5.9 NOISE

This section of the Draft Environmental Impact Report (DEIR) discusses the fundamentals of sound; examines federal, state, and local noise guidelines, policies, and standards; reviews noise levels at existing receptor locations; and evaluates potential noise impacts associated with the Hyatt Regency Newport Beach expansion (proposed project). This evaluation uses procedures and methodologies as specified by Caltrans and the Federal Highway Administration (FHWA). The noise calculations and modeling on which this analysis is based are included in Appendix I of this DEIR.

5.9.1 Environmental Setting

Characteristics of Sound

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in Hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the loudness of sound is the decibel (dB). Changes of 1 to 3 dB are detectable under quiet, controlled conditions and changes of less than 1 dBA are usually indiscernible. A 3 dB change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dB is readily discernable to most people in an exterior environment whereas a 10 dBA change is perceived as a doubling (or halving) of the sound.

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all and are felt more as a vibration. Similarly, while people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz. Since the human ear is not equally sensitive to sound at all frequencies, a special frequency dependent rating scale is usually used 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.

Noise is defined as unwanted sound, and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

Measurement of Sound

Sound intensity is measured through the A-weighted measure to correct for the relative frequency response of the human ear. That is, an A-weighted noise level deemphasizes low and very high frequencies of sound similar to the human ears deemphasis of these frequencies.

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. On a logarithmic scale, an increase of 10 dB is 10 times more intense than 1 dB, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single point source, sound levels decrease by approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dB for each doubling of distance in a hard site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases by 4.5 dB for each doubling of distance.

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_2, L_8 and L_{25} values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour. These L values are typically used to demonstrate compliance for stationary noise sources with a city's noise ordinance, as discussed below. Other values typically noted during a noise survey are the L_{min} and L_{max}. These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law and the City of Newport Beach require that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an artificial increment of 5 dBA be added to the actual noise level for the hours from 7 PM to 10 PM and 10 dBA for the hours from 10 PM to 7 AM. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7 PM and 10 PM. Both descriptors give roughly the same 24-hour level with the CNEL being only slightly more restrictive (i.e., higher).

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, and thereby affecting blood pressure, functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA could result in permanent hearing damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 190 dBA will rupture the eardrum and permanently damage the inner ear. See Table 9-1, *Typical Noise Levels from Noise Sources*.

Table 5.9-1
Typical Noise Levels from Noise Sources

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation. Traffic Noise Analysis Protocol, Table 9-2136.2, October 1998.

Vibration Fundamentals

Vibration is a trembling, quivering, or oscillating motion of the earth. Like noise, vibration is transmitted in waves, but through the earth or solid objects. Unlike noise, vibration is typically of a frequency that is felt rather than heard.

Vibration can either be natural as in the form of earthquakes, volcanic eruptions, sea waves, and landslides; or manmade, as from explosions, heavy machinery, or heavy vehicles such as trains. Both natural and manmade vibration may be continuous, such as operating machinery, or transient, as an explosion.

As with noise, vibration can be described by both its amplitude and frequency. Amplitude may be characterized in three ways: displacement, velocity, and acceleration. Particle displacement is a measure of the distance that a vibrated particle travels from its original position and for the purposes of soil displacement is typically measured in inches or millimeters. Particle velocity is the rate of speed at which soil particles move in inches per second or millimeters per second. Particle acceleration is the rate of change in velocity with respect to time and is measured in inches per second or millimeters per second. Typically, particle velocity (measured in inches or millimeters per second) and/or acceleration (measured in gravities) are used to describe vibration. Table 5.9-2 presents the human reaction to various levels of peak particle velocity.

Table 5.9-2
Human Reaction to Typical Vibration Levels

Vibration Level Peak Particle Velocity (in/sec)	*Human Reaction*	*Effect on Buildings*
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of "architectural" (i.e., not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwellings—houses with plastered walls and ceilings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: Caltrans 2002.

Vibrations also vary in frequency and this affects perception. Typical construction vibrations fall in the 10 to 30 Hz range and usually occur around 15 Hz. Traffic vibrations exhibit a similar range of frequencies; however, due to their suspension systems, buses often generate frequencies around 3 Hz at high vehicle speeds. It is less common to measure traffic frequencies above 30 Hz.

The way in which vibration is transmitted through the earth is called propagation. Propagation of earthborne vibrations is complicated and difficult to predict because of the endless variations in the soil through which waves travel. There are three main types of vibration propagation: surface, compression and shear waves. Surface waves, or Raleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave

front. The particle motion in these waves is longitudinal (i.e., in a push-pull fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or side-to-side and perpendicular to the direction of propagation.

As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

Regulatory Framework

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise.

Federal Regulations

California State Regulations

The California Department of Health Services (DHS) Office of Noise Control has studied the correlation of noise levels and their effects on various land uses. The State of California Interior and Exterior Noise Standards are shown in Table 5.9-3. These noise standards are incorporated as part of the California Building Code and California Noise Insulation Standards (Title 24 and 25, California Code of Regulations) and are the noise standards required for new construction in California.

Table 5.9-3
State of California Interior and Exterior Noise Standards

Land Use		CNEL (dBA)	
Categories	**Uses**	**Interior[1]**	**Exterior[2]**
Residential	Single and multifamily, duplex	45[3]	65
	Mobile homes	–	65[4]
Commercial	Hotel, motel, transient housing	45	–
	Commercial retail, bank, restaurant	55	–
	Office building, research and development, professional offices	50	–
	Amphitheater, concert hall, auditorium, movie theater	45	–
	Gymnasium (multipurpose)	50	–
	Sports Club	55	–
	Manufacturing, warehouse, wholesale, utilities	65	–
	Movie Theaters	45	–
Institutional/ Public	Hospital, school classrooms/playground	45	65
	Church, library	45	–
Open Space	Parks	–	65

Source: Title 24 and 25, California Code of Regulations.
[1] Indoor environment excluding: bathrooms, kitchens, toilets, closets, and corridors.
[2] Outdoor environment limited to private yard of single-family dwellings, multifamily private patios or balconies accessed from within the dwelling (balconies 6 feet deep or less are exempt), mobile home parks, park picnic areas, school playgrounds, and hospital patios.
[3] Noise level requirement with closed windows, mechanical ventilation, or other means of natural ventilation shall be provided as per Chapter 12, Section 1205 of the Uniform Building Code.
[4] Exterior noise levels should be such that interior noise levels will not exceed 45 dBA CNEL.

City of Newport Beach Noise Standards

Noise Compatibility

The City of Newport Beach General Plan Noise Element discusses the effects of noise exposure on the population and sets goals aimed at protecting its residents from undue noise. The General Plan Noise Element contains noise thresholds for developments located adjacent to mobile or transportation noise sources and thresholds for stationary noise sources. The City applies the state's Community Noise and Land Use Compatibility standards, summarized in Table 5.9-4, to assess the compatibility of new development with existing noise sources, such as vehicles and trains.

