

3.11 NOISE

This section describes the environmental and regulatory setting for noise and vibration. It also describes existing conditions and potential impacts related to noise that would result from the implementation of the Project, and mitigation for potentially significant impacts, where feasible.

SUMMARY OF IMPACTS

The Project would not result in a substantial temporary or permanent increase in ambient noise levels with implementation of Mitigation Measure NOI-1. The impact would be less than significant with mitigation incorporated.

The Project would not result in generation of excessive groundborne vibration or groundborne noise levels, and the Project impact would be less than significant.

The Project would not expose people residing or working in the Project area to excessive noise levels, and the Project impact would be less than significant.

The residential component of the ORCC Specific Plan Project was considered as part of the construction and operation noise and vibration analysis of this Project. Specific impact findings associated with the development of the ORCC Specific Plan Project are being evaluated in a standalone EIR.

3.11.1 Environmental Setting

Noise Fundamentals and Terminology

Noise is generally defined as unwanted sound that annoys or disturbs people and potentially causes an adverse psychological or physiological effect on human health. Because noise is an environmental pollutant that can interfere with human activities, evaluation of noise is necessary when considering the environmental impacts of a Project.

Sound is mechanical energy transmitted by pressure waves over a medium such as air or water. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level (SPL) is the most common descriptor used to characterize the loudness of an existing sound level.

Although the decibel (dB) scale, a logarithmic scale, is used to quantify sound intensity, it does not accurately describe how sound intensity is perceived by human hearing. The perceived loudness of sound is dependent upon many factors, including sound pressure level and frequency content. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called A-weighting, written as dB(A) and referred to as A-weighted decibels. There is a strong correlation between A-weighted sound levels and community response to noise. For this reason, the A-weighted sound level has



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become the standard tool of environmental noise assessment. Table 3.11-1 summarizes typical A-weighted sound levels for different common noise sources.

Table 3.11-1: Typical A-Weighted Sound Levels

Common Outdoor Activities	Noise Level (dB(A))	Common Indoor Activities
Jet flyover at 1,000 Feet	-110-	Rock band
Gas lawnmower at 3 Feet	-100-	
Diesel truck at 50 Feet at 50 MPH	-90-	Food blender at 3 Feet
Noisy urban area, daytime	-80-	Garbage Disposal at 3 Feet
Gas lawnmower, 100 Feet		
Commercial area	-70-	Vacuum Cleaner at 10 Feet
Heavy traffic at 300 Feet		Normal Speech at 3 Feet
	-60-	
Quiet urban daytime		Large business office
	-50-	Dishwasher in next room
Quiet urban nighttime		
Quiet suburban nighttime	-40-	Theater, large conference room (Background)
Quiet rural nighttime	-30-	Library
		Bedroom at night, concert hall (Background)
	-20-	
	-10-	Broadcast/recording studio
	-0-	

Source: Caltrans 2013

Different types of measurements are used to characterize the time-varying nature of sound. These measurements include the equivalent sound level (Leq), the minimum and maximum sound levels (Lmin and Lmax), percentile-exceeded sound levels (such as L10, L20), the day-night sound level (Ldn), and the community noise equivalent level (CNEL). Ldn and CNEL values often differ by less than 1 dB. As a matter of practice, Ldn and CNEL values are considered to be equivalent and are treated as such in this assessment. Table 3.11-2 defines sound measurements and other terminology used in this report.

Table 3.11-2: Definition of Sound Measurements

Sound Measurements	Definition
Decibel (dB)	A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micro-pascals.
A-Weighted Decibel (dB(A))	An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.



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Sound Measurements	Definition
Maximum Sound Level (Lmax)	The maximum sound level measured during the measurement period.
Minimum Sound Level (Lmin)	The minimum sound level measured during the measurement period.
Equivalent Sound Level (Leq)	The equivalent steady state sound level that in a stated period of time would contain the same acoustical energy.
Percentile-Exceeded Sound Level (Lxx)	The sound level exceeded xx % of a specific time period. L10 is the sound level exceeded 10% of the time. L90 is the sound level exceeded 90% of the time. L90 is often considered to be representative of the background noise level in a given area.
Day-Night Level (Ldn)	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10:00 PM to 7:00 AM
Community Noise Equivalent Level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 dB added to the A-weighted sound levels occurring during the period from 7:00 PM to 10:00 PM and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 PM to 7:00 AM.
Peak Particle Velocity (Peak Velocity or PPV)	A measurement of ground vibration defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. PPV is usually expressed in inches/second.
Frequency: Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.

Source: FHWA 2006

With respect to how humans perceive and react to changes in noise levels, a 1 dB(A) increase is imperceptible, a 3 dB(A) increase is barely perceptible, a 5 dB(A) increase is clearly noticeable, and a 10 dB(A) increase is subjectively perceived as approximately twice as loud. These subjective reactions to changes in noise levels were developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broadband noise and to changes in levels of a given noise source. These statistical indicators are thought to be most applicable to noise levels in the range of 50 to 70 dB(A), as this is the usual range of voice and interior noise levels. Numerous agencies and municipalities have developed or adopted noise level standards, consistent with these and other similar studies to help prevent annoyance and to protect against the degradation of the existing noise environment.

For a point source such as a stationary compressor or construction equipment, sound attenuates based on geometry at a rate of 6 dB per doubling of distance. For a line source such as free-flowing traffic on a freeway, sound attenuates at a rate of 3 dB per doubling of distance. Atmospheric conditions including wind, temperature gradients, and humidity can change how sound propagates over distance and can affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound that travels over an acoustically absorptive surface, such as grass, attenuates at a slightly greater rate than sound that travels over a hard surface, such as pavement. The increased attenuation is typically in the range of 1–2 dB per doubling of distance. Barriers, such as buildings and topography that block the line of sight between a source and receiver, also increase the attenuation of sound over distance.



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Decibel Addition

Because decibels are logarithmic units, sound pressure levels cannot be added or subtracted through ordinary arithmetic. On the dB scale, a doubling of sound energy corresponds to a 3 dB increase. In other words, when two identical sources are each producing sound of the same loudness, their combined sound level at a given distance would be 3 dB higher than one source under the same conditions. For example, if one source produces a sound pressure level of 70 dB(A), two identical sources would combine to produce 73 dB(A). The cumulative sound level of any number of sources can be determined using decibel addition.

Vibration Standards

Vibration is like noise such that it involves a source, a transmission path, and a receiver. While related to noise, vibration differs in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to vibration depends on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system that is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration in terms of peak particle velocity in inches per second (in/sec). Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of in/sec PPV.

