

## 4.11 NOISE

This section evaluates the potential short-term and long-term noise impacts associated with the construction and operation of the Ganahl Lumber Project (proposed project). This section is based on information provided in the *Noise Impact Assessment: Ganahl Lumber Hardware Store and Lumber Yard Project* (ECORP, November 2019), which is provided in Appendix I to this Draft Environmental Impact Report (EIR).

### 4.11.1 Scoping Process

The City of San Juan Capistrano (City) received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this EIR. One of the comment letters included comments related to Noise. The letter from the City of Dana Point, received on June 28, 2019, raises concerns regarding potential noise impacts on users of Creekside Park and the County Bike Trail in Dana Point. Mitigation measures were requested, if necessary, to protect users of these facilities.

### 4.11.2 Methodology

Evaluation of noise impacts associated with the proposed project includes the following:

- Determination of the short-term construction noise levels at off-site noise-sensitive uses and comparison to the Cities of San Juan Capistrano and Dana Point Noise Ordinance requirements.
- Determination of the long-term noise levels from vehicular traffic using the Federal Highway Administration (FHWA) approved method and from on-site stationary sources using empirical noise data obtained in field measurements, as well as their impact at on- and off-site noise-sensitive uses, and comparison of these levels to the City's pertinent noise standards in the Cities of San Juan Capistrano and Dana Point General Plan Noise Elements and Noise Ordinances.
- Determination of the required mitigation measures to reduce short-term construction-related noise impacts from all sources.

The evaluation of noise and vibration impacts was prepared in conformance with appropriate standards, utilizing procedures and methodologies in the City of San Juan Capistrano Noise Element and Municipal Code and City of Dana Point Municipal Code and General Plan. The Federal Highway Administration (FHWA) Traffic Noise Prediction Model (FHWA-RD-77-108), was used to determine traffic noise impacts. On-site stationary source noise levels have been calculated with the SoundPLAN 3D noise model. Ground-borne vibration levels associated with construction-related activities for the project were evaluated utilizing typical ground-borne vibration levels associated with construction equipment obtained from the California Department of Transportation (Caltrans) guidelines set forth, above. Please refer to the *Noise Impact Assessment: Ganahl Lumber and Hardware Project* (ECORP 2019) for additional details on the noise and vibration modeling methodology and assumptions used to estimate construction and operation impacts of the proposed project.

#### 4.11.2.1 Characteristics of Sound

Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a wave resulting in the tone's range from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment and is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

#### 4.11.2.2 Measurement of Sound

Sound intensity is measured through the A-weighted decibel (dBA) scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units, such as inches or pounds, decibels (dB) are measured on a logarithmic scale representing points on a sharply rising curve. For example, 10 dB is 10 times more intense than 1 dB, 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Thirty dB represents 1,000 times as much acoustic energy as 1 dB. 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. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 dB (very quiet) to 100 dB (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. For a single point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source, such as highway traffic or railroad operations, the sound decreases 3 dB for each doubling of distance in a hard site environment. Line source, noise in a relatively flat environment with absorptive vegetation, decreases 4.5 dB for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. However, the predominant rating scales for human communities in the State of California are the equivalent continuous sound level ( $L_{eq}$ ) and the Community Noise Equivalent level (CNEL) or the day-night average level ( $L_{dn}$ ) based on dBA. CNEL is the time-varying noise over a 24-hour period, with a weighting factor of 5 dBA applied to the hourly  $L_{eq}$  for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and with a weighting factor of 10 dBA from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours).  $L_{dn}$  is similar to the CNEL scale but without the adjustment for events occurring

during the evening hours. CNEL and  $L_{dn}$  are normally exchangeable and within 1 dBA of each other. The City uses the CNEL noise scale for long-term noise impact assessment.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level ( $L_{max}$ ), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-term noise impacts are specified in terms of maximum levels denoted by  $L_{max}$ .  $L_{max}$  reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. For example, the  $L_{10}$  noise level represents the noise level exceeded 10 percent of the time during a stated period. The  $L_{50}$  noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The  $L_{90}$  noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source,  $L_{eq}$  and  $L_{50}$  are approximately the same.