Table 5.9-4
Community Noise and Land Use Compatibility

Land Uses	CNEL (dBA) <55	55-60	60-65	65-70	70-75	75-80	>80
Residential – Single-Family, Two-Family, Multiple-Family							
Residential – Mixed Use							
Residential – Mobile Home							
Commercial (Regional, District) – Hotel, Motel, Transient Lodging							
Commercial (Regional, Village, Special District, Special) – Commercial Retail, Bank, Restaurant, Movie Theater							
Commercial Industrial Institutional – Office Building, Research and Development, Professional Offices, City Office Building							
Commercial (Recreational) & Institutional (Civic Center) – Amphitheatre, Concert Hall Auditorium, Meeting Hall							
Commercial (Recreational) – Children's Amusement Park, Miniature Golf Course, Go-cart Track, Equestrian Center, Sports Club							
Commercial (General, Special), Industrial, & Institutional – Automobile Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities							
Institutional – Hospital, Church, Library, School' Classroom							
Open Space – Parks							
Open Space – Golf Course, Cemeteries, Nature Centers, Wildlife Reserves, Wildlife Habitat							
Agriculture – Agriculture							

Explanatory Notes

Clearly Compatible:
With no special noise reduction requirements assuming standard construction.

Normally Compatible:
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design.

Normally Incompatible:
New construction is discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Incompatible:
New construction or development should generally not be undertaken.

Source: City of Newport Beach, *Newport Beach General Plan*, Adopted November 2006. Adapted from the Governor's Office of Planning and Research. State of California General Plan Guidelines, 2003.

Table 5.9-4 identifies normally acceptable, conditionally acceptable, and clearly unacceptable noise levels for various land uses. A conditionally acceptable designation implies new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use is made and needed noise insulation features are incorporated in the design. A normally acceptable designation indicates that standard construction can occur with no special noise reduction requirements.

For the purposes of CEQA, the City of Newport Beach has adopted the Federal Transit Administration's (FTA) incremental traffic noise impact criteria, which becomes progressively more stringent as the baseline traffic noise levels increase. The City's incremental thresholds are shown in Table 5.9-5.

Table 5.9-5
City of Newport Beach Incremental Noise Impact Criteria for Noise-Sensitive Uses (dBA CNEL)

Existing Noise Exposure	Allowable Combined Noise Exposure	Allowable Noise Exposure Increment
55	58	3
60	62	2
65	66	1
70	71	1
75	75	0

Source: City of Newport Beach General Plan and General Plan EIR. Adopted November 2006.

Stationary (Nontransportation) Noise

The City applies the Noise Control Ordinance standards (Newport Beach Municipal Code Section 10.26.025), summarized in Table 5.9-6, to nontransportation, stationary noise sources. These standards do not gauge the compatibility of developments in the noise environment, but provide restrictions on the amount and duration of noise generated at a property, as measured at the property line of the noise receptor. These noise standards do not apply to noise generated by vehicle traffic, because the state, counties, and cities are preempted from controlling vehicle noise under federal law. The City's noise ordinance is designed to protect people from objectionable nontransportation noise sources such as music, machinery, pumps, and air conditioners.

Table 5.9-6
City of Newport Beach Exterior Noise Standards
(L_{eq})

Noise Zone	Time Interval	Maximum Daytime Noise Levels (dBA)	
		L_{25}	L_{max}
Zone I – Single-, two-, or multiple-family residential	7 AM to 10 PM	55	75
	10 PM to 7 AM	50	70
Zone II – Commercial	7 AM to 10 PM	65	85
	10 PM to 7 AM	60	80
Zone III – Residential portions of mixed use properties	7 AM to 10 PM	60	80
	10 PM to 7 AM	50	70
Zone IV – Industrial or manufacturing	7 AM to 10 PM	70	90
	10 PM to 7 AM	70	90

Source: City of Newport Beach Municipal Code. Section 10.26.025, Exterior Noise Standards.
Notes:
- These noise standards do not apply to heating ventilation and air conditioning (HVAC) systems or construction pursuant to Section 10.26.035 of the Municipal Code.
- In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.
- The Noise Zone III standard shall apply to that portion of residential property falling within 100 feet of a commercial property, if the intruding noise originates from that commercial property.
- If the measurement location is on boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.

Equipment sound ratings of new heating ventilation and air condition (HVAC) equipment installed within the City of Newport Beach are reviewed during plan check and tested in the field after installation. According to Section 10.26.045 of the City of Newport Beach Municipal Code, new permits for HVAC equipment in or adjacent to residential areas shall be issued only where the sound rating of the proposed equipment does not exceed 55 dBA and is installed with a timing device that will deactivate the equipment during the hours of 10 PM to 7 AM.

Sound-Amplifying Equipment

The City of Newport Beach requires that use of any sound-amplifying equipment used within the City apply for and obtain a permit from the Finance Director (City of Newport Beach Municipal Code Chapter 10.32, *Sound-Amplifying Equipment*). According to the City's Municipal Code, the volume of sound shall be controlled so that it will not be audible for a distance in excess of 100 feet from the sound-amplifying device, and so that the volume is not unreasonably loud, raucous, jarring, disturbing, or a nuisance to persons within the range of allowed audibility. Furthermore, use of sound-amplifying equipment is prohibited outdoors between the hours of 8 PM and 8 AM.

Construction Noise

The City realizes that the control of construction noise is difficult and therefore provides exemption for this type of noise. According to the City of Newport Beach Municipal Code Section 10.26.035, *Exemptions*, noise sources associated with construction, repair, remodeling, demolition, or grading of any real property are exempt from the noise level limits shown in the Table 5.9-4 above. Such activities shall instead be subject to the provisions of the City of Newport Beach Municipal Code Section 10.28.040, *Construction Activity – Noise Regulations*. According to this chapter, construction is permitted on weekdays between the hours of 7:00 AM and 6:30 PM and Saturdays between the hours of 8:00 AM and 6:00 PM. Construction is not permitted on Sundays or any federal holiday. Exceptions to these construction hours can be made when the maintenance,

repair or improvement is of a nature that cannot feasibly be conducted during normal business hours, as outlined in Section 10.28.040 of the City's Municipal Code.

Vibration Standards

The City of Newport Beach does not have specific limits or thresholds for vibration. The FTA provides criteria for acceptable levels of groundborne vibration for various types of special buildings that are sensitive to vibration. These criteria were used for this analysis. The human reaction to various levels of vibration varies. The upper end of the range shown for the threshold of perception, or roughly 65 VdB, may be considered annoying by some people. Vibration below 65 VdB may also cause secondary audible effects such as a slight rattling of doors, suspended ceilings/fixtures, windows, and dishes, any of which may result in additional annoyance. Table 5.9-7 shows the FTA groundborne vibration and noise impact criteria.

Table 5.9-7
Groundborne Vibration and Noise Impact Criteria

Land Use Category	*Groundborne Vibration Impact Levels (VdB re 1 microinch/sec)*		*Groundborne Noise Impact Levels (dB re 20 micropascals)*	
	Frequent Events[1]	*Infrequent Events[2]*	*Frequent Events[1]*	*Infrequent Events[2]*
Category 1: Buildings where low ambient vibration is essential for interior operations.	65 VdB[3]	65 VdB[3]	NA[4]	NA[4]
Category 2: Residences and buildings where people normally sleep.	72 VdB	80 VdB	35 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use.	75 VdB	83 VdB	40 dBA	48 dBA

Source: United States Department of Transportation Federal Transit Administration, *Transit Noise and Vibration Assessment*, April 1995.
[1] More than 70 vibration events per day.
[2] Fewer than 70 vibration events per day.
[3] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research will require detailed evaluation to define the acceptable vibration levels.
[4] Vibration-sensitive equipment is not sensitive to groundborne noise.