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Table 3.11-3: Guideline Vibration Annoyance Potential Criteria

Human Response	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Sources
Barely perceptible	0.035	0.012
Distinctly perceptible	0.24	0.035
Strongly perceptible	0.90	0.10
Severe	2.0	0.40

Notes: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seal equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Caltrans 2020

Table 3.11-4: Guideline Vibration Damage Potential Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile ¹ buildings	0.30	0.12
Historic and some old buildings	0.50	0.20
Older ² residential structure	0.70	0.30
New residential structures	1.2	0.50
Modern industrial/commercial buildings	2.0	0.50

Notes:

Transient sources again create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seal equipment, vibratory pile drivers, and vibratory compaction equipment.

¹ A fragile building is considered one where the structural components are weakened due to age, poor construction materials, or significant deterioration, making it susceptible to damage from even minor stress.

² An older building refers to a structure that has been around for a considerable period of time, regardless of its current structural integrity, with factors like construction materials, maintenance history, and design playing a role in determining its overall condition.

Source: Caltrans 2020

The operation of heavy construction equipment, particularly pile driving, and other impact devices, such as pavement breakers, create seismic waves that radiate along the surface of the ground and downward into the earth. These surface waves can be felt as ground vibration. Vibration from the operation of this equipment can result in effects ranging from annoyance of people to damage of structures. Varying



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geology and distance will result in different vibration levels containing different frequencies and displacements. In all cases, vibration amplitudes will decrease with increasing distance. Perceptible groundborne vibration is generally limited to areas within a few hundred feet of construction activities.

Table 7-4, Vibration Source Levels for Construction Equipment, in the 2018 Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (FTA 2018) lists vibration source levels for the construction equipment most likely to generate high levels of ground vibration. The equipment listed in the FTA table includes impact and sonic pile drivers, clam shovel drops, hydromills, vibratory rollers, hoe rams, large and small bulldozers, caisson drilling, loaded trucks, and jackhammers. Table 3.11-5 below summarizes typical reference vibration levels generated by select construction equipment.

Table 3.11-5: Vibration Source Levels for Construction Equipment

Equipment	PPVref at 25 Feet
Pile Driver (Impact)	1.518 – Upper Range 0.644 - Typical
Vibratory roller	0.210
Large bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003

Source: FTA 2018

Vibration amplitude attenuates over distance and is a complex function of how energy is imparted into the ground and the soil conditions through which the vibration is traveling. The following equation can be used to estimate the vibration level at a given distance for typical soil conditions (FTA 2018). “PPVref” is the reference PPV from Table 5 and “Distance” is the distance between the source and the receptor:

$$PPV = PPV_{ref} \times (25/Distance)^{1.5}$$

Existing Project Setting

Mobile Sources

The predominant noise source in the City of Seal Beach originates from the movement of motor vehicles on roadways. While some of the noise comes from the engine and exhaust, at higher speeds tires and wind noise predominate. Several major arterial roadways pass through the City, including the San Diego Freeway (I-405), the San Gabriel River Freeway (I-605), the Garden Grove Freeway (SR 22), Pacific Coast Highway (SR 1), and arterial roadways. These major roadways bisect residential, commercial, public, and industrial areas, therefore mobile sources along these routes means that noise levels from traffic are audible throughout areas of the City.



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The City of Seal Beach also encompasses the Naval Weapons Station Seal Beach in the southeast half of the City. The base has “evolved into the Navy’s primary West Coast ordnance storage, loading and maintenance installation. Under the station’s primary tenant, the Navy Munitions Command, cruisers, destroyers, frigates, and medium-sized amphibious assault ships are loaded with missiles, torpedoes, countermeasures devices and conventional ammunition at the facility’s 1,100 foot-long pier. Personnel also perform maintenance on some weapons systems. An average of 40 vessels are loaded or unloaded each year. The weapons station services a majority of the U.S. Pacific Fleet” (United States Navy 2024).

In addition, noise levels within the City are affected by overflights from military aircraft from the Los Alamitos JFTB and from civilian aircraft from the Long Beach Airport. The Los Alamitos JFTB aircraft flights occur over residential and other noise sensitive land uses within the City. The CNEL contours from the Air Installations Compatible Use Zone (AICUZ) study for the Los Alamitos JFTB are contained within the Noise Element of the City of Seal Beach General Plan. Some residential noise sensitive areas north of I-405 experience aircraft-generated noise levels greater than 65 CNEL.

Also as noted in the City of Seal Beach General Plan, the 65 CNEL noise contour for Long Beach Airport is located approximately three miles outside the City of Seal Beach boundary. Therefore, aircraft noise generated from the Long Beach Airport will not have a significant impact on residential and other noise sensitive land uses within the City.

Other mobile sources within Seal Beach include trucks, cars, motorcycles, buses, leaf blowers, lawn mowers, and other portable maintenance equipment. These are considered typical sounds of a city and are regulated by the City’s Municipal Code (Chapter 7.15) and the Noise Element in the City’s General Plan (City of Seal Beach 2003, 2024).

Fixed Noise Sources

Stationary sources of noises may occur from all types of land uses. Residential uses would generate noise from primarily air conditioning systems. Commercial and industrial uses would generate noise from heating, ventilation, air conditioning (HVAC) systems, loading docks and other sources. Stationary equipment often generates noise on a continual basis due to the functioning of the equipment. Other common noise sources from fixed locations includes nightclubs, outdoor dining areas, gas stations, car washes, fire stations, drive-throughs, swimming pool pumps, school playgrounds, athletic and music events, and public parks.

Existing Vibrations

Commercial and industrial operations can generate varying degrees of ground vibration, depending on the operational procedures and equipment. Such equipment-generated vibrations spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity of the vibration source 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.



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3.11.2 Regulatory Setting

Federal, state, and local agencies regulate different aspects of environmental noise. Generally, the federal government sets standards for transportation-related noise sources closely linked to interstate commerce, including aircraft, locomotives, and trucks. The state government sets standards for transportation noise sources such as automobiles, light trucks, and motorcycles. Noise sources associated with industrial, commercial, and construction activities are generally subject to local control through noise ordinances and general plan policies. Local general plans identify general principles intended to guide and influence development plans.

Federal

Federal Highway Administration

Proposed federal or federal-aided highway construction projects at a new location, or the physical alteration of an existing highway that significantly changes the horizontal or vertical alignment or increases the number of through-traffic lanes, require an assessment of noise and consideration of noise abatement per 23 CFR Part 772, "Procedures for Abatement of Highway Traffic Noise and Construction Noise." The Federal Highway Administration (FHWA) has adopted noise abatement criteria for sensitive receivers—such as picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals—when "worst-hour" noise levels approach or exceed 67 dBA Leq (Caltrans 2020).