Noise impacts can be described in three categories. The first is audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dB or greater because this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1 dB and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise levels of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

#### 4.11.2.3 Physiological Effects of Noise

While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise. The Occupational Safety and Health Administration (OSHA) has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over eight hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

#### 4.11.2.4 Vibration

Sources of earthborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or manmade causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV); another is the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. The RMS velocity is defined as the average of the squared amplitude of the signal. For the purposes of this analysis, a PPV descriptor with units of inches per second (inch/sec) is used to evaluate construction-generated

vibration for building damage and human complaints. Ground vibration can be a concern in instances where buildings shake and substantial rumblings occur. However, it is unusual for vibration from typical urban sources such as buses and heavy trucks to be perceptible. Common sources for ground-borne vibration are planes, trains, and construction activities such as earth-moving which requires the use of heavy-duty earth moving equipment.

### 4.11.3 Existing Environmental Setting

#### 4.11.3.1 Existing Project Site

The approximately 17-acre project site is currently undeveloped, and the northern portion of the site is vacant. A vehicle storage area, located on the central and southern portions of the project site, is secured by a chain-link fence. The vehicle storage area consists of a crushed-rock gravel surface and is not paved.

#### 4.11.3.2 Existing Sensitive Land Uses in the Project Vicinity

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

Nearby noise-sensitive land uses consist of a residential mobile home park adjacent to the northern boundary of the project site. To the west of the project site across San Juan Creek and within the City of Dana Point is Creekside Park with residential land uses beyond; there are residential land uses to the southwest and southeast of the project site, beyond Stonehill Drive and also within the City of Dana Point. Additionally, there is an existing hotel located southeast of the project site across Stonehill Drive. The nearest sensitive receptors are residences within the mobile home park adjacent to the northern boundary of the project site. The nearest residence at this mobile home park is approximately 60 feet from the proposed construction area.

#### 4.11.3.3 Overview of the Existing Noise Sources

The noise environment in the project area is impacted by various noise sources. Mobile sources of noise, especially cars and trucks traveling on Interstate 5 and Stonehill Drive, are the most common and significant sources of noise in project area. The project area is also affected by the Los Angeles – San Diego – San Luis Obispo (LOSSAN) rail corridor, which accommodates light rail and traverses the eastern boundary of the project site. According to recent data collected on the Los Angeles County Metropolitan Transportation Authority (Metro) Gold Line Foothill Extension, the maximum sound level ( $L_{max}$ ) of a two-car Metro train operating at 40 miles per hour on ballast-and-tie track, at a distance of 50 feet, is 77 dBA  $L_{max}$ . The project site is located within a railway Quiet Zone, which is a segment of a rail line where locomotive horns are not routinely sounded, except for safety reasons (i.e., at-grade crossings).

Other sources of noise are the various land uses (i.e., residential, commercial, institutional, and recreational and parks activities) throughout San Juan Capistrano and Dana Point that generate stationary source noise.

**Existing Ambient Noise Environment.** Four short-term noise measurements were conducted on the afternoon of September 29, 2017, between 11:55 a.m. and 1:23 p.m., and two short-term noise measurements were conducted in the early morning of June 6, 2019, between 5:04 a.m. and 5:47 a.m. to measure existing ambient noise levels.

As shown in Table 4.11.A, ambient recorded noise levels ranged from 48.7 to 56.8 dBA near the project site in the afternoon and 46.1 to 55.7 dBA in the early morning.

**Table 4.11.A: Existing Noise Measurements**

Location Number	Location	Leq dBA	Time
<b>September 29, 2017 Measurements</b>			
1	Northern boundary of the project site, adjacent to the mobile home park	48.7	11:55 AM–12:05 PM
2	Southeast corner of the project site, adjacent to the rail corridor and an elevated portion of Stonehill Drive	56.4	12:25 PM–12:35 PM
3	Directly west of Project site on the San Juan Creek Trail	55.5	12:49 PM–12:59 PM
4	Scotty’s Cove Drive, southwest of the project site, across Stonehill Drive	56.8	1:13 PM–1:23 PM
<b>June 6, 2019 Measurements</b>			
5	Along San Juan Creek Trail, approximately 100 feet south of Stonehill Drive and 100 feet east of residences fronting Scotty’s Cove Drive. Southwest of the project site and in the City of Dana Point	55.7	5:04 AM–5:19 AM
6	Northern boundary of the project site, adjacent to the mobile home park. Same location as #1	46.1	5:32 AM–5:47 AM

Source: *Noise Impact Assessment: Ganahl Lumber Hardware Store and Lumber Yard Project* (ECORP 2019).

dBA = A-weighted decibels (The sound pressure level, in decibels, as measured on a sound level meter using the A- weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.)

Leq = equivalent continuous sound level (The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period, typically 1, 8, or 24 hours.)

**Existing Roadway Noise Levels.** Existing roadway noise levels were calculated for the roadway segments in the project vicinity using the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) and traffic volumes from the *Traffic Impact Analysis: Ganahl Lumber Development Project* (LSA 2019). The average daily noise levels along these roadway segments are presented in Table 4.11.B.

As shown in Table 4.11.B, the existing traffic-generated noise level on project-vicinity roadways currently ranges from 53.6 to 64.1 dBA CNEL.

**Table 4.11.B: Existing Traffic Noise Levels**

Roadway Segment	Surrounding Uses	CNEL at 100 ft from Centerline of Roadway
<b>Stonehill Drive</b>		
Camino Capistrano to Project Driveway	Commercial & Hotel	64.1
Project Driveway to Del Obispo Street	Residential & Park/Outdoor Recreation	64.0
<b>Camino Capistrano/Doheny Park Road</b>		
Victoria Boulevard to Costco Driveway	Commercial & Residential	62.0
Costco Driveway to Stonehill Drive	Commercial, Hotel & Residential	62.5
Stonehill Drive to Avenida Aeropuerto	Commercial	63.1
<b>Valle Road</b>		
South of La Novia Avenue	Residential	55.3
<b>La Novia Avenue</b>		
East of Valle Road	Residential	53.6
<b>Del Obispo Street</b>		
North of Stonehill Avenue	Commercial & Residential	61.7
South of Stonehill Avenue	Commercial & Residential	60.6

Source: *Noise Impact Assessment: Ganahl Lumber Hardware Store and Lumber Yard Project* (ECORP 2019).

CNEL = Community Noise Equivalent Level

ft = foot/feet

#### 4.11.4 Regulatory Setting

##### 4.11.4.1 Federal Regulations

**United States Noise Control Act.** In 1972, Congress enacted the United States Noise Control Act. This act authorized the EPA to publish descriptive data on the effects of noise and establish levels of sound “requisite to protect the public welfare with an adequate margin of safety.” These levels are separated into health (hearing loss levels) and welfare (annoyance levels). For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to 70 dBA during a 24-hour period of time. At 55 dBA  $L_{dn}$ , 95 percent sentence clarity (intelligibility) may be expected at 11 feet, with no community reaction. However, 1 percent of the population may complain about noise at this level and 17 percent may indicate annoyance. The EPA cautions that these identified levels are guidelines, not standards.

##### 4.11.4.2 State Regulations

**State Noise Insulation Standard.** The State of California’s noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Code. These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

**California Health and Safety Code, Division 28, Noise Control Act.** The California Noise Control Act states that excessive noise is a serious hazard to public health and welfare and that it is the policy of the State to provide an environment for all Californians that is free from noise that jeopardizes their health or welfare. The goal is to minimize the number of people that would be exposed to excessive noise but not create an environment completely free from any noise.

**State of California General Plan Guidelines.** The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The State of California General Plan Guidelines (OPR 2017), published by the OPR, also provides guidance for the acceptability of projects within specific CNEL/L<sub>dn</sub> contours. The Guidelines present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community’s sensitivity to noise, and the community’s assessment of the relative importance of noise pollution.

**4.11.4.3 Regional Regulations**

There are no regional regulations related to noise that are applicable to the proposed project.

**4.11.4.4 Local Regulations**

**City of San Juan Capistrano Municipal Code.** The City of San Juan Capistrano’s Municipal Code (Title 9, Chapter 3, Article 5, Noise Standards [residential and nonresidential]) regulates noise from stationary sources. These standards provide restrictions on the amount and duration of noise generated by stationary sources at a property, as measured at the property line of a noise receptor. These stationary-source noise standards are shown in Table 4.11.C.