Existing Noise Environment

The project site and neighboring land uses in the vicinity of the project site are subject to noise from many sources. The majority of noise within the vicinity of the Hyatt Regency is from mobile sources and most specifically, traffic traveling through the City on Jamboree Road. Aircraft overflights from the John Wayne Airport also contribute to the ambient noise environment. To characterize the existing noise environment, noise measurements were taken during the morning peak traffic period on roadways within the vicinity of the project site that contribute to the ambient noise environment. Table 5.9-8 presents the minimum (L_{min}), average (L_{eq}), and maximum (L_{max}) noise levels that were monitored. Figure 5.9-1 shows the noise monitoring locations.

Noise Monitoring Locations

1 Noise Monitoring Location

NOT TO SCALE

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Table 5.9-8
Noise Measurements along Local Roadways

Monitoring Site	L_{min}	L_{eq}	L_{max}
Monitoring Site No. 1 – Jamboree Road, eastern project boundary	49.1	67.7	76.8
Monitoring Site No. 2 – Back Bay Drive, southern project boundary	47.9	59.4	77.3
Monitoring Site No. 3 – Back Bay Drive, western project boundary	45.1	58.9	71.1
Monitoring Site No. 4 – Back Bay Drive, northwest of project boundary	39.3	58.2	71.1

Noise monitoring conducted for 15–20 minutes at each site on January 3, 2007, during morning peak hours of hours of 7 AM to 9 AM with a Larson Davis 820 sound level meter.

Monitoring Site 1. West side of Jamboree Road on the eastern boundary of the project site, just south of the Palisades Tennis Club, eight feet from the roadway. Jamboree Road is a six-lane roadway with a divided center median (120 feet wide). The speed limit on Jamboree Road is 50 miles per hour (mph). Surrounding land uses include the Hyatt Regency hotel parking lot, the Palisades Tennis Club, and the Sea Island residential community across the street. The primary noise source at this monitoring location was traffic on Jamboree Road and occasional aircraft overflights from the John Wayne Airport. Secondary noise sources included birds. Traffic counts during noise monitoring included 343 light duty autos, 2 medium duty trucks, and 2 heavy duty trucks. There were five overflights from departing aircraft at the John Wayne Airport.

Monitoring Site 2. North side of Back Bay Drive on the southern boundary of the project site, three feet from the roadway. Back Bay Drive is a four-lane roadway with bike lanes on both sides of the street (61 feet wide) at the monitoring site. Surrounding land uses include the Hyatt Regency hotel parking lot, the Bayview Landing senior community, and the Newport Dunes to the west of the noise monitoring location. The primary noise source was traffic on Back Bay Drive and occasional aircraft overflights from the John Wayne Airport. Secondary noise sources included birds and distant traffic on Jamboree Road. Traffic counts during noise monitoring included 33 light duty autos, 2 medium duty trucks, and 1 heavy duty truck. There was one aircraft overflight from the John Wayne Airport.

Monitoring Site 3. West side of Back Bay Drive on the western boundary of the project site. Surrounding land uses include the Hyatt Regency hotel rooms, a boat storage facility, and the Newport Dunes to the southwest of the noise monitoring location. The noise meter was placed one foot from the roadway. Back Bay Drive is a two-lane roadway with on-street parking and bike lanes on both sides of the street (62 feet wide). The primary noise source was traffic on Back Bay Drive and occasional aircraft overflights from the John Wayne Airport. Secondary noise sources included birds and distant sirens and car horns. Traffic counts during noise monitoring included four light duty autos. There were seven overflights from departing aircraft at the John Wayne Airport.

Monitoring Site 4. East side of Back Bay Drive northwest of the project site. Surrounding land uses include the Hyatt Regency golf course, a boat storage facility, and the Newporter North Environmental Study Area to the north of the noise monitoring location. The noise meter was placed two feet from the roadway. At the noise-monitoring location, Back Bay Drive is a two-lane roadway with parking on the west side of the street and bike lanes of both side of the street (51 feet wide). The primary noise source was traffic on Back Bay Drive Road and occasional aircraft overflights from the John Wayne Airport. Secondary noise sources included birds. Traffic counts during noise monitoring included six light duty autos and one medium duty truck. There were five overflights from departing aircraft at the John Wayne Airport.

On-Road Vehicles

Noise from motor vehicles is generated by engine vibrations, the interaction between tires and the road, and the exhaust system. Reducing the average motor vehicle speed reduces the noise exposure of receptors adjacent to the road. Each reduction of five miles per hour reduces noise by about 1.3 dBA.

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. Average daily traffic (ADT) volumes were based on the existing daily traffic volumes provided by IBI Group in October 2006. The results of this modeling indicate that average noise levels along arterial segments currently range from approximately 49 dBA to 76 dBA CNEL as calculated at a distance of 100 feet from the centerline of the road. Noise levels for existing conditions along analyzed roadways are presented in Table 5.9-9.

Table 5.9-9
Existing Traffic Noise Levels
(dBA CNEL)

Segment	*Existing Year 2006*	
	ADT Volumes	*CNEL (dBA @100 ft)*
Jamboree Road		
n/o San Joaquin Hills Road	38,502	74.1
n/o Santa Barbara Drive	34,000	73.7
n/o Hyatt Regency Entrance	34,000	73.6
s/o Hyatt Regency Entrance	34,000	73.7
s/o Back Bay Drive	34,000	73.5
Pacific Coast Highway (SR-1)		
w/o Dover Drive	51,515	71.7
w/o Bayside Drive	56,667	75.9
w/o Jamboree Road	46,364	75.1
e/o Jamboree Road	37,091	72.4
e/o Newport Center Drive	37,091	72.3
e/o Avocado Avenue	37,091	72.2
e/o MacArthur Boulevard	37,091	69.1
San Joaquin Hills Road		
e/o Jamboree Road	18,000	69.4
Santa Barbara Drive		
e/o Jamboree Road	14,524	65.5
Newport Center Drive		
n/o Pacific Coast Highway	10,000	65.9
MacArthur Boulevard		
n/o Pacific Coast Highway	35,030	65.9
Dover Drive		
n/o Pacific Coast Highway	32,000	68.7
Back Bay Drive		
e/o Jamboree Road	997	48.8

Source: Federal Highway Administration, Traffic Noise Model. The Planning Center. Based on traffic volumes and speed limits obtained from the Traffic Analysis prepared by IBI Group, Revised January 2008.
e/o: east of; w/o: west of; n/o: north of; s/o: south of.
Note: Noise-sensitive residential uses are located approximately 100 feet from the centerline.

Aircraft Noise

The John Wayne Airport is approximately 3.5 miles north of the project site. The California Public Resources Code, Section 21096, requires that when preparing an Environmental Impact Report for any project located within an airport influence area as defined by an Airport Land Use Compatibility Plan (ALUC), the lead agency shall utilize the California Airport Land Use Planning Handbook as a technical resource with respect to airport noise and safety compatibility issues. The basis for compatibility zone delineation for airports is the CNEL contours created with the Federal Aviation Administration (FAA) Integrated Noise Model for private and public airports. Noise from aircrafts at the John Wayne Airport is produced from takeoffs, flyovers/overflights, approaches, and landings. Each of these events results in noise exposure to noise-sensitive receptors within close proximity to the airport. Figure 5.9-2 shows that the project site is located outside both the 60 and 65 dBA CNEL noise contours for the John Wayne Airport.

5.9.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would result in:

N-1 Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Based on local noise criteria as established in the City of Newport Beach General Plan and Municipal Code the following would be considered significant:

- Based on Policy N 1.8 of the Newport Beach General Plan, project-related traffic increases the CNEL at any noise-sensitive receptor by an audible amount of: (1) 3 dBA or more when the existing CNEL is 60 dBA or less, (2) 2 dBA or more when the CNEL is between 60 and 65 dBA, (3) 1 dBA or more when the CNEL is between 65 and 75, or (4) any amount when the CNEL exceeds 75 dBA in the vicinity of any noise-sensitive receptors (see Table 5.9-5).

- Noise generated by buildout of the Hyatt Regency would result in stationary (non-transportation) noise that exceeds the standards of the City's Municipal Code (see Table 5.9-6) on noise-sensitive receptors.

- It is the Policy of the City of Newport Beach to require Commercial (Regional, District) – Hotel, Motel, and Transient Lodging to mitigate to achieve an exterior noise environment of 70 dBA CNEL. Future development associated with the Hyatt Regency Newport Beach expansion would place on-site noise-sensitive uses in a noise environment that exceeds 70 dBA CNEL.

N-2 Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

Based on the noise criteria as established by the FTA, the following would be considered significant:

- Construction equipment would produce levels of vibration that exceed the FTA's criterion for human annoyance for infrequent events (80 VdB) at off-site vibration-sensitive structures.

N-3 A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Based on local noise criteria as established in the City of Newport Beach General Plan and Municipal Code the following would be considered significant:

- Based on Policy N 1.8 of the Newport Beach General Plan, project-related traffic increases the CNEL at any noise-sensitive receptor by an audible amount of: (1) 3 dBA or more when the existing CNEL is 60 dBA or less, (2) 2 dBA or more when the CNEL is between 60 and 65 dBA, (3) 1 dBA or more when the CNEL is between 65 and 75, or (4) any amount when the CNEL exceeds 75 dBA in the vicinity of any noise-sensitive receptors (see Table 5.9-5)

- Noise generated by buildout of the Hyatt Regency would result in stationary (nontransportation) noise that exceeds the standards of the City's Municipal Code (see Table 5.9-6) on noise-sensitive receptors.

N-4 A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

N-5 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.

Based on noise criteria as established by the Caltrans Aeronautics Program the following would be considered significant:

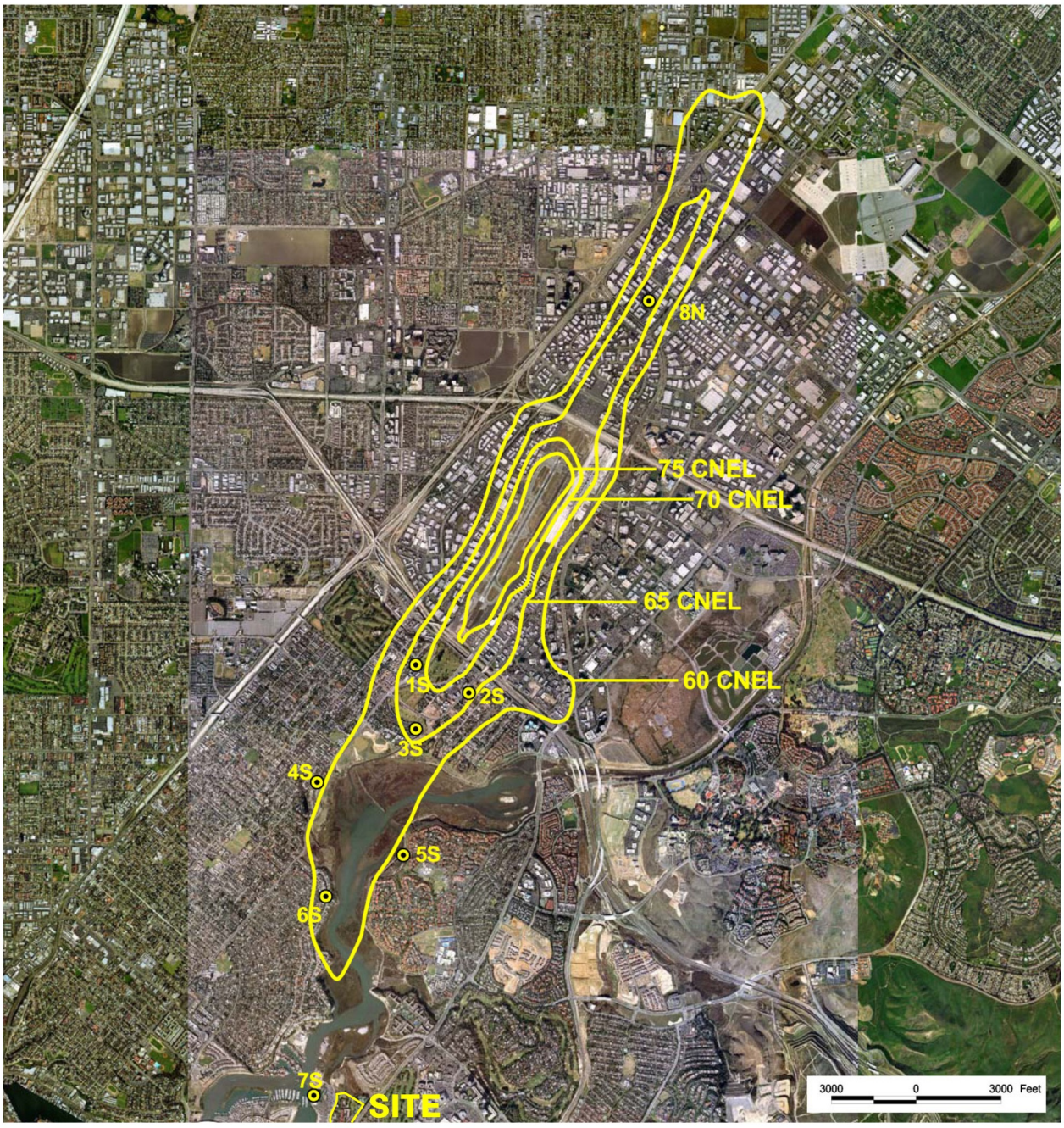
- If the project would be located within the Noise Impacted Area of John Wayne Airport and thus be exposed to noise levels that exceed 65 dBA CNEL.

N-6 For a project within the vicinity of a private airstrip, expose people residing or working the project area to excessive noise levels.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant: N-6.

This impact will not be addressed in the following analysis.

John Wayne Airport 2005 Annual Noise Contours



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5.9.3 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

IMPACT 5.9-1: THE INCREASE IN TRAFFIC FROM OPERATION OF THE HYATT REGENCY EXPANSION PROJECT WOULD NOT SIGNIFICANTLY INCREASE TRAFFIC NOISE LEVELS. [THRESHOLDS N-1 AND N-3]

Impact Analysis: The operations phase of the project would generate noise primarily associated with vehicular trips. According to the Traffic Analysis conducted by IBI Group, Inc. (January 2008), the proposed project would generate 661 average daily vehicle trips (ADT) with 51 trips in the morning peak hour and 58 trips in the evening peak hour. Traffic noise modeling was compiled for buildout year (2012) No Project and With Project conditions, as shown in Table 5.9-10.

Table 5.9-10
Year 2012 Without Project vs. With Project Traffic Noise Modeling

Location	Existing CNEL (dBA @ 100 feet from centerline)	Year 2012 w/o Project		Year 2012 with Project		Increase in CNEL (dBA) from Existing	Increase in CNEL (dBA) Due to Project
		ADT	CNEL (dBA @ 100 feet from centerline)	ADT	CNEL (dBA @ 100 feet from centerline)		
Jamboree Road							
n/o San Joaquin Hills Road	74.1	48,058	75.0	48,322	75.0	0.9	0.0
n/o Santa Barbara Drive	73.7	42,381	74.6	42,679	74.7	1.0	0.1
n/o Hyatt Regency Entrance	73.6	42,215	74.6	42,545	74.6	1.0	0.0
s/o Hyatt Regency Entrance	73.7	42,275	74.6	42,605	74.7	1.0	0.1
s/o Back Bay Drive	73.5	42,415	74.4	42,745	74.4	0.9	0.0
Pacific Coast Highway (SR-1)							
w/o Dover Drive	71.7	63,056	72.6	63,188	72.6	0.9	0.0
w/o Bayside Drive	75.9	69,359	76.8	69,525	76.8	0.9	0.0
w/o Jamboree Road	75.1	59,132	76.1	59,298	76.1	1.0	0.0
e/o Jamboree Road	72.4	50,423	73.7	50,589	73.7	1.3	0.0
e/o Newport Center Drive	72.3	50,355	73.6	50,521	73.6	1.3	0.0
e/o Avocado Avenue	72.2	49,927	73.5	50,059	73.5	1.3	0.0
e/o MacArthur Boulevard	69.1	49,937	70.4	50,069	70.4	1.3	0.0
San Joaquin Hills Road							
e/o Jamboree Road	69.4	19,350	69.7	19,384	69.7	0.3	0.0
Santa Barbara Drive							
e/o Jamboree Road	65.5	14,648	65.6	14,682	65.6	0.1	0.0
Newport Center Drive							
n/o Pacific Coast Highway	65.9	10,538	66.2	10,572	66.2	0.3	0.0
MacArthur Boulevard							
n/o Pacific Coast Highway	65.9	43,056	74.1	43,122	74.1	8.2	0.0
Dover Drive							
n/o Pacific Coast Highway	68.7	34,750	69.1	34,784	69.1	0.4	0.0
Back Bay Drive							
e/o Jamboree Road	48.8	1,107	49.3	1,107	49.3	0.5	0.0

Source: The Planning Center, Federal Highway Administration Traffic Noise Model. Based on traffic volumes and speed limits obtained in the Traffic Impact Analysis prepared by IBI Group dated October 2006.
e/o: east of; w/o: west of; n/o: north of; s/o: south of.
Note: Noise-sensitive residential uses are located approximately 100 feet from the centerline.

The difference in traffic noise between the No Project and With Project conditions represents the increase in noise attributable to project-related traffic. In accordance with General Plan Policy N1.8, project-related noise impacts may occur if there are substantial noise increases (3 dBA or more when the existing CNEL is 60 dBA or less, 2 dBA or more when the CNEL is between 60 and 65 dBA, 1 dBA or more when the CNEL is between 65 and 75, or any amount when the CNEL exceeds 75 dBA in the vicinity of any noise-sensitive receptors) in comparison to Without Project conditions. As shown in Table 5.9-10, the project would increase traffic noise levels by a maximum of 0.1 dBA on Jamboree Road, north of Santa Barbara Drive and south of the Hyatt Regency entrance. At these locations, future noise levels at the residences would be less than 75 dBA. Consequently, a project-related noise increase of less than 1 dBA at Jamboree Road north of Santa Barbara

Drive and south of the Hyatt Regency entrance would not significantly contribute to the impacted noise environment in the vicinity of noise-sensitive receptors.

IMPACT 5.9-2: NEW STATIONARY NOISE SOURCES FROM LONG-TERM OPERATION OF THE HYATT REGENCY NEWPORT BEACH EXPANSION WOULD NOT SUBSTANTIALLY ELEVATE NOISE LEVELS IN THE VICINITY OF NOISE-SENSITIVE LAND USES. [THRESHOLDS N-1 AND N-3]

Impact Analysis: Operation of the Hyatt Regency project would include the following improvements: 88 new timeshare units, a new 800-seat ball room, a new 10,072-square-foot spa and pool, and a new two-level parking garage. Use of these new facilities would generate stationary noise at the Hyatt Regency in Newport Beach. Currently, stationary noise sources at the project site include noise sources associated with landscaping, maintenance, recreation (golf and pool), deliveries, parking, and events (conferences, weddings, etc). Use of the new facilities would generate similar types of stationary noise on-site.

As the adjacent land uses are commercial/recreational in nature, the project is required to abide by the City of Newport Beach maximum noise limits for Zone II, which require noise levels from stationary equipment to not exceed a daytime maximum of 65 dBA L_{eq} for a period of 15 minutes during an hour (or 85 dBA L_{max}) and a nighttime maximum of 60 dBA L_{eq} for a period of 15 minutes in an hour (or 80 dBA L_{max}). Noise-sensitive residential uses within the vicinity of the proposed noise-generating uses are located a significant distance (greater than 340 feet) and therefore would not be exposed to noticeable levels of stationary noise generated at the project site. Stationary equipment or on-site facilities used in a manner that violates these standards is defined as a public nuisance by the City of Newport Beach and is not permitted within the City.

The Hyatt Regency Newport Beach hosts an annual outdoor jazz event. Operation of the annual jazz event requires a Special Events Permit by the City of Newport Beach. Future jazz events and other similar events held within the expanded ballroom facilities would also require the approval of this type of permit. Under the Special Events Permit, the City of Newport Beach cites the City's noise ordinance for use of amplified sound at Special Events. It is specifically stated in the permit that having a Special Events Permit does not give the permit holder permission to violate the City's ordinances. A citation can be issued if the special event is not in compliance with the noise ordinance. Pursuant to the City's Municipal Code for sound-amplifying equipment, noise levels from such devices are required to be controlled so they are not audible in excess of 100 feet. Consequently, the project would be required to abide by the mandatory noise limits of the Newport Beach Municipal Code.

Furthermore, due to the current levels of activity on-site, the expansion of the on-site facilities would not substantially increase noise levels when located in the vicinity of similar facilities at the Hyatt Regency Newport Beach, including the ballroom facilities. Perceptible changes in the ambient noise environment from on-site stationary sources would be a result of replacement or relocation of on-site uses with different types of noise-generating activities and not necessarily a result of an increase in noise levels. For example, the existing golf course is located in the northern portion of the project site. Noise-generating activities associated with the golf course include landscape maintenance (lawnmowers, edgers, blowers, etc.). Project implementation would replace the existing golf course with new residential timeshare facilities, parking lots, and pool recreational facilities. While the new timeshare units would provide a barrier for noise transmission along portions of the northeastern boundary of the site from the pool area, pool recreational uses tend to be louder than golf activities. In contrast, the new parking lot would eliminate the need for landscape maintenance at the boundary of the project site, but would introduce a new type of noise source (car horns, car alarms, beeps, door slamming) along the northeastern boundary. Additional noise sources from operation of the Hyatt Regency expansion would not generate noise levels that exceed the City's noise standards or substantially elevate existing noise levels in the vicinity of noise-sensitive land uses.

IMPACT 5.9-3: NEWLY EXPANDED ON-SITE NOISE-SENSITIVE USES WOULD BE COMPATIBLE WITH THE NOISE ENVIRONMENT. [THRESHOLDS N-1 AND N-3]

Impact Analysis: Noise may be a significant impact if the project constructs a noise-sensitive land use in an area that is incompatible due to excessive noise. The City of Newport Beach has adopted land use compatibility criteria for the siting of new noise-sensitive land uses within the City (see Table 5.9-4). Pursuant to the City of Newport Beach General Plan, new Commercial (Regional, District) – Hotel, Motel, and Transient Lodging land uses are considered noise impacted if they are located in a noise environment that exceeds 70 dBA CNEL. Operation of the proposed project would include the following noise-sensitive uses: 88 new timeshare units, a new 800-seat ballroom, and a new 10,072-square-foot spa and pool. As shown in Table 5.9-10, Jamboree Road generates noise levels of 74.6 dBA CNEL at 100 feet from the centerline. The closest proposed noise-sensitive uses to Jamboree Road would be the timeshares, which would be set back at least 350 feet from the centerline of Jamboree Road. Consequently, exterior noise levels at these noise-sensitive land uses are calculated at 66.4 dBA CNEL, and would be within the normally compatible noise environment. Exterior noise levels at other proposed facilities of the Hyatt Regency expansion would be at even greater distances, and therefore would also be within a normally compatible noise environment.

For interior noise environments associated with the proposed project, the state of California requires that new construction achieve a noise environment of 45 dBA CNEL. Standard windows and doors in a warm-weather climate typically achieve a minimum of 12 dBA noise reduction with windows open and a minimum of 24 dBA reduction with windows closed (Society of Automotive Engineers 1971). Consequently, interior noise environments at the nearest noise-sensitive structures to Jamboree Road are calculated at 54.4 dBA CNEL with windows open and 42.4 dBA CNEL with windows closed. Therefore, standard building construction would be sufficient to meet the California Building Code noise-level requirements.

IMPACT 5.9-4: CONSTRUCTION OF THE HYATT REGENCY NEWPORT BEACH EXPANSION WOULD NOT GENERATE VIBRATION LEVELS THAT EXCEED THE FTA CRITERION FOR HUMAN ANNOYANCE AT NEARBY RESIDENTIAL STRUCTURES. [THRESHOLD N-2]

Impact Analysis: Construction operations can generate varying degrees of ground vibration, depending on the construction procedures and the construction equipment. However, construction equipment used during project development would produce vibration from vehicle travel as well as grading and building activities. However, no pile driving, blasting, or other vibration-intensive activity would be required in the construction effort.

Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. Hence, the communities of Harbor Cove and Villa Point would not be affected by construction vibration generated at the project site, as these communities are significantly elevated above the project site on a bluff and are located at a significant distance from project-related construction activities. Groundborne vibration is almost never annoying to people who are outdoors and therefore groundborne vibration is evaluated in terms of indoor receivers (FTA 1995). Vibration is typically sensed at nearby structures when objects within the structure generate noise from the vibration, such as rattling windows or picture frames. The effect on buildings located in the vicinity of the construction site varies depending on soil type, ground strata, and receptor building construction. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Ground vibrations from construction activities rarely reach levels that can damage structures, but can achieve the audible and perceptible ranges in buildings close to the construction site.

The nearest vibration-sensitive off-site uses are the communities of Bayview Landing, the senior community south of Back Bay Drive, and the Sea Island residential community east of Jamboree Road. The majority of heavy construction equipment would be used during grading operations. Construction of the new structures would require use of heavy construction grading equipment to partially underground the parking structures under the new timeshare units. The highest levels of vibration would be experienced when a heavy piece of construction equipment is operating or passes in close proximity to the nearby vibration-sensitive structures. Table 5.9-11 lists the maximum levels of vibration from heavy construction equipment that would be experienced at the nearest vibration-sensitive structures at Bayview Landing and Sea Island.

Table 5.9-11
Vibration Source Levels for Construction Equipment at Nearest Residences

Vibration Annoyance Assessment						
Equipment	***Velocity Level at 90 Feet (VdB) – Bayview Landing***	***Significance Threshold (VdB)***	***Exceeds Significance Threshold?***	***Velocity Level at 125 Feet (VdB) – Sea Island[1]***	***Significance Threshold (VdB)***	***Exceeds Significance Threshold?***
Large bulldozer	76	80	No	73	80	No
Small bulldozer	47	80	No	44	80	No
Jackhammer[2]	68	80	No	65	80	No
Loaded trucks	75	80	No	72	80	No
Structural Damage Assessment						
Equipment	***Approximate RMS Velocity at 90 Feet (in/sec) – Bayview Landing***	***Significance Threshold (in/sec)***	***Exceeds Significance Threshold?***	***Approximate RMS Velocity at 125 Feet (in/sec) – Sea Island***	***Significance Threshold (in/sec)***	***Exceeds Significance Threshold?***
Large bulldozer	0.0130	0.2	No	0.0080	0.2	No
Small bulldozer	0.0004	0.2	No	0.0003	0.2	No
Jackhammer[2]	0.0051	0.2	No	0.0031	0.2	No
Loaded trucks	0.0111	0.2	No	0.0068	0.2	No

Source: Based on methodology from the United States Department of Transportation Federal Transit Administration, *Transit Noise and Vibration Impact Assessment,* 1995.
Note: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second.
[1] Distance based on construction activities associated with storm drain and sewer improvements. On-site construction activities would occur at distances of 215 feet or farther and vibration levels would be lower than shown above.
[2] Determined based on use of jackhammers or pneumatic hammers that may be used for pavement demolition at a distance of 25 feet.

The FTA has established thresholds for vibration levels that would cause annoyance to a substantial number of people or damage to building structures. The FTA criterion for vibration-induced structural damage is 0.20 inch per second for the peak particle velocity (PPV). Project construction activities would result in PPV levels that are below the FTA's criterion for vibration-induced structural damage.

The FTA's criterion for vibration-induced annoyance is 80 Vibration Velocity (VdB) for residential uses. As shown in Table 5.9-11, construction of the project would not generate levels of vibration that exceed the FTA criterion for nuisance for existing residential uses.

IMPACT 5.9-5: CONSTRUCTION ACTIVITIES AT THE HYATT REGENCY WOULD SUBSTANTIALLY ELEVATE THE DAYTIME NOISE ENVIRONMENT IN THE VICINITY OF NOISE-SENSITIVE RESIDENTIAL AND RECREATIONAL USES. [THRESHOLD N-3]

Impact Analysis: Short-term noise can be associated with site preparation, grading, and building construction of the proposed land uses. Two types of short-term noise impacts could occur during construction: First, the transport of workers and movement of materials to and from the site could incrementally increase noise levels along local access roads; second, short-term noise impacts during demolition, site preparation, grading, and/or physical construction. Construction is performed in distinct steps, each with its own mix of equipment and, consequently, its own noise characteristics. However, despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Composite construction noise is best characterized by *Noise from Construction Equipment and Operations, Building Equipment and Home Appliances* (Bolt et al. 1971). Noise levels represent the documented average noise levels for each construction phase for typical residential construction. Table 5.9-12 shows typical noise levels from each construction phase at the closest off-site noise-sensitive uses. Noise levels were calculated as if all construction equipment were operating adjacent to the property line. These values take into account both the number of pieces and spacing of the heavy equipment used in the construction effort. In later phases, during building assembly, noise levels are typically reduced from these values and the physical structures further break up line-of-sight noise propagation.

Table 5.9-12
Noise Levels at Project Construction Sites
(dBA L_{eq})

	Noise Levels from All Applicable Equipment in Use:[1]				
Construction Phase	***Newporter North Environmental Study Area/ Palisades Tennis Club (Within 50 Feet)***	***Bayview Landing/ Newport Dunes (90 Feet)***	***Villa Point (150 Feet)***	***Sea Island (125 Feet)[2]***	***Harbor Cove (675 Feet)***
Ground Clearing/Demolition	83	78	73	75	60
Excavation/Grading	88	83	78	80	65
Foundation Construction	81	76	71	73	58
Building Construction	81	76	71	73	58
Finishing and Site Cleanup	88	83	78	80	65
Existing Ambient Noise Levels[3]	58	59	68	68	68
Maximum Projected dBA over Ambient Level	30	24	10	12	Ambient Not Exceeded

[1] Based on Bolt et al. 1971. Based on the Analysis for residential construction.
[2] Distance based on construction activities associated with storm drain and sewer improvements. On-site construction activities would occur at distances of 215 feet or farther and would be approximately 5 dBA lower than noise levels shown.
[3] Based on monitored noise levels on Jamboree Road for the Villa Point residences, the Sea Island residences, and the Harbor Cove residences and monitored noise levels on Back Bay Drive for the Newporter North Environmental Study Area and Palisades Tennis Club (northwest of project site) and the Bayview Landing residences and Newport Dunes recreational area (south of project site).

Grading of the project would involve the heaviest pieces of construction equipment. Consequently, this phase of development would result in the loudest noise levels at the existing noise-sensitive receptors in the project vicinity. However, all project-related construction activities would occur within the least noise-sensitive portion of the day, as specified in Section 10.28.040, *Construction Activity – Noise Regulations,* of the City's Municipal Code As shown in Table 5.9-12, noise levels generated by construction activities would cause the existing ambient noise levels at the closest residential developments (Sea Island, Villa Points and Bayview Landing) to be exceeded by up to 24 dBA (Bayview Landing) during the noisiest construction periods. Ambient noise levels at Harbor Cove, approximately 675 feet from the project, would not be exceeded.

The adjacent Palisades Tennis Club would experience noise levels up to 30 dBA in excess of ambient noise levels during some construction phases. While the City of Newport Beach does not specifically designate this type of use as noise-sensitive, recreational uses require a degree of quietness for enjoyment. Many of these noise-sensitive uses lie at elevations higher than the project site, and therefore would have an unobstructed view of construction activities.

Due to the length of construction activities (approximately 23 months) and level of noise from the combination of construction activities (ranging from 58 to 88 dBA), project-related construction noise at the nearby residential and recreational receivers would be significant.

Construction Noise Impacts to Biological Resources

In addition, the biological surveys and impact analysis conducted by Glen Lukos and Associates, dated February 2007, indicated the presence of coastal California gnatcatcher adjacent to the northwestern corner of the site, in the Ecological Preserve. As described in Chapter 5.2, *Biological Resources,* construction noise could affect gnatcatchers if construction occurs within the breeding season. However, if gnatcatchers are located within 300 feet of construction activities, Mitigation Measure 3-2, as outlined in Chapter 5.3, *Biological Resources*, of this DEIR, would require installation of temporary noise barriers and a change in grading arrays if noise levels cannot be reduced below 60 dBA hourly L_{eq}. With the implementation of this mitigation, noise levels from construction activities would not negatively affect this adjoining land use.

IMPACT 5.9-6: THE HYATT REGENCY IS LOCATED OUTSIDE THE 60 AND 65 dBA CNEL NOISE CONTOUR OF THE JOHN WAYNE AIRPORT AND WOULD NOT RESULT IN SUBSTANTIAL AIRCRAFT NOISE EXPOSURE TO FUTURE OCCUPANTS AND WORKERS. [THRESHOLDS N-5]

Impact Analysis: The project site is located approximately 3.5 miles south of the John Wayne International Airport, under the primary departure corridor. Noise from takeoffs and occasionally landings contribute to the ambient noise environment at the project site. The John Wayne Airport maintains a network to monitor aircraft noise levels in the vicinity of the airport. The project site is in close proximity to the airport's noise monitor No. 7. As shown in Figure 5.9-2, the Hyatt Regency is located outside the 60 and 65 dBA CNEL noise contours for the airport. Therefore the project would not expose future occupants and workers to excessive noise levels from the John Wayne Airport.

In addition to daily CNEL noise contours, the noise-monitoring network also measures average single-event noise exposure from a single aircraft passing over the noise monitoring location. At Monitoring Site 7, single-event noise levels from all aircraft ranged from 78.1 to 90.6 dBA L_{max}, as shown in the *4th Quarter Noise Abatement Report* (John Wayne Airport 2006). Single-event noise disturbance impacts primarily affect school classrooms, where loud disruptions severely impair the learning environment, and residential users, where nighttime noise events can be invasive. The project site proposes new timeshare units within the vicinity of the airport and therefore, single-event noise exposure is only relevant in an indoor environment during the

late night hours. Operation of the John Wayne Airport is restricted to the hours of 7:00 AM and 11:00 PM. Therefore, nighttime disturbance at the project site from aircraft overflights would be highly limited. Furthermore, standard windows and doors in a warm-weather climate typically achieve a minimum of 24 dBA reduction with windows-closed (Society of Automotive Engineers 1971). Consequently, interior single-event noise levels from aircrafts at the John Wayne Airport would range from 54.1 dBA to 66.6 dBA. Based on a single noise event level of 81 dBA (the threshold at which 10 percent of the population would be awakened based on the Federal Interagency Committee on Aviation Noise *Effects of Aviation Noise on Awakenings from Sleep*), noise from aircraft overflights would not disrupt the sleep of residents of the timeshare units with windows closed. Upgraded windows and doors would therefore not be necessary to prevent nighttime awakenings from aircraft overflights.

5.9.4 Cumulative Impacts

Mobile Source Noise

Traffic noise increases on local roadways in the vicinity of the project site were shown previously in Table 5.9-10. The difference in traffic noise between the existing environment and 2008 conditions represents cumulative noise impacts, whereas the difference between the 2012 No Project and With Project conditions represents the project's contribution to cumulative noise increases. Project-related cumulative noise impacts may occur if the project's contribution to cumulative noise increases results in a substantial noise increase in comparison to existing conditions (3 dBA or more when the existing CNEL is 60 dBA or less, 2 dBA or more when the CNEL is between 60 and 65 dBA, 1 dBA or more when the CNEL is between 65 and 75, or any amount when the CNEL exceeds 75 dBA in the vicinity of any noise-sensitive receptors). Thus, where individual project-related impacts are identified, the project would also significantly contribute to cumulative traffic noise increases on local roadways. However, as shown in Table 5.9-10, the project would result in a maximum traffic noise increase of 0.1 dBA CNEL at Jamboree Road, north of Santa Barbara Drive and south of the Hyatt Regency entrance. At these locations, the future noise environment at the residences would be less than 75 dBA CNEL. Consequently, project-related traffic noise increases would not be cumulatively considerable and no significant cumulative noise impacts would occur.

Stationary Source Noise

Unlike transportation noise sources, whose effects can extend well beyond the limits of the project site, stationary noise generated by the project is limited to impacts to noise-sensitive receptors adjacent to the project site. Stationary noise sources are confined to the immediate area of noise generation. As no significant stationary noise impacts from project implementation were identified and the City of Newport Beach restricts stationary noise generated on a property from creating a nuisance to other noise-sensitive receptors, cumulative stationary source noise generation would also be less than significant.

Construction Noise and Vibration

Like stationary source noise, cumulative construction noise and vibration impacts are confined to a localized area of impact. Consequently, cumulative impacts would only occur if other projects are being constructed in the local vicinity of the project at the same time construction activities associated with the project would occur. Because the adjacent land uses are developed and no remaining vacant parcels lie within the immediate vicinity of the project site, no cumulative construction noise and vibration impacts would occur. Impacts to nearby noise- and vibration-sensitive land uses would be limited to project-related impacts only.

5.9.5 Existing Regulations and Standard Conditions

Existing Regulations

- Section 10.26.025, City of Newport Beach Municipal Code: Exterior Noise Standards.
- Section 10.28.040, City of Newport Beach Municipal Code: Construction Noise: Construction Activity – Noise Regulations.
- Chapter 11.03, City of Newport Beach Municipal Code: Special Events.
- State of California Interior and Exterior Noise Standards are incorporated into the California Building Code (Title 24 and Title 25, California Code of Regulations) and are the noise standards required for new construction in California.
- Community noise standards adopted by the City of Newport Beach in the General Plan, Noise Element.

City of Newport Beach Standard Conditions of Approval

- The project must comply with the exterior noise standards for commercial uses of the Noise Ordinance. The exterior noise level standard is 65 dBA between the hours of 7:00 AM and 10:00 PM and 60 dBA between the hours of 10:00 PM and 7:00 AM. An acoustic study shall be performed by a qualified professional that demonstrates compliance with these standards of the Noise Ordinance. This acoustic study shall be performed and submitted to the City Planning Department prior to occupancy of the project. If the exterior noise levels exceed applicable standards, additional mitigation shall be required, which may include the installation of additional sound attenuation devices as recommended by the acoustic study and subject to the approval of the Planning Director.
- The operator of the facility shall be responsible for the control of noise generated by the subject facility including, but not limited to, noise generated by patrons, food service operations, and mechanical equipment. All noise generated by the proposed use shall comply with the provisions of Chapter 10.26 and other applicable noise control requirements of the Newport Beach Municipal Code. The maximum noise shall be limited to no more than noise limits specified in Table 5.9-6 for the specified time periods unless the ambient noise level is higher.
- The operator of the facility shall be responsible for the control of noise generated by the subject facility. The noise generated by the proposed use shall comply with the provisions of Chapter 10.26 of the Newport Beach Municipal Code. The maximum noise shall be limited to no more than depicted in Table 5.9-6 for the specified time periods unless the ambient noise level is higher.
- All mechanical equipment shall be screened from view of adjacent properties and adjacent public streets within the limits authorized by this permit, and shall be sound-attenuated in accordance with Chapter 10.26 of the Newport Beach Municipal Code, Community Noise Control.
- No outside paging system shall be utilized in conjunction with this establishment.

5.9.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.9-1, 5.9-2, 5.9-3, 5.9-4, and 5.9-6.

Without mitigation, the following impacts would be **potentially significant**:

- Impact 5.9-5 Construction activities at the Hyatt Regency would significantly elevate the daytime noise environment in the vicinity of noise-sensitive residential and recreational uses.

5.9.7 Mitigation Measures

Impact 5.9-5

9-1 Temporary sound blankets (fences typically comprised of poly-vinyl-chloride-coated outer shells with adsorbent inner insulation) shall be placed alongside the boundary of the project site during construction activities that occur in the vicinity of residential and recreational land uses, which includes the areas adjacent to the Palisades Golf Course, the Newporter North Environmental Study Area, and the Bayview Landing senior community. The temporary sound blankets shall be to prevent direct line-of-sight from active construction areas.

9-2 The Construction Contractor shall ensure that all construction equipment on-site is properly maintained and tuned to minimize noise emissions.

9-3 The Construction Contractor shall ensure that construction equipment is fit with properly operating mufflers, air intake silencers, and engine shrouds no less effective than as originally equipped by the manufacturer.

9-4 The Construction Contractor shall locate all stationary noise sources (e.g., generators, compressors, staging areas) as far from residential and recreational receptor locations as is feasible.

9-5 Material delivery, soil haul trucks, equipment servicing, and construction activities shall be restricted to the hours set forth in the City of Newport Beach Municipal Code, Section 10.28.040.

5.9.8 Level of Significance After Mitigation

Mitigation Measures 9-1 through 9-5 described above would reduce noise levels from construction activities to the extent feasible. Placement of temporary sound walls along the project boundaries would reduce noise levels approximately 5 to 6 dBA where sound walls block line of sight between construction activities and nearby noise-sensitive receptors. Because many of the residential areas overlook proposed construction activities, sound walls would not be effective at these locations. However, despite the application of mitigation measures, nearby noise-sensitive uses would be temporarily exposed to elevated noise levels during construction activities and Impact 5.9-5 would remain Significant and Unavoidable.