U.S. Environmental Protection Agency

In addition to FHWA standards, the EPA has identified the relationship between noise levels and human response. The EPA determined that over a 24-hour period, an Leq of 70 dBA will result in some hearing loss. Interference with activity and annoyance will not occur if exterior levels are maintained at an Leq of 55 dBA and interior levels at or below 45 dBA. These levels are relevant to planning and design and useful for informational purposes, but they are not land use planning criteria because they do not consider economic cost, technical feasibility, or the needs of the community; therefore, they are not mandated. The EPA also set 55 dBA Ldn as the basic goal for exterior residential noise intrusion. However, other federal agencies, in consideration of their own program requirements and goals, as well as the difficulty of actually achieving a goal of 55 dBA Ldn, have settled on the 65 dBA Ldn level as their standard. At 65 dBA Ldn, activity interference is kept to a minimum, and annoyance levels are still low. It is also a level that can realistically be achieved.

U.S. Department of Housing and Urban Development

The U.S. Department of Housing and Urban Development (HUD) has set the goal of 65 dBA Ldn as a desirable maximum exterior standard for residential units developed under HUD funding (this level is also generally accepted within the State of California). Although HUD does not specify acceptable interior noise levels, standard construction of residential dwellings typically provides 20 dBA or more of attenuation with the windows closed. Based on this premise, the interior Ldn should not exceed 45 dBA.



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Occupational Health and Safety Administration

The federal government regulates occupational noise exposure common in the workplace through the Occupational Health and Safety Administration (OSHA) under the EPA. Noise limitations would apply to the operation of construction equipment and could also apply to any proposed industrial land uses. Noise exposure of this type is dependent on work conditions and is addressed through a facility's Health and Safety Plan, as required under OSHA, and is therefore not addressed further in this analysis.

State

California Building Code

Part 2, Title 24 of the CCR California Noise Insulation Standards establishes minimum noise insulation standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and dwellings other than single-family residences. Under Section 1207.11, Exterior Sound Transmission Control, interior noise levels attributable to exterior noise sources cannot exceed 45 dB(A) Ldn in any habitable room. Where such residences are located in an environment where exterior noise is 60 dB(A) Ldn or greater, an acoustical analysis is required to ensure interior levels do not exceed the 45 dB(A) Ldn interior standard. If the interior allowable noise levels are met by requiring that windows be kept closed, the design for the building must also specify a ventilation or air conditioning system to provide a habitable interior environment.

California Green Building Standards

CalGreen establishes interior noise insulation standards for non-residential occupied buildings, such as office buildings. The CalGreen code also applies to occupied non-residential spaces within a multi-family residential building, such as community rooms, offices, etc. CalGreen Section 5.507, Environmental Comfort, states the following:

5.507.4.1 Exterior noise transmission. Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite sound transmission class (STC) rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations:

Within the 65 CNEL noise contour of an airport

Exceptions:

Ldn or CNEL for military airports shall be determined by the facility Air Installation Compatible Land Use Zone (AICUZ) plan.

Ldn or CNEL for other airports and heliports for which a land use plan that has not been developed shall be determined by the local general plan noise element.

Within the 65 CNEL or Ldn noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway noise source as determined by the Noise Element of the General Plan.



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5.507.4.1.1 Noise exposure where noise contours are not readily available. Buildings exposed to a noise level of 65 dB Leq-1-hr during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).

5.507.4.2 Performance method. For buildings located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (Leq -1Hr) of 50 dBA in occupied areas during any hours of operations

5.507.4.2.1 Site features. Exterior features such as sound walls or earth berms may be utilized as appropriate to the building, addition, or alteration project to mitigate sound migration to the interior.

5.507.4.2.2 Documentation of compliance. An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.

5.507.4.3 Interior sound transmission. Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

California Environmental Quality Act

CEQA Guidelines, Appendix G, indicates a significant noise impact may occur if a project exposes persons to noise or vibration levels in excess of local general plans or noise ordinance standards, or cause a substantial permanent or temporary increase in ambient noise levels. CEQA standards are discussed more below under Section 3.11.3, Environmental Impacts.

Local

City of Seal Beach General Plan

The Noise Element in the City of Seal Beach General Plan “quantifies the community noise environment in terms of noise exposure contours for near-term and long-term levels of growth and traffic activity. The Noise Element identifies noise sensitive land uses and noise sources and defines areas of noise impact for the purpose of developing programs to ensure that Seal Beach residents will be protected from excessing noise intrusion.”

Figure N-3 “Noise/Land Use Compatibility Guidelines” in the City of Seal Beach General Plan (shown below) identifies land use compatibility noise standards for noise-sensitive land uses affected by transportation and non-transportation noise sources.



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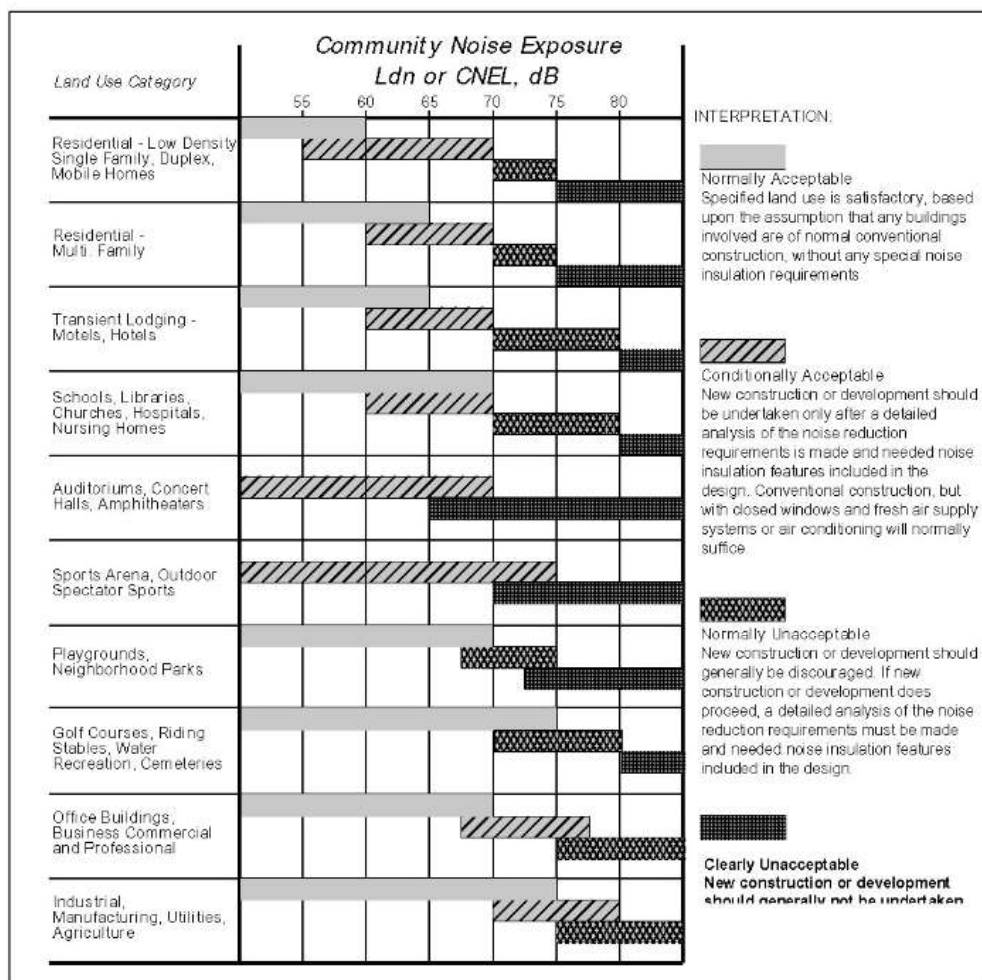


Figure N-3 – Noise/Land Use Compatibility Guidelines

The City of Seal Beach General Plan also lists the following goal, objectives, and actions relating to noise:

Goals: A beach town should be a quiet place where one can hear the surf and the wind. Reduce the level of noise, so that it causes less human stress or health damage, is not as likely to interfere with human activities such as sleep, work, play, or thought, and allow the peaceful existence of wildlife and pets.

- **Objectives:**

The identification in quantitative, numerical terms of existing and projected noise levels, noise sources, and noise-sensitive land uses in the City of Seal Beach.

Establishment of appropriate criteria and guidelines for desirable sound levels and the identification of means available to achieve those sound levels in the City of Seal Beach.



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Direction for an implementation program that may be used to achieve and maintain a minimal noise environment.

Maintain the relatively quiet areas of Seal Beach by regulating existing and potential noise sources, especially in public open space and the designated Wildlife Refuge area.

Inform the citizenry of Seal Beach of real and potential noise hazards, both physical and psychological.

The City shall encourage a long-term development pattern that minimizes noise conflicts through planning and zoning.

The City shall require the construction of barriers to mitigate sound emissions where necessary and feasible to protect outdoor noise sensitive land uses.

The City shall require the inclusion of noise mitigation measures in the design of new roadway projects in Seal Beach.

The City shall minimize potential transportation noise through proper design of street circulation, coordination of routing, and other traffic control measures.

The City shall ensure the effective enforcement of city, state, and federal noise level standards by all appropriate city divisions. The city shall provide quick response to complaints and rapid abatement of noise nuisances within the scope of the city's police powers.

Actions:

Issue 1 – Transportation Noise Control.

The most efficient and effective means of controlling noise from transportation systems is reducing noise at the source. However, since the City has little direct control over source noise levels because of state and federal preemption (e.g., State Motor Vehicle Noise Standards), policies should be focused on reducing the impact of the noise on the community. Cooperative efforts with state and federal offices are essential.

Encourage the use of walls and berms in the design of residential or other noise sensitive land uses that are adjacent to major roads, commercial, or industrial areas.

Provide for continues evaluation of truck movements and routs in the City to provide effective separation from residential or other noise sensitive land uses.

Encourage the enforcement of State Motor Vehicle noise standards for cars, trucks, and motorcycles through coordination with the California Highway Patrol and Seal Beach Police Department.



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Aircraft noise standards shall be enforced by the local Airport Environ Land Use Plan (AELUP), which is regulated by the local Airport Land Use Commission (ALUC) and the Federal Aviation Administration (FAA).

Issue 2 – Noise and Land Use Planning Integration.

Community noise considerations are to be incorporated into land planning. These measures are intended to prevent future noise and land-use incompatibilities.

The criteria shown previously in Figure N-3 are used to assess the compatibility of proposed land uses with the noise environment. These criteria are the basis for review of projects to ensure the compatibility between land-use and noise environment. These guidelines are the primary tool that will allow the City to ensure noise integrated planning for compatibility between land uses and outdoors.

Incorporate noise reduction features during site planning to mitigate anticipated noise impacts on affected noise sensitive land uses. The noise referral zones (areas exposed to noise levels greater than 60 CNEL) can be used to identify locations or potential conflict. New developments will be permitted only if appropriate mitigation measures are included such that the standards contained in this Element or the ordinance are met.

Enforce the State of California Uniform Building Code that specifies that the indoor noise levels for residential living spaces not exceed 45 dB[A] LDN/CNEL due to the combined effect of all noise sources. The state requires implementations of this standard when the outdoor noise levels exceed 60 dB[A] LDN/CNEL. The Noise Referral Zones (60 CNEL) can be used to determine when this standard needs to be addressed. The Uniform Building Code requires that “Interior community noise levels (CNEL/LDN) with windows closed, attributable to exterior sources shall not exceed an annual CNEL or LDN of 45 dB[A] in any habitable room.” The code requires that this standard be applied to all new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings. The City can and is encouraged to reduce the noise standard from 45 CNEL to 40 CNEL. Additionally, the standard should be applied to single-family homes.

Issue 3 – Community Noise Control for Non-Transportation Noise Sources.

The focus of noise from non-transportation sources is the Community Noise Ordinance. The ordinance can be used to protect people from noise generated on adjacent properties.

The purpose of the ordinance is to protect people from non-transportation-related noise sources such as music, machinery and pumps, air conditioners, landscaping and gardening activities, and truck traffic on private property. The Noise Ordinance does not apply to motor vehicle noise on public streets, but it does apply to motor vehicle noise on private property. The Noise Ordinance is designed to protect quiet residential areas from stationary noise sources. The noise levels encouraged by the ordinance are typical of quiet residential areas.



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Continue to enforce the community Noise Ordinance. The most effective method to control community noise impacts from non-transportation noise sources is through application of the community noise ordinance.

All new residential projects to be constructed near existing non-transportation noise sources (including, but not limited to commercial facilities, public parks with sports activities) must demonstrate via an acoustical study conducted by a Registered Engineer that the indoor noise levels will be consistent with the limits contained in the noise ordinance.

Require construction activity to comply with the limits establishes in the City Noise Ordinance.

Designate one agency in the City to act as the noise control coordinator. This will ensure the continued operation of noise enforcement efforts in the city.

City of Seal Beach Municipal Code

Chapter 7.15 “NOISE” in the City’s Municipal Code offers the following limits and requirements relating to noise in the City.

- **7.15.010 Designated Noise Zones.** The noise zones of the City are as follows:
 - A. Noise Zone 1: Residential properties.
 - B. Noise Zone 2: Commercial properties.
 - C. Noise Zone 3: Industrial, manufacturing and oil properties.
- **7.15.015 Exterior Noise Standards.**
 - A. Unless otherwise specifically indicated, the following exterior noise standards shall apply to all property within a designated noise zone:

Noise Zone	Noise Standards:	
	Noise Level	Time Period
1	55 db(A)	7:00 a.m. - 10:00 p.m.
	50 db(A)	10:00 p.m. - 7:00 a.m.
2	65 db(A)	At any time
3	70 db(A)	At any time

- B. No person shall create any noise, or allow the creation of any noise, on property owned or occupied by such person when such noise causes the noise level to exceed the following when measured from a residential property:
 1. The exterior noise standard for a cumulative period of more than 30 minutes in any hour.
 2. The exterior noise standard plus 5 dB(A) for a cumulative period of more than 15 minutes in any hour.



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3. The exterior noise standard plus 10 db(A) for a cumulative period of more than 5 minutes in any hour.
 4. The exterior noise standard plus 15 db(A) for a cumulative period of more than one minute in any hour.
 5. The exterior noise standard plus 20 db(A) for any period of time.
- C. In the event the ambient noise level exceeds any of the first 4 noise limit categories in subsection B, the cumulative period applicable to such category shall be increased to reflect that ambient level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.
- **7.15.020 Interior Noise Standards.**

- A. Unless otherwise specifically indicated, the following interior noise standards shall apply to all residential property within a designated noise zone:

Noise Zone	Noise Standards:	
	Noise Level	Time Period
1	55 db(A)	7:00 a.m. - 10:00 p.m.
	50 db(A)	10:00 p.m. - 7:00 a.m.

In the event the alleged offensive noise consists of impact noise, simple tone noise, speech, music or any combination thereof, each of the above noise levels shall be reduced by 5 dB(A).

- B. No person shall create any noise, or allow the creation of any noise, on property owned or occupied by such person when such noise causes the noise level to exceed the following when measured from another dwelling unit on residential property:
1. The interior noise standard for a cumulative period of more than 5 minutes in any hour.
 2. The interior noise standard plus 5 db(A) for a cumulative period of more than one minute in any hour.
 3. The interior noise standard plus 10 db(A) for any period of time.
- C. In the event the ambient noise level exceeds either of the first 2 noise limit categories in subsection B, the cumulative period applicable to such category shall be increased to reflect that ambient level. In the event the ambient noise level exceeds the third noise limit category, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.



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- **7.15.025 Exemptions.** The following activities are exempt from the provisions of this chapter:
 - A. Activities conducted on the grounds of a nursery, elementary, intermediate or secondary school or college.
 - B. Activities conducted pursuant to a special event permit issued by the city.
 - C. Activities conducted at a publicly owned park or playground.
 - D. Any mechanical device, apparatus or equipment used in connection with emergency machinery, vehicle or work.
 - E. Noise associated with construction, repair, remodeling or grading of real property performed in the following periods: between 7:00 a.m. and 8:00 p.m. on weekdays; and between 8:00 a.m. and 8:00 p.m. on Saturday.
 - F. Noise associated with real property maintenance performed in the following periods: between 7:00 a.m. and 8:00 p.m. on weekdays; between 8:00 a.m. and 8:00 p.m. on Saturday; and between 9:00 a.m. and 8:00 p.m. on Sunday or a holiday.
 - G. Activities for which local noise regulations are preempted by federal or state law.
- **7.15.030 Schools, Hospitals and Churches.**
 - A. No person shall create any noise that causes the noise level at a school, hospital or church to exceed the exterior noise standard for the noise zone in which such facility is located.
 - B. No person shall create any noise that causes the noise level at a school, hospital or church to interfere unreasonably with the operation of the facility.
 - C. The prohibitions of this section apply only if signs are conspicuously displayed at 3 separate locations within one-tenth of a mile of the school, hospital or church. Additionally, the prohibitions of this section apply only if the school, hospital or church is in use.
- **7.15.035 Heating, Venting, and Air Conditioning Equipment.**
 - A. No building permit shall be issued for the installation of heating, venting and air conditioning ("HVAC") equipment in or adjacent to residential areas if the noise produced by the HVAC equipment exceeds an A-weighted exterior sound pressure level of 50 dB(A). The method of computation used shall be that specified in the "Application of Sound Rating Levels of Outdoor Unitary Equipment," Standard 275, Air-Conditioning and Refrigeration Institute, 1997 ed. or the latest revision thereof.
 - B. Notwithstanding subsection A of this section, a building permit may be issued for the installation of:



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1. HVAC equipment containing a timing device deactivating the HVAC equipment between the hours of 10:00 p.m. and 7:00 a.m. provided the noise produced by the HVAC equipment does not exceed an A-weighted exterior sound pressure level of 55 dB(A).
2. HVAC equipment generating noise that does not exceed an A-weighted exterior sound pressure level of 65 dB(A), provided that the applicant obtains the prior written consent of the owner of each property where the exterior sound pressure level would exceed 55 dB(A).

3.11.3 Environmental Impacts

This section analyzes the Project's potential to result in significant noise impacts. When an impact is determined to be significant, mitigation measures are identified that would reduce or avoid impacts.

Methodology for Analysis

Construction Noise Thresholds

The City of Seal Beach does not have specific limits or thresholds for construction noise but rather limits the times of construction as shown in Section 7.15.025 of the City's Municipal Code.

Stationary Noise Thresholds

The City's Municipal Code Sections 7.15.015 and 7.15.020 provides exterior and interior noise standards for new development with new stationary noise sources, respectively. For the purposes of this analysis, these standards are used to determine significant stationary noise impacts.

Transportation Noise Thresholds

A Project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas. Most people can detect changes in sound levels of approximately 3 dB(A) under normal, quiet conditions, and changes of 1 to 3 dBA are detectable under very quiet, controlled conditions. Changes of less than 1 dB(A) are usually indiscernible. A change of 5 dB(A) is readily discernible to most people in an exterior environment. Based on this, the following thresholds of significance, similar to those recommended by the FAA, are used to assess traffic noise impacts at sensitive receptor locations (e.g., residential dwellings, schools, hospitals, educational facilities, and libraries). A significant impact would occur if traffic noise increase would exceed: 1.5 dB(A) in ambient noise environments of 65 dBA CNEL and higher, 3 dB(A) in ambient noise environments of 60 to 64 dBA CNEL, and 5 dB(A) in ambient noise environments of less than 60 dBA CNEL.

Vibration Thresholds

The City does not have specific limits or thresholds for construction vibration. Therefore, the recommended criteria by Caltrans for human annoyance and vibration damage shown in Tables 3.11-3 and 3.11-4 above are used in this analysis.



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Thresholds of Significance

In accordance with the current CEQA Guidelines Appendix G Environmental Checklist, the following questions were analyzed and evaluated to determine whether noise impacts are significant.

Would the Project result in:

- *Generation of a substantial temporary or permanent increase in the ambient noise levels in the vicinity of the Project noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*
- *Generation of excessive groundborne vibration or groundborne noise levels?*
- *For a Project located within the vicinity of a private airstrip or 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, would the Project expose people residing or working in the Project area to excessive noise levels?*

Impact Analysis and Mitigation Measures

Noise Levels in Excess of Standards

Impact NOI-1	The Project would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
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Impact Analysis

Construction

The Project is intended to result in the construction of future residential developments which would generate temporary noise level increases on and adjacent to existing development in the City.

Construction is performed in distinct steps, each of which has its own mix of equipment, and, consequently, its own noise characteristics. Table 3.11-6 lists typical construction equipment noise levels recommended for noise-impact assessments based on a distance of 50 feet between the equipment and noise receptor.

Table 3.11-6: Reference Construction Equipment Noise Levels

Construction Equipment Source at the Project Site	Distance to Nearest Sensitive Receptor	Sound Level at Receptor		
		Lmax, dB(A)	Acoustical Use Factor (%)	Leq, dB(A)
Backhoe	50 feet	77.6	40	73.6
Compressor (air)	50 feet	77.7	40	73.7



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Construction Equipment Source at the Project Site	Distance to Nearest Sensitive Receptor	Sound Level at Receptor		
		Lmax, dB(A)	Acoustical Use Factor (%)	Leq, dB(A)
Concrete/Industrial Saw	50 feet	89.6	20	82.6
Crane	50 feet	80.6	16	72.6
Dozer	50 feet	81.7	40	77.7
Dump Truck	50 feet	76.5	40	72.5
Excavator	50 feet	80.7	40	76.7
Forklift (Gradall)	50 feet	83.4	40	79.4
Front End Loader	50 feet	79.1	40	75.1
Generator	50 feet	80.6	50	77.6
Grader	50 feet	85.0	40	81.0
Pavement Scarafier	50 feet	89.5	20	82.5
Paver and Paving Equipment	50 feet	77.2	50	74.2
Pumps	50 feet	80.9	50	77.9
Roller	50 feet	80.0	20	73.0
Scraper	50 feet	83.6	40	79.6
Tractor	50 feet	84.0	40	80.0
Welder / Torch	50 feet	74.0	40	70.0

Source: Federal Highway Administration Road Construction Noise Model v1.1 2018

As shown, construction equipment generates high levels of noise, with average noise levels ranging from 73 to 83 dB(A). Construction of individual future developments associated with implementation of the Project would temporarily increase the ambient noise environment and would have the potential to affect noise sensitive land uses in the vicinity of an individual project. Construction noise levels are highly variable and dependent upon the specific locations, site plans, construction details of individual projects. Significant noise impacts may occur from operation of heavy earth-moving equipment and truck haul operations that would occur during the construction phase of an individual development.

The City's Municipal Code includes noise mitigation measures such as limiting hours of operation for construction. Municipal Code Section 7.15.025.E exempts noise associated with construction, repair, remodeling, or grading or real property performed between 7:00 A.M. and 8:00 P.M. on weekdays; and between 8:00 A.M. and 8:00 P.M. on Saturday. Furthermore, Municipal Code Section 7.15.015 requires stationary equipment not exceed the maximum allowable noise levels listed in the table (shown above). The General Plan Noise Element also requires construction activity to comply with the limits established in the City Municipal Code. Even with the application of noise attenuation policies from the General Plan and Municipal Code, it is likely that construction noise would affect adjacent sensitive receptors, therefore construction noise impacts associated with implementation of the Project are considered potentially significant. As such, Mitigation Measure NOI-1 described below has been identified to reduce potential



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impacts. Mitigation Measure NOI-1 requires Project applicants to describe and commit to a mitigation plan that would be developed when the individual project information is available to make final decisions on all specific mitigation measures to be implemented. Additionally, Mitigation Measure NOI-1 lists potential provisions that could be included in the mitigation plan. With implementation of Mitigation Measure NOI-1, the Project would have a less than significant impact.

This EIR includes a discussion of the residential component of the ORCC Specific Plan Project based on the site location and proposed buildout of the 167 dwelling units that are included within the City's site inventory to meet its RHNA requirements. Construction of the residential component of the ORCC Specific Plan Project may result in construction noise that would affect adjacent sensitive receptors. As with the Project, construction of the residential component of the ORCC Specific Plan Project would still be required to comply with the requirements of the City's Municipal Code and the General Plan Noise Element policies to minimize construction noise and therefore, the 167 dwelling units proposed under the ORCC Specific Plan Project were considered within the analysis of this Project. Specific impact findings associated with the development of the ORCC Specific Plan Project are being evaluated in a standalone EIR.

Operation

The Project would expose nearby noise sensitive receptors to noise from operations associated with increased traffic and stationary operational noise, such as lawn maintenance and air conditioning equipment. All new residential development under the Project would be required to comply with the policies in the City's General Plan Noise Element and noise limits in the Municipal Code, which would reduce noise impacts to less than significant.

Operational Traffic

Implementation of the Project would facilitate new development and would impact offsite sensitive receptors due to Project-related traffic. Vehicle trips associated with future developments would increase traffic volumes throughout the City along the entire existing roadway network. The total additional vehicle trips would be dispersed throughout the City associated with each proposed housing site. As such, traffic from the Project would represent an incremental increase in traffic on individual roadways and result in a less than significant impact related to noise.

The City's Noise Element includes actions to control the development of noise-sensitive land uses in areas exposed to existing or projected noise which exceed the levels specified in Figure N-3 of the General Plan (shown above) unless the project includes specific and effective mitigation measures to reduce noise levels. Where noise-sensitive projects are proposed within areas which exceed standards in Figure N-3 of the General Plan, future developments will need to prepare a report that performs a project specific analysis of noise impacts and recommend mitigation measures to reduce noise levels in the site to comply with standards set in Figure N-3 of the General Plan. Following the noise level standards set in the City's Noise Element for noise exposure from transportation noise sources would result in less than significant impact.



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As discussed, this EIR includes a discussion of the residential component of the ORCC Specific Plan Project based on the site location and proposed buildout of the 167 dwelling units that are included within the City's site inventory to meet its RHNA requirements. Operation of the residential component of the ORCC Specific Plan Project may increase traffic volumes. However, the total additional vehicle trips associated with the Project, include the residential component of the ORCC Specific Plan Project, would be dispersed throughout the City and represent an incremental increase in traffic related noise. Therefore, the 167 dwelling units proposed under the ORCC Specific Plan Project were considered within the analysis of this Project. Specific impact findings associated with the development of the ORCC Specific Plan Project are being evaluated in a standalone EIR.

Operational Stationary Noise

Implementation of the Project would facilitate the addition of new development throughout the City. New development would result in the installation of HVAC systems. Future developments would need to comply with the noise level limits listed within Sections 7.15.015 and 7.15.020 in the City's Municipal Code. Following the regulations in the City's Noise Ordinance would result in impacts related to stationary noise to be less than significant.

This EIR includes a discussion of the residential component of the ORCC Specific Plan Project based on the site location and proposed buildout of the 167 dwelling units that are included within the City's site inventory to meet its RHNA requirements. The residential component of the ORCC Specific Plan Project may install HVAC systems that generate operational stationary noise. As with the Project, the residential component of the ORCC Specific Plan Project would still need to comply with the noise level limits listed within Sections 7.15.015 and 7.15.020 in the City's Municipal Code. Therefore, the 167 dwelling units proposed under the ORCC Specific Plan Project were considered within the analysis of this Project. Specific impact findings associated with the development of the ORCC Specific Plan Project are being evaluated in a standalone EIR.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM NOI-1: **Noise Mitigation Plan.** Project applicants shall describe and commit to a mitigation plan that will be developed when the information is available to make final decisions on all specific mitigation measures. The objective of the plan should be to minimize construction using all reasonable (e.g., cost vs. benefit) and feasible (e.g., possible to construct) means available. Components of a mitigation plan may include some or all of the following provisions, which should also be specified in construction contracts.

- During the entire active construction period, equipment and trucks used for project construction shall use the best-available noise control techniques available. (e.g., mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds).



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- Impact tools (e.g., jack hammers and hoe rams) shall be hydraulically or electrically powered wherever possible. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools.
- Stationary equipment, such as generators and air compressors shall be located as far as possible from nearby noise-sensitive uses.
- Stockpiling shall be located as far as possible from nearby noise-sensitive receptors.
- Construction traffic shall be limited to approved haul routes established by the City.
- Construct noise barriers, such as temporary walls or piles of excavated material, between noisy activities and noise-sensitive receptors.
- Combine noisy operations to occur in the same time period. The total noise level produced will not be substantially greater than the level produced if the operations were performed separately.
- At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction days and hours, as well as the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, they shall investigate, take appropriate corrective action, and report the action to the City.
- Signs shall be posted at the job site entrance(s), within the onsite construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment shall be turned off if not in use for more than 5 minutes.
- During the entire active construction period, the use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. The construction manager shall use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws.

Level of Significance After Mitigation

Less Than Significant with Mitigation.



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Excessive Groundborne Vibration

Impact NOI-2	The Project would not result in generation of excessive groundborne vibration or groundborne noise levels.
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Impact Analysis

Construction Vibration Impacts

Construction activity at projects within the plan area would generate varying degrees of ground vibration, depending on the construction procedures and equipment. Operation of construction equipment generates vibrations that spread through the ground and diminish with distance from the source. The effect on buildings 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. Vibration from construction activities rarely reaches the levels that can damage structures but can achieve the audible and perceptible ranges in buildings close to the construction site. Table 3.11-5 lists reference vibration levels for construction equipment.

As shown in Table 3.11-4, vibration generated by construction equipment has the potential to be substantial, since it can exceed the Caltrans criteria for architectural damage (e.g., 0.12 inches per second [in/sec] PPV for fragile buildings, 0.30 in/sec PPV for older residential structures, and 0.5 in/sec PPV for new residential and commercial buildings). Construction details and equipment for future project-level developments under the Project are not known at this time but may cause vibration impacts. This would be a potentially significant impact. As such, Mitigation Measure NOI-2 described below has been identified to reduce potential impacts. Mitigation Measure NOI-2 requires Project applicants to prepare a noise and vibration analysis to assess and mitigate potential noise and vibration impacts related to construction activities prior to issuance of a building permit. With implementation of Mitigation Measure NOI-2, the Project would have a less than significant impact.

This EIR includes a discussion of the residential component of the ORCC Specific Plan Project based on the site location and proposed buildout of the 167 dwelling units that are included within the City's site inventory to meet its RHNA requirements. As with the Project, construction details and equipment associated with the development of the residential component of the ORCC Specific Plan Project are not known at this time; however, would be subject to a vibration and noise analysis to assess potential impacts. Specific vibration impact findings associated with the development of the ORCC Specific Plan Project are being evaluated in a standalone EIR.

Operational Vibration Impacts

Operational vibration is typically associated with commercial and industrial uses which can generate varying levels of groundborne vibration, depending on operational procedures and equipment. Other sources of groundborne vibration include rail traffic and subways. The Project would allow for future developments with conventional road traffic that is not anticipated to generate significant levels of operational vibration. Therefore, impacts would be less than significant.



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This EIR includes a discussion of the residential component of the ORCC Specific Plan Project based on the site location and proposed buildout of the 167 dwelling units that are included within the City's site inventory to meet its RHNA requirements. Similar to the Project, the residential component of the ORCC Specific Plan Project would result in a use that would generate conventional road traffic that is not anticipated to generate significant levels of operational vibration. Therefore, development of the 167 dwelling units proposed under the ORCC Specific Plan Project were considered within the analysis of this Project. Specific impact findings associated with the development of the ORCC Specific Plan Project are being evaluated in a standalone EIR.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM NOI-2: Noise and Vibration Analysis. Prior to issuance of a building permit for a project requiring pile driving during construction within 135 feet from fragile structures, such as historical resources, 75 feet from older residential structures, of non-engineered timber and masonry buildings (e.g., most residential buildings), or within 55 feet of new residential or commercial buildings; or a vibratory roller within 25 feet of any structure, the project applicant shall prepare a noise and vibration analysis to assess and mitigate potential noise and vibration impacts related to these activities. A qualified and experienced acoustical consultant or engineer shall conduct this noise and vibration analysis. The vibration levels shall not exceed the Caltrans damage thresholds listed in the table below. If vibration levels would exceed this threshold, alternative uses such as drilling piles as opposed to pile driving and static rollers as opposed to vibratory rollers shall be used. If necessary, construction vibration monitoring shall be conducted to ensure vibration thresholds are not exceeded.

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile ¹ buildings	0.30	0.12
Historic and some old buildings	0.50	0.20
Older ² residential structure	0.70	0.30
New residential structures	1.2	0.50



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Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Sources
Modern industrial/commercial buildings	2.0	0.50

Notes:

Transient sources again create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seal equipment, vibratory pile drivers, and vibratory compaction equipment.

¹ A fragile building is considered one where the structural components are weakened due to age, poor construction materials, or significant deterioration, making it susceptible to damage from even minor stress.

² An older building refers to a structure that has been around for a considerable period of time, regardless of its current structural integrity, with factors like construction materials, maintenance history, and design playing a role in determining its overall condition.

Source: Caltrans 2020

Level of Significance After Mitigation

Less Than Significant Impact with Mitigation.

Airport Land Use Plan

Impact NOI-3	For a Project located within the vicinity of a private airstrip or 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, the Project would not expose people residing or working in the Project area to excessive noise levels.
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Impact Analysis

Noise levels within portions of Seal Beach are affected by overflights from military and civilian aircraft from the Los Alamitos JFTB and from civilian aircraft from the Long Beach Airport. The Los Alamitos JFTB aircraft flights occur over residential and other noise sensitive land uses within the City. The CNEL contours from the AICUZ study are contained within the Noise Element of the City of Seal Beach General Plan. Residential noise sensitive areas north of I-405 experience aircraft-generated noise levels greater than 65 CNEL.

The City's Noise Element includes actions to control the development of noise-sensitive land uses in areas exposed to existing or projected noise which exceed the levels specified in Figure N-3 of the General Plan unless the project includes specific and effective mitigation measures to reduce noise levels. This includes noise generated from aircraft flyovers. The City's General Plan Noise Element states "all new residential projects to be constructed near existing non-transportation noise sources (including, but not limited to commercial facilities, public parks with sports activities) must demonstrate via an acoustical study conducted by a Registered Engineer that the indoor noise levels will be consistent with the limits contained in the noise ordinance." Where noise-sensitive projects are proposed within areas which exceed standards in Figure N-3 of the General Plan, future developments will be required to prepare a report that performs a project specific analysis of noise impacts and recommend mitigation measures to reduce noise levels in the site to comply with standards set in Figure N-3. Following the



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noise level standards set in the City's Noise Element for noise exposure and compliance with the City's requirements for preparation of an acoustical study would reduce potential impacts and the Project would result in a less than significant impact.

This EIR includes a discussion of the residential component of the ORCC Specific Plan Project based on the site location and proposed buildout of the 167 dwelling units that are included within the City's site inventory to meet its RHNA requirements. The residential component of the ORCC Specific Plan Project may experience aircraft-generated noise levels greater than 65 CNEL as it is located north of I-405 and near the Los Alamitos JFTB. Similar to the Project, the residential component of the ORCC Specific Plan Project would be subject to the noise level standards and actions in the City's Noise Element, which include the preparation of an acoustical study or implementation of project-specific mitigation measures to reduce noise levels. Therefore, the 167 dwelling units proposed under the ORCC Specific Plan Project were considered within the analysis of this Project. Specific impact findings associated with the development of the ORCC Specific Plan Project are being evaluated in a standalone EIR.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

No mitigation is necessary.

Level of Significance After Mitigation

Less Than Significant Impact.

3.11.4 Cumulative Impacts

CEQA requires that EIRs evaluate the potential cumulative impacts of a project. A project's environmental impacts are "cumulatively considerable" if the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (CEQA Guidelines Section 15065(a)(3)). The geographic scope for cumulative noise impacts is the immediate project vicinity. This geographic scope is appropriate for noise as effects of noise are highly localized.

As discussed in Section 3.0, Environmental Analysis, CEQA Guidelines Section 15130 requires cumulative impact analysis in EIRs to consider a list of planned and pending projects that may contribute to the cumulative impacts of a project. Section 3.0, Table 3.0-3 identifies all past, present, and probable future residential projects in the City and surrounding areas that may impact the Project. Table 3.11-7 identifies the cumulative past, present, and probable future projects from Table 3.0-3 that may drive a potential cumulative impact related to noise and therefore were analyzed in this cumulative discussion.



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Table 3.11-7: Cumulative Projects Related to Noise

#	Project Name	Location	Project Characteristics	Status	Total Dwelling Units
1	Old Ranch Country Club Project	Old Ranch Country Club, City of Seal Beach	Construction of a 116-unit, 4-level (188,500 square feet) multi-family housing development; a 51-unit, 3-level senior housing complex; medical office facility; overnight accommodation, including a bar and lounge and specialty restaurant	Preparation of EIR	167
2	Naval Weapons Station	Pacific Coast Hwy & Seal Beach Boulevard	Potential future housing developments proposed within the Naval Weapons Station	Anticipated	150

These two cumulative projects listed in the table above are located within close proximity to and adjacent to one of the Housing Opportunity Sites. Cumulative project 1 is located adjacent to and within close proximity to Housing Opportunity Sites 4 and 5. Cumulative project 2 is located within close proximity to Housing Opportunity Site 1. All other cumulative projects listed in Table 3.0-3 in Section 3.0, Environmental Analysis, are located more than a quarter mile away from a Housing Opportunity Site or Main Street Program area and would not result in a cumulatively considerable impact to noise when considered with the Project. If the two cumulative projects listed in the table above were to have the same construction schedule and timeline as the adjacent Housing Opportunity Site, then there could be a cumulatively considerable increase in construction noise in the area resulting in potential impacts. However, as future development of Housing Opportunity Sites is currently speculative and there is no timeline for actual buildout for any of Housing Opportunity Sites, it is currently not feasible to predict whether construction noise from buildout of the cumulative projects would combine with construction noise from buildout of the Housing Opportunity Sites in a manner that could result in significant impacts. Buildout of future developments facilitated by the Project and cumulative developments would be required to comply with and adhere to the City's construction noise ordinances and requirements to minimize impacts.

The Housing Element Update's anticipated noise and vibration-related impacts from future developments facilitated by the Project, in conjunction with cumulative development in the City, would increase housing development in an already developed area, thereby resulting in increased ambient noise levels. Potential noise and vibration-related impacts would be site-specific and would require evaluation on a case-by-



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case basis at the project level when future development is proposed in accordance with the Housing Element Update. Unless exempt, each cumulative project would require separate approval and evaluation under CEQA, which would verify compliance with the City's Municipal Code and address potential noise and vibration impacts and identify necessary mitigation measures, where appropriate. Future developments facilitated by the Project in conjunction with cumulative development is not anticipated to result in significant noise and vibration impacts, or conflict with or obstruct a state or local plan, ordinance, or standards aimed at avoiding or minimizing excessive noise, following compliance with the City's Municipal Code. Therefore, the Project would not cause a cumulatively considerable noise or vibration impact, and no mitigation is required.

3.11.5 References

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