates, *Noise Assessment for Amerige Court*, August 2006.

1. Based on the Caltrans document: Caltrans Noise Manual, California State Department of Transportation, *Amplified Stereo Noise Level*, 1980.

In addition to the parking lot noise impacts described above, the proposed Residence Halls would have the potential to create parking lot noise impacts during nighttime hours, because they would involve a 24-hour, seven-day a week, operation. The parking lot designated for use by the resident students would be located in the eastern portion of the Project site, in the area currently occupied by the tennis and hardball courts. A total of 129 parking spaces would be available for use by the resident students. However, nighttime parking lot activity would be considerably less than daytime activity.

The Environmental Protection Agency (EPA), in considering the effects of noise on sleep, has stated the following:

*The maximum permissible outdoor level of  $L_{dn} = 55$  to 60 dBA is proposed in order to limit people's annoyance due to noise and to provide average sound levels from exterior noise sources below 35 dB at night in an average bedroom with closed windows. The levels in a bedroom with open windows could, of course, be higher but it is reasonable to expect people who open their windows at night to be able to accommodate to slightly higher levels.*



The Ldn represents the Leq with a 10 dBA nighttime weighting. A 10 dBA weighting penalty would be applied for sound levels that occur during the nighttime hours of 10:00 PM to 7:00 AM.

The proposed resident student parking would be located approximately 35 feet from the San Ramon residences. Based on the analysis presented above, the maximum noise level anticipated at the nearest residence from the proposed parking lot is approximately 73 dBA  $L_{max}$ . As previously stated there would need to be almost continuous activity in the parking lot directly adjacent to the existing residences to reach noise levels that would exceed thresholds. As a result, although parking lots may result in peak noise instances of 73 dBA  $L_{max}$ , the continuous noise level is not anticipated to exceed City or EPA noise standards. Therefore, impacts are concluded to be less than significant.

It is noted that the six-foot block wall that would be retained between the campus and the San Ramon lots would provide certain noise attenuation (a reduction of 3 to 5 dBA).<sup>12</sup> Further, implementation of the recommended mitigation would lessen parking lot noise impacts. More specifically, mitigation is recommended prohibiting nighttime parking by commuting students/staff in the spaces adjacent to the San Ramon residences.<sup>13</sup> The recommended mitigation also requires that all feasible sound attenuation be incorporated into the northeasterly and easterly parking areas (i.e., landscaping and brushed driving surfaces). Additionally, Mitigation Measure NOI-5 requires implementation of the Marymount College Code of Conduct, which would regulate conduct in parking areas during nighttime hours, and Mitigation Measure PSU-1 in Section 5.8, *Public Services and Utilities*, requires implementation of a private security program at the campus to enforce the Project's Conditions of Approval and the Marymount College Code of Conduct. With mitigation, impacts associated with parking lot noise during daytime and nighttime hours would be reduced to a less than significant level.

## LANDSCAPE MAINTENANCE

Noise generated by gas lawnmowers is estimated to be approximately 70 dBA at a distance of 5.0 feet from the source. The distance from the proposed athletic field, which would require the greatest amount of landscape services, to the property lines of the nearest residences situated to the northwest (across Palos Verdes Drive East) would be approximately 80 feet. Using the standard attenuation rate for a soft site, gas lawnmower noise levels at the property line of these residences would be approximately 46 dBA. Therefore, noise generated by gas lawnmowers on the proposed athletic field would not exceed the City's 65 dBA noise standard and a less than significant impact would occur in this regard. Notwithstanding, potential impacts from landscaping activities on the College would be further minimized, because landscaping activities would be subject to compliance with Code Section 17.56.020, *Conduct of Construction and Landscaping Activities - Hours of Operation*, which prohibits landscaping activities except between the hours of 7:00 AM and 7:00 PM,

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<sup>12</sup> This six-foot wall extends the full length of the campus' northeasterly boundary.

<sup>13</sup> It is noted that the recommended mitigation would not apply to resident student/employees, because it would result in resident student/employees utilizing parking in the northern portion of the campus, which would be located at a greater distance from the proposed sleeping facilities. Such a measure would conflict with the provisions of Code Section 17.50.040.C, *Location*, which requires parking to be within 150 feet of the building it is to serve.



Monday through Saturday, or on legal holidays and Sundays. Additionally, the use of leaf blowers during landscaping activities would be subject to compliance with Code Chapter 8.16, *Weed and Debris*, which prohibits the use of blowers before 8:00 AM or after 5:00 PM, Monday through Friday, or before 9:00 AM or after 4:00 PM on Saturday or at any time on Sundays, or national holidays.

## RESIDENCE HALLS

Concern has been expressed by the Community regarding the potential for noise impacts from activities at the proposed Residence Halls. The types of activities that may occur at the Residence Halls that may be considered excessive or offensive to adjacent residences include noise generated 24 hours a day by televisions, music, shouting, conversations, social gatherings and vehicles entering/exiting the parking lot 24 hours a day (see *Parking Lots* discussion above).

The distances between the proposed Residence Halls and the property lines of surrounding residences would be as follows:

- To the north (across Palos Verdes Drive East), approximately 490 feet;
- To the northeast (San Ramon residences), approximately 380 feet;
- To the south (across Palos Verdes Drive East and the frontage road), approximately 280 feet;
- To the southeast (Vista del Mar residence), approximately 190 feet; and
- To the west (across Palos Verdes Drive East), approximately 870 feet.

Construction of the proposed Residence Halls would be subject to compliance with the California Sound Transmission Control Standards found in California Building Code Appendix Chapter 12, Division 11 and 11A - Sound Transmission Control. Additionally, construction of the proposed Residence Halls would be subject to the provisions of City Code Section 17.06, *Attached Unit Development Standards*, which provides “supplemental development standards that apply to all residential structures, which are constructed with common walls and/or floor/ceiling assemblies (attached single-family, multiple-family, condominiums, stock cooperatives, community apartment houses, etc.)” (Code Section 17.06.010, *Purpose*). According to Code Section 17.06.020.A.5, *Development Standards - Attenuation of Noise and Vibration*, “all common wall assemblies, which separate dwelling units from each other or from public or quasi-public spaces (interior corridors, laundry rooms, recreation rooms and garages) shall be constructed with a minimum rating of 55 STC (sound transmission class).”<sup>14</sup> An STC rating of 55 means that the element reduces the sound passing through it by 55 dB. Generally, with an STC rating of 53, loud speech cannot be heard.

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<sup>14</sup> The noise performance of a building system is called the Sound Transmission Class (STC). The higher the STC, the better the system is at isolating airborne noise.



Based on the above discussion, it has been determined that, following mitigation, a less than significant impact would occur from potentially excessive/offensive noise generated by activities associated with the proposed Residence Halls. This conclusion is based on the following factors:

- Construction of the proposed Residence Halls would be subject to compliance with the provisions of Code Section 17.06.020.A.5 requiring an STC rating of 55 for interior walls. This Code provision would minimize sound travel through the interior of the building.
- A typical building with closed windows (i.e., upgraded) provides a CNEL noise reduction of approximately 20 to 25 dBA. The Residence Halls' proposed stone veneer exterior would provide a minimum 20-dBA-noise reduction (with windows closed).
- For comparative purposes and in order to provide a conservative analysis, the noise levels of an amplified stereo have been analyzed during daytime hours and assuming windows are open. The maximum indoor noise level associated with an amplified stereo is approximately 110 dBA at the source.<sup>15</sup> (Typical noise levels from televisions and stereos are significantly less than noise levels from an amplified stereo.)
- Using the standard attenuation rate for a soft site, if an amplified stereo were playing at Residence Hall No. 1 during the daytime, the resultant noise levels at the property lines of the surrounding residences would not exceed the City's 65-dBA-noise standard and a less than significant impact would occur in this regard. Using the standard attenuation rate for a soft site, if an amplified stereo were playing at Residence Hall No. 2 during the daytime, the resultant noise levels at the property lines of the residences to the north, northeast, south, and west would not exceed the City's 65-dBA-noise standard and a less than significant impact would occur in this regard. However, the resultant noise levels at the property line of the nearest residence to the immediate southeast (a distance of approximately 190 feet from Residence Hall No. 2) would be approximately 66 dBA. Therefore, noise generated by an amplified stereo at Residence Hall No. 2 during the daytime would exceed the City's 65-dBA-noise standard and a significant impact would occur in this regard unless mitigated.

Mitigation has been recommended to reduce potential impacts from Residence Hall No. 2 to less than significant. Specifically, the recommended mitigation requires that the Marymount College Code of Conduct, which includes provisions for the Residence Halls, designate "Quiet Hours" between 10:00 PM and 7:00 AM and that the Code be reviewed and approved annually by the City Planning Commission. The mitigation would be enforced through Mitigation Measure PSU-1 in Section 5.8, *Public Services and Utilities*, which requires that a private security program be implemented at the campus to enforce the Project's Conditions of Approval and the Marymount College Code of Conduct, including provisions for the Residence Halls. With

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<sup>15</sup> Source: Caltrans Noise Manual, California State Department of Transportation, Amplified Stereo Noise Level, 1980.



implementation of the recommended mitigation, potential impacts during daytime hours associated with an amplified stereo at Residence Hall No. 2 would be reduced to less than significant.

- Applying a 10 dBA weighting penalty for sound levels that occur during the nighttime hours of 10:00 PM to 7:00 AM, the maximum indoor noise level associated with an amplified stereo would be approximately 110 dBA at the source. Using the standard attenuation rate for a soft site, if an amplified stereo were playing at either Residence Hall during nighttime, the resultant noise levels at the property lines of all surrounding residences would potentially exceed the City's 65-dBA-noise. Mitigation has been recommended, as discussed above, to reduce potential impacts to less than significant.
- All activities at the campus would be subject to compliance with the provisions of the California Penal Code relative to disturbing the public peace, health, safety or welfare, due to the magnitude of a crowd, noise, disturbance or unruly behavior generated by a gathering.

Potential noise impacts from activities at the Residence Halls during daytime and nighttime hours are anticipated to be less than significant, following Code compliance and implementation of the recommended mitigation. Further, the proposed Residence Halls would not directly face the nearest residences to the southeast and certain noise attenuation would be achieved from the intervening vegetation, topography, and buildings.

### **ATHLETIC FIELD/TENNIS COURTS**

The Project proposes to relocate the existing athletic field and tennis courts to the western portion of the Project site. As described in Section 3.0, Project Description, the College is a member of the Athletic Association of California Community Colleges - South Coast Conference and the Peninsula Soccer League. The Project does not propose to change the scheduling or frequency of soccer or tennis events at the campus. However, relocating the athletic field and tennis courts could expose surrounding receptors to noise impacts from events at these facilities, primarily from crowd noise.

For soccer games, the focal point is variable, with considerable excitement occurring when the ball is near either goal, but with the sound of the players spread out over the field and the sounds of spectators spread out along the sidelines. Noise sources associated with soccer events would primarily consist of occasional shouting and cheering of the players and spectators during the contests and practices. Based on data collected at various soccer venues, average noise levels generated during games are approximately 58.4 dBA at a distance of 50 feet from the focal point or effective noise center of the playing field; refer to Table 5.5-3, Noise Measurements.

The distance between the proposed athletic field and the property lines of the nearest residences to the northwest (across Palos Verdes Drive East) would be approximately 80 feet. Using the standard attenuation rate for a soft site, soccer event noise levels at the property line of residences situated to the northwest would



be approximately 54 dBA. Therefore, the 65 dBA State noise standard used by the City would not be exceeded and a less than significant impact would occur in this regard. To further lessen the potential for noise impacts associated with the athletic field, mitigation has been recommended, which limits the hours of use of the proposed athletic field. Additionally, mitigation is recommended, which specifies that the use of amplification equipment at the proposed athletic field, as well as the tennis courts and swimming pool (see discussion below) is prohibited unless a Special Use Permit for said use has been issued by the Director of Planning, Building and Code Enforcement, pursuant to Code Chapter 17.62, *Special Use Permits*.

The distance between the proposed tennis courts and the property lines of the residences to the north would be approximately 110 feet. Typically, noise levels during tennis events range from 40 to 50 dBA at a distance of 100 feet from the focal point or effective noise center of the courts. Using the standard attenuation rate for a soft site, tennis event noise levels at the property line of residences situated to the north would be approximately 50.9 dBA. Therefore, the 65 dBA State noise standard used by the City would not be exceeded and a less than significant impact would occur in this regard. To further lessen the potential for noise impacts associated with tennis events, mitigation has been recommended, which limits the hours of use of the proposed tennis courts. As previously noted, the use of amplification equipment at the tennis courts would be prohibited unless a Special Use Permit has been issued.

## **OUTDOOR POOL**

### **Pool Equipment Noise**

Mechanical equipment, such as pool pumps and filters typically produce noise levels of 55 dBA at 50 feet from the source. Since the equipment noise would be a constant noise source, it would require compliance with the City standard of 65 dBA (7:00 AM to 7:00 PM Monday through Sunday). The pool equipment would be enclosed, which would provide an approximately 20-dBA reduction in noise levels. Therefore, the noise level would be reduced to 35 dBA. This projected noise level is within the City's noise standards and therefore impacts in this regard would be less than significant.

### **Pool Activity Noise**

The pool would be utilized for various activities (6:00 AM to 10:00 PM, seven days per week) including use for instructional purposes, community swim, and special events. Hourly noise levels for swimming pool activities range from 74.7 dBA  $L_{eq}$  to 69.2 dBA  $L_{eq}$  at 35 feet. The proposed pool facilities would be located approximately 250 feet from the nearest sensitive receptors (residential uses across Palos Verdes Drive East). Based on the standard attenuation rate for a hard site<sup>16</sup> of 6 dBA per doubling of distance, pool activity noise would be less than 57 dBA  $L_{eq}$ .

Peak pool activity noise typically ranges from 65.6 dBA  $L_{max}$  to 87.5 dBA  $L_{max}$  at 35 feet. Although pool activity may result in peak noise instances of 87.5 dBA  $L_{max}$  at 35 feet, the continuous noise level is not anticipated exceed the City's 65 dBA CNEL

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<sup>16</sup> The standard attenuation rate for a "hard site" of 6 dBA per doubling of distance was used for the pool analysis, because the area surrounding the pool involves a hard surface.



noise standard. Noise from pool activities would be primarily attenuated due to the proposed retaining wall and grade differential between the pool and adjacent structures (i.e., pool elevation is approximately 898 feet and proposed Maintenance and Athletic buildings are approximately 912 feet). Noise from pool activities would be further attenuated by distance and intervening structures and vegetation that would block the line of sight of the pool from the adjacent residential uses. Additionally, roadway noise along Palos Verdes Drive East would mask peak noise levels. As a result, the continuous noise level is not anticipated to exceed the City's or EPA noise standards. Additionally, as previously noted, the use of amplification equipment at the outdoor pool would be prohibited unless a Special Use Permit has been issued. Impacts would be less than significant.

Overall, analysis has concluded that with mitigation and/or adherence to Code requirements, stationary noise impacts from mechanical equipment, deliveries, loading/unloading activities, parking lot noise, landscape maintenance, Residence Halls, athletic field, tennis courts and outdoor pool would be reduced to a less than significant level.

**Mitigation Measures:**

- NOI-2 Prior to issuance of any Certificate of Occupancy, the Applicant shall submit a noise analysis that demonstrates to the satisfaction of the Director of Planning, Building and Code Enforcement and the City Engineer, that site placement of stationary noise sources would not exceed noise standards indicated in the State Land Use Noise Compatibility Guidelines for adjacent residences.
- NOI-3 Prior to issuance of any Building Permit, the Applicant shall demonstrate, to the satisfaction of the Director of Planning, Building and Code Enforcement, compliance with the following:
- All mechanical equipment shall include specifications on quiet equipment;
  - All mechanical equipment shall be properly selected and installed, and shall include sound attenuation packages;
  - To the extent possible, all mechanical equipment shall be oriented away from the nearest noise sensitive receptors; and
  - All mechanical equipment shall be screened and enclosed to minimize noise.
- NOI-4 Prior to issuance of any Certificate of Occupancy, a subsequent noise analysis shall be prepared, to the satisfaction of the Director of Planning, Building and Code Enforcement and the City Engineer, which demonstrates that all feasible sound attenuation has been incorporated into the northeasterly and easterly parking areas (i.e., landscaping and brushed driving surfaces), such that noise from the parking areas has been minimized to the greatest extent possible.



NOI-5 Prior to issuance of any Certificate of Occupancy, the Marymount College Code of Conduct shall be reviewed and approved by the Planning Commission at a duly noticed public hearing. The provisions of the Code of Conduct shall outline measures for minimizing impacts, such as but not limited to noise, to the surrounding neighborhoods. The City or the College may initiate revisions or modifications to the Code of Conduct, which shall be reviewed and approved by the Planning Commission at a duly noticed public hearing. The Code of Conduct shall, at a minimum, include provisions for the Residence Halls, Parking Lots, common area activities, and security measures, in order to ensure stationary noise impacts are minimized, and shall specify the following provisions, among others:

- “Quiet Hours” throughout the campus are designated between 10:00 PM and 7:00 AM.
- Limitations on noise from congregations during quiet hours.
- Residence Hall doors on the south-facing portion shall be maintained in a closed position between sunset and sunrise.
- The City’s review and approval of revisions to the Code of Conduct shall be limited to provisions related to potential Project impacts.

NOI-6 Use of the athletic field and tennis courts shall be prohibited between sunset and sunrise, seven days per week, unless a Special Use Permit for said use has been issued by the Director of Planning, Building and Code Enforcement, pursuant to Code Chapter 17.62, *Special Use Permits*.

NOI-7 The use of amplified sound shall be prohibited at the proposed athletic field, tennis courts and swimming pool unless a Special Use Permit for said use has been issued by the Director of Planning, Building and Code Enforcement, pursuant to Code Chapter 17.62, *Special Use Permits*.

**Level of Significance:** Less Than Significant With Mitigation Incorporated.

#### **5.5.4 CUMULATIVE IMPACTS**

- ❑ **IMPLEMENTATION OF THE PROPOSED PROJECT, COMBINED WITH CUMULATIVE PROJECTS, COULD INCREASE THE AMBIENT NOISE LEVELS IN THE SITE VICINITY.**

#### **Impact Analysis:**

#### **CONSTRUCTION NOISE IMPACTS**

Of the 16 related projects that have been identified within the Project study area, the Applicant has no control over the timing or sequencing of related projects, and as such, any quantitative analysis to ascertain the daily construction noise levels that



assumes multiple, concurrent construction would be speculative. Construction noise is a localized activity that would affect only land uses located in proximity to each respective cumulative projects construction site. Noise from construction of the cumulative projects could expose adjacent receptors to noise levels between 70 and 90 decibels at 50 feet from the noise source. The degree of impact would be site-specific and would be dependant upon the distance between the construction site and the nearest noise sensitive receptor. The City's exterior residential noise standard (65 dBA) could be exceeded during the construction phase of the cumulative projects, although, the City's Code provides exemptions to the City's noise standards.

Construction noise impacts would cease upon completion of grading/construction. Compliance with site-specific mitigation, as well as compliance with Code requirements, would serve to minimize the length of time noise-sensitive receptors are exposed to significant noise levels. Additionally, because noise dissipates as it travels away from its source, and because there is no cumulative project located within a one-mile radius of the Project site, noise impacts from construction activities would be limited to each of the respective sites and their and vicinities. As such, construction noise from cumulative projects would not interact with noise from the proposed Project due to distances between the specific sites. Therefore, a less than significant impact would occur in this regard.

#### **CUMULATIVE OPERATIONAL NOISE**

The proposed Project would introduce the use of stationary equipment that would increase noise levels within the area. Based on the long-term stationary noise analysis, impacts would be less than significant. Because noise dissipates as it travels away from its source, and because there is no cumulative project located within a one-mile radius of the Project site, noise impacts from on-site stationary sources would be limited to each of the respective sites and their and vicinities. As such, noise from cumulative projects would not interact with noise from the proposed Project due to distances between the specific sites. Further, future development proposals within the City of Rancho Palos Verdes would require separate discretionary approval and CEQA assessment, which would address potential noise impacts and identify necessary attenuation measures, where appropriate. Therefore, in conjunction with cumulative projects, the proposed Project would not have the potential to result in cumulatively significant stationary noise impacts.

#### **CUMULATIVE MOBILE NOISE**

In accordance with the *Project Traffic Impact Analysis*, mobile source noise impacts on the surrounding street network were modeled for Future (2012) Without Project and Future (2012) With Project conditions. Future traffic volumes were based on the cumulative projects outlined in Table 4-1, *Cumulative Projects List*. Additionally, as discussed in the *Project Traffic Impact Analysis*, an annual growth rate of 0.6 percent, which would represent a nominal increase in traffic volumes, was applied to future traffic volumes. Although proposed Project buildout would be 2015, cumulative mobile noise impacts were analyzed for 2012 conditions for consistency with the *Project Traffic Impact Analysis*.



### Weekday Cumulative Scenario

Table 5.5-16, *Weekday Cumulative Scenario*, compares the estimated Future (2012) Weekday With Project scenario (includes the proposed Project and related cumulative projects) to the Existing Weekday Without Project scenario. The highest cumulative noise increase would occur along Palos Verdes Drive South (Palos Verdes Drive East to Western Avenue), which would experience a noise increase of 2.6 dBA. Under the Existing Weekday Without Project scenario, this roadway segment is estimated at 59.1 dBA at 100 feet from the roadway centerline. Because the No Project conditions are below 60 dBA CNEL, a noise level increase of less than 5.0 dBA (i.e., 2.6 dBA) is considered a less than significant noise impact along this roadway segment.

**Table 5.5-16  
Weekday Cumulative Scenario**

Roadway Segment	Existing Without Project		2012 With Project		Difference in dBA @ 100 Feet from Roadway	Significant Impact?
	ADT	dBA @ 100 Feet from Roadway Centerline	ADT	dBA @ 100 Feet from Roadway Centerline		
<b>Palos Verdes Drive East</b>						
Via Colinita to Crest Drive	7,699	56.7	9,752	57.7	1.0	No
Crest Drive to Palos Verdes Drive South	3,873	53.7	4,604	54.5	0.8	No
<b>Miraleste Drive</b>						
Palos Verdes Drive East to Via Colinita	12,635	58.5	14,659	59.2	0.7	No
Via Colinita to First Street*	9,805	57.4	10,648	57.8	0.4	No
First Street to Western Avenue	7,446	57.6	7,699	57.7	0.1	No
<b>Western Avenue</b>						
Toscanini Drive to Capitol Drive	34,768	68.1	42,071	68.9	0.8	No
Capitol Drive to Crestwood Street	36,211	68.2	43,279	69.0	0.8	No
Crestwood Street to First Street*	30,913	64.6	37,101	65.4	0.8	No
First Street to Ninth Street	25,362	63.8	29,360	64.4	0.6	No
Ninth Street to West Twenty-Fifth Street	27,331	64.2	30,488	64.7	0.5	No
<b>First Street</b>						
Miraleste Drive to Western Avenue	5,547	55.2	6,471	55.9	0.7	No
<b>Palos Verdes Drive South</b>						
Palos Verdes Drive East to Western Avenue	10,895	59.1	15,965	61.7	2.6	No
ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level						
* Existing ADT calculated from peak hour volumes						
Traffic modeling is based upon data contained within the <i>Traffic Impact Analysis</i> (RBF Consulting, July 27, 2007).						

### Weekend Cumulative Scenario

Table 5.5-17, *Weekend Cumulative Scenario*, compares the estimated Future (2012) Weekend With Project scenario (includes the proposed Project and related cumulative projects) to the Existing Weekend Without Project scenario. The highest cumulative noise increase would occur along Palos Verdes Drive South (Palos Verdes Drive East to Western Avenue), which would experience a noise increase of



2.1 dBA. Under the Existing Weekend Without Project scenario, this roadway segment is estimated at 59.7 dBA at 100 feet from the roadway centerline. Because the No Project conditions are less than 60 dBA CNEL, a noise level increase of less than 5.0 dBA (i.e., 2.1 dBA) is considered a less than significant noise impact along this roadway segment.

**Table 5.5-17  
Weekend Cumulative Scenario**

Roadway Segment	Existing Without Project		2012 With Project		Difference in dBA @ 100 Feet from Roadway	Significant Impact?
	ADT	dBA @ 100 Feet from Roadway Centerline	ADT	dBA @ 100 Feet from Roadway Centerline		
<b>Palos Verdes Drive East</b>						
Via Colinita to Crest Drive	5,766	55.4	8,060	56.9	1.5	No
Crest Drive to Palos Verdes Drive South	3,326	53.1	4,167	54.0	0.9	No
<b>Miraleste Drive</b>						
Palos Verdes Drive East to Via Colinita	11,103	58.0	13,428	58.8	0.8	No
Via Colinita to First Street*	5,880	55.2	6,865	55.9	0.7	No
First Street to Western Avenue	5,798	56.5	6,113	56.7	0.2	No
<b>Western Avenue</b>						
Toscanini Drive to Capitol Drive	34,038	68.0	41,598	68.8	0.8	No
Capitol Drive to Crestwood Street	33,493	67.9	40,885	68.8	0.9	No
Crestwood Street to First Street*	27,121	64.1	33,738	65.0	0.9	No
First Street to Ninth Street	20,749	62.9	25,320	63.8	0.9	No
Ninth Street to West Twenty-Fifth Street	25,726	63.9	28,784	64.4	0.5	No
<b>First Street</b>						
Miraleste Drive to Western Avenue	4,616	54.4	5,736	55.4	1.0	No
<b>Palos Verdes Drive South</b>						
Palos Verdes Drive East to Western Avenue	12,444	59.7	16,472	61.8	2.1	No
ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level						
* Existing ADT calculated from peak hour volumes						
Traffic modeling is based upon data contained within the <i>Traffic Impact Analysis</i> (RBF Consulting, July 27, 2007).						

As previously stated, although the Project's proposed buildout would be 2015, cumulative impacts analyzed under 2012 scenarios (based on traffic volumes from the *Project Traffic Impact Analysis*) would be well below thresholds. A 0.6 percent annual growth rate in background traffic volumes would represent a nominal increase and would not cause noise levels to exceed thresholds. Therefore, impacts would be considered less than significant. Additionally, future development proposals within the City of Rancho Palos Verdes would require separate discretionary approval and CEQA assessment, which would address potential noise impacts and identify necessary attenuation measures, where appropriate. Thus, cumulative noise exposure from mobile sources would be considered a less than significant impact.

**Mitigation Measures:** No mitigation measures are recommended.

**Level of Significance:** Less Than Significant Impact.



### **5.5.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION**

Short-term construction-related noise impacts during Phases I, II, and III are anticipated to intermittently expose adjacent receptors to construction noise levels in excess of the 70 dBA speech interference criteria. Adherence to Code requirements and compliance with the specified mitigation measures would reduce the length of time residents are exposed to significant noise levels. However, construction-related noise impacts are concluded to be significant and unavoidable.

If the City of Rancho Palos Verdes approves the proposed Project, the City would be required to adopt findings in accordance with CEQA Guidelines Section 15091 and prepare a Statement of Overriding Considerations in accordance with CEQA Guidelines Section 15093.