**Table 4.11.C: City of San Juan Capistrano Noise Standards for Stationary Noise Sources**

Exterior Noise Level	Time Period
<b>Residential &amp; Public and Institutional Land Uses</b>	
65 dBA L <sub>eq</sub>	7:00 AM to 7:00 PM
55 dBA L <sub>eq</sub>	7:00 PM to 10:00 PM
45 dBA L <sub>eq</sub>	10:00 PM to 7:00 AM
<b>Commercial Land Uses</b>	
65 dBA L <sub>eq</sub>	At any time during the day

Source: City of San Juan Capistrano Municipal Code

dBA = A-weighted decibels (The sound pressure level, in decibels, as measured on a sound level meter using the A- weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.)

L<sub>eq</sub> = equivalent continuous sound level (The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period, typically 1, 8, or 24 hours.)

The City’s Municipal Code exempts noise from construction activities provided that construction is limited to between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday, and between the hours of 8:30 a.m. and 4:30 p.m. on Saturdays. Construction noise occurring on Sundays or federal holidays is not exempt.

**City of Dana Point General Plan and Municipal Code.** The City of Dana Point city limits are located directly across San Juan Creek, west and southwest of the project site. As previously described, there are sensitive noise receptors consisting of single-family residences and the Creekside Park located within the City of Dana Point near the project site. The City of Dana Point General Plan Noise Element promulgates a mobile-source threshold of 65 dBA CNEL at residential land uses. The Dana Point Municipal Code Chapter 11.10, Noise Control, regulates stationary source noise. Dana Point stationary source noise regulations are shown in Table 4.11.D.

**Table 4.11.D: City of Dana Point Noise Standards for Stationary Noise Sources**

Exterior Noise Level	Time Period
<b>Residential Land Uses</b>	
55 dBA $L_{eq}$	7:00 AM to 10:00 PM
50 dBA $L_{eq}$	10:00 PM to 7:00 AM

Source: City of Dana Point Municipal Code

dBA = A-weighted decibels (The sound pressure level, in decibels, as measured on a sound level meter using the A- weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.)

$L_{eq}$  = equivalent continuous sound level (The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period, typically 1, 8, or 24 hours.)

**City of San Clemente General Plan and Municipal Code.** The City of San Clemente City limits are located east and southeast of the project site, across Camino Capistrano. The City of San Clemente does not promulgate a specific mobile-source standard in the City of San Clemente Municipal Code or General Plan and therefore a threshold of 65 dBA CNEL at residential land uses shall be employed for the purpose of this analysis, consistent with the mobile-source noise thresholds of both San Juan Capistrano and Dana Point.

**City of San Juan Capistrano General Plan.** The purpose of the City of San Juan Capistrano General Plan Noise Element (1999) is to limit the exposure of the community to excessive noise levels. The Noise Element includes a land use compatibility table (Table 4.11.E) that provides the City of San Juan Capistrano with a tool to gauge the compatibility of new land uses relative to existing and future noise levels. This table identifies normally acceptable, conditionally acceptable, and clearly unacceptable noise levels for various land uses. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community’s sensitivity to noise, and the community’s assessment of the relative importance of noise pollution.

**Table 4.11.E: Land Use Compatibility for Community Noise Environments**

	Community Noise Exposure (CNEL)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Single Family, Multifamily, Duplex	50 – 60	60 – 70	70 – 75	≥ 75
Residential – Mobile Homes	50 – 60	60 – 65	65 – 75	≥ 75
Transient Lodging – Motel, Hotels	50 – 60	60 – 70	70 – 80	≥ 80
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 60	60 – 65	65 – 75	≥ 75
Auditoriums, Concert Halls, Amphitheaters	N/A	50 – 60	60 – 70	≥ 70
Sports Arenas, Outdoor Spectator Sports, amusement Parks	50 – 65	65 – 75	N/A	≥ 75
Playgrounds, Neighborhood Parks	50 – 65	65 – 70	70 – 75	≥ 75
Golf Courses, Riding Stables, Cemeteries	50 – 70	70 – 75	75 – 85	≥ 85
Office and Profession Buildings	50 – 65	65 – 75	75 – 80	≥ 80
Commercial Retail, Banks, Restaurants, Theaters	50 – 70	70 – 80	80 – 85	≥ 85
Industrial, Manufacturing, Utilities, Wholesale, Service Stations	50 – 70	70 – 85	N/A	N/A
Agriculture	≥ 50	N/A	N/A	N/A

Source: City of San Juan Capistrano General Plan Noise Element (1999).

Note:

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

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

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

CNEL = Community Noise Equivalent Level

N/A = not applicable

In addition to the noise compatibility standards shown in Table 4.11.E, the City of San Juan Capistrano has adopted interior and exterior noise standards for land uses, as shown in Table 4.11.F. As shown, the City requires outdoor areas of frequent human use to achieve 65 dBA CNEL.

**Table 4.11.F: City of San Juan Capistrano Interior and Exterior Noise Standards**

Land Use Category	Exterior Standards (CNEL)	Interior Standards (CNEL)
Residential – Single Family, Multifamily, Duplex, mobile home	65 dBA	45 dBA
Residential – Transient Lodging, Hotels, Motels, Nursing Homes, Hospitals, Assisted Care Facilities	65 dBA	45 dBA
Private Offices, Churches, Libraries, Theaters, Concert Halls, meeting Halls, Schools	65 dBA	45 dBA
General Commercial, Retail, Reception, Restaurant	65 dBA	50 dBA
Manufacturing, Industrial <sup>1</sup>	--	--
Parks, Playgrounds	65 dBA	--
Golf Courses, Riding Stables, Cemeteries	70 dBA	--

Source: City of San Juan Capistrano General Plan (1999).

Note: Noise standards not applied to Industrial districts.

CNEL = Community Noise Equivalent Level

dBA = A-weighted decibels

The Noise Element also contains goals and policies that must be used to guide decisions concerning land uses that are common sources of excessive noise levels. The General Plan policies most applicable to the proposed project include the following:

- **Policy 1.2:** Provide noise control measures and sound attenuating construction in areas of new construction or rehabilitation.
- **Policy 3.1:** Reduce the impacts of noise-producing land uses and activities on noise-sensitive land uses.

#### 4.11.5 Thresholds of Significance

The thresholds for noise impacts used in this analysis are consistent with Appendix G of the California Environmental Quality Act Guidelines (*State CEQA Guidelines*) and the City's *Local Guidelines for Implementing CEQA (2019)*. The proposed project may be deemed to have a significant impact with respect to noise if it would result in:

**Threshold 4.11.1: 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?**

**Threshold 4.11.2: Generation of excessive groundborne vibration or groundborne noise levels?**

**Threshold 4.11.3: 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, would the project expose people residing or working in the project area to excessive noise levels?**

#### 4.11.6 Project Impacts

**Threshold 4.11.1: Would the project result in 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?**

#### ***Less than Significant with Mitigation.***

**Construction Noise Impacts.** Construction noise associated with the proposed project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for on-site construction activities as well as construction vehicle traffic on surrounding roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Other primary sources of acoustical disturbance would be random incidents, such as dropping large pieces of equipment or the hydraulic movement of machinery lifts. During construction, exterior noise levels could negatively affect residences in the vicinity of the construction site. As previously stated, the closest residences are located adjacent to the northern boundary of the project site. Noise levels associated with individual construction equipment are summarized in Table 4.11.G.

**Table 4.11.G: Typical Construction Equipment Noise Levels**

Type of Equipment	Maximum Noise (L <sub>max</sub> ) at 50 ft (dBA)	Maximum 8-Hour Noise (L <sub>eq</sub> ) at 50 ft (dBA)
Crane	80.6	72.6
Dozer	81.7	77.7
Excavator	80.7	76.7
Generator	80.6	77.6
Grader	85.0	81.0
Other Equipment (> 5 HP)	85.0	82.0
Paver	77.2	74.2
Roller	80.0	73.0
Tractor	84.0	80.0
Dump Truck	76.5	72.5
Concrete Pump Truck	81.4	74.4
Welder	74.0	70.0

Source: *Noise Impact Assessment: Ganahl Lumber Hardware Store and Lumber Yard Project* (ECORP 2019).

dBA = A-weighted decibels

ft = foot/feet

HP = horsepower

L<sub>eq</sub> = equivalent continuous sound level

L<sub>max</sub> = maximum instantaneous noise level

As depicted in Table 4.11.G, noise levels generated by individual pieces of construction equipment typically range from approximately 70.0 dBA L<sub>eq</sub> to 82.0 dBA L<sub>eq</sub> at 50 feet. Noise levels associated with construction projects can vary, depending on the activities performed. Short-term increases in vehicle traffic, including worker commute trips and haul truck trips, may also result in temporary increases in ambient noise levels.

During project construction, exterior noise levels could affect sensitive receptors in the vicinity. The residential mobile home park to the north of the site could be exposed to temporary and intermittent noise levels of 82 dBA L<sub>eq</sub> with L<sub>max</sub> events even louder (the nearest residence at the mobile home park is approximately 60 feet from the proposed construction area).

The City of San Juan Capistrano General Plan contains Noise Element Policy 1.2, which requires noise control measures in areas of new construction and Noise Element Policy 3.1, which requires the reduction of noise associated with noise-producing activities, such as construction activities on noise-sensitive land uses. Project construction activities would occur within San Juan Capistrano and as previously discussed, the City’s Municipal Code exempts construction noise from noise standards provided that construction is limited to the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday, and between the hours of 8:30 a.m. and 4:30 p.m. on Saturdays. Construction noise occurring on Sundays or federal holidays is not exempt from noise standards. Implementation of Mitigation Measure NOI-1, which requires compliance with the construction hours specified in the City’s Noise Ordinance (Section 9-3.531, Noise Standards [Residential and Nonresidential]), would reduce construction noise impacts. Additionally, Mitigation Measure NOI-2 includes noise attenuation measures to reduce construction noise generated at sensitive receivers. With implementation of Mitigation Measure NOI-1 and NOI-2, construction noise impacts would be reduced to a less than significant level.

## ***Less than Significant Impact.***

### **Operational Noise.**

**Project Land Use Compatibility.** As discussed in Section 4.11.4.4, Local Regulations, above, the City of San Juan Capistrano General Plan Noise Element includes a land use compatibility table (Table 4.11.E) that provides the City with a tool to gauge the compatibility of new land uses relative to existing noise levels. This table identifies normally acceptable, conditionally acceptable, and clearly unacceptable noise levels for various land uses, including commercial and industrial land uses such as those proposed by the project. In the case that the noise levels identified at a proposed project site fall within levels considered normally acceptable, the project is considered compatible with the existing noise environment. As shown in Table 4.11.E, an acceptable existing noise level for locating both commercial uses such as fast-food restaurants and hardware stores, as well as industrial uses such as a lumber yard, falls under 70 dBA CNEL. In order to quantify existing ambient noise levels in the project area, short-term noise measurements were conducted as described in Section 4.11.2, Methodology, and as shown in Table 4.11.A. The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the project site and are considered representative of the noise levels throughout the day. As shown in Table 4.11.A, the ambient recorded noise levels ranged from 46.1 to 56.8 dBA near the project site. Additionally, as shown in Table 4.11.B, the existing traffic-generated noise level on project-vicinity roadways currently ranges from 53.6 to 64.1 dBA CNEL. As these ranges all fall below 70 dBA, the project site is considered an appropriate noise environment to locate proposed commercial and industrial land uses.

**Long-Term Mobile-Source Noise Impacts.** Future traffic noise levels throughout the project vicinity were modeled based on the traffic volumes identified by the *Traffic Impact Assessment* (LSA 2019) to determine the noise levels along project vicinity roadways. Table 4.11.H shows the calculated off-site roadway noise levels under existing traffic levels compared to future buildout of the proposed project. The calculated noise levels as a result of the project at affected land uses are compared to the noise standards in the City of Dana Point General Plan Noise Element for the segment of Stonehill Drive west of the Project Driveway and the segments of Del Obispo Street north and south of Stonehill Drive. As previously stated, the City of Dana Point General Plan Noise Element includes a mobile-source threshold of 65 dBA CNEL at residential land uses. Calculated noise levels as a result of the proposed project at affected land uses were compared to the noise standards in the San Juan Capistrano Noise Element (see Table 4.11.C) for the remainder of project vicinity roadway segments. As shown in Table 4.11.C, similar to Dana Point, the City of San Juan Capistrano requires outdoor areas of frequent human use to achieve 65 dBA CNEL. Additionally, project-generated traffic could potentially influence the ambient noise environment in the City of ~~San Clemente~~ Dana Point to the south, specifically a mobile home park located across Camino Capistrano from the existing Costco store. ~~The City of San Clemente does not have a specific mobile-source standard and therefore a~~ A threshold of 65 dBA CNEL at residential land uses shall be employed for the purpose of this analysis, consistent with the mobile-source noise thresholds of both the City of San Juan Capistrano and the City of Dana Point.

**Table 4.11.H: Existing Plus Project Conditions Predicted Traffic Noise Levels**

Roadway Segment	Surrounding Uses	CNEL at 100 feet from Centerline of Roadway		Noise Standard (dBA CNEL)	Exceed Standard/ Significant Impact?
		Existing Conditions	Existing Plus Project Conditions		
<b>Stonehill Drive</b>					
Camino Capistrano to Project Driveway (in the City of San Juan Capistrano)	Commercial & Hotel,	64.1	64.4	65	No
Project Driveway to Del Obispo Street (in the City of Dana Point)	Residential & Park/Outdoor Recreation	64.0	64.0	65	No
<b>Camino Capistrano/Doheny Park Road</b>					
Victoria Boulevard to Costco Driveway (in the City of San Clemente)	Commercial & Residential	62.0	62.0	65	No
Costco Driveway to Stonehill Drive (in the City of San Juan Capistrano)	Commercial, Hotel & Residential	62.5	62.5	65	No
Stonehill Drive to Avenida Aeropuerto (in the City of San Juan Capistrano)	Commercial	63.1	63.1	65	No
<b>Valle Road</b>					
South of La Novia Avenue (in the City of San Juan Capistrano)	Residential	55.3	55.3	65	No
<b>La Novia Avenue</b>					
East of Valle Road (in the City of San Juan Capistrano)	Residential	53.6	53.6	65	No
<b>Del Obispo Street</b>					
North of Stonehill Avenue (in the City of Dana Point)	Commercial & Residential	61.7	61.7	65	No
South of Stonehill Avenue (in the City of Dana Point)	Commercial & Residential	60.6	60.6	65	No

Source: *Noise Impact Assessment: Ganahl Lumber Hardware Store and Lumber Yard Project* (ECORP 2019)  
 CNEL = Community Noise Equivalent Level  
 dBA = A-weighted decibels

As shown in Table 4.11.H, predicted increases in traffic noise levels associated with the project would not result in any mobile-source noise level standards being exceeded. Therefore, impacts associated with long-term, mobile-source noise would be less than significant. No mitigation is required.

**Long-Term Stationary-Source Noise Impacts.** The proposed project would include several on-site noise sources as show in Table 4.11.I. The estimated time of use of these stationary sources would differ as shown in the table. The fast-food restaurants proposed on Site A would be expected to operate similar hours as the lumber yard, while the vehicle storage facility proposed for Site C would only operate during daytime hours.

Table 4.11.J shows the predicted on-site noise levels associated with full operation of the proposed project, during the hours of 7:00 a.m. and 7:00 p.m. compared to the daytime noise standards as described in Section 4.11.3.4. Full operations at the project site include noise associated with the proposed restaurants on Site A, the Ganahl Lumber retail store and yard operations on Site B, and the vehicle storage facility on Site C.

**Table 4.11.I: Summary of On-Site Stationary Sources**

Stationary Sources	Noise Level (dBA L <sub>eq</sub> ) at the Source	Estimated Time of Use
Drive-Through Activity on Site A (including amplified communication system)	75.0 dBA	5:00 AM– 11:00 PM
Parking Lot Activity on Site A	60.0 dBA	5:00 AM– 11:00 PM
Parking Lot Activity on Site B	65.7 dBA	5:00 AM– 11:00 PM
Lumber Yard Activity on Site B (including material handling vehicles)	73.6 dBA	5:00 AM– 11:00 PM
Wood Chip Baler on Site B	68.0 dBA	6:00 AM– 10:00 PM
Trash Compactor on Site B	60.1 dBA	6:00 AM– 10:00 PM
Truck Loading Dock on Site B	73.0 dBA	6:00 AM– 11:00 PM
Vehicle Storage Facility on Site C	48.7 dBA	7:00 AM– 7:00 PM

Source: *Noise Impact Assessment: Ganahl Lumber Hardware Store and Lumber Yard Project* (ECORP 2019).

dBA = A-weighted decibels

L<sub>eq</sub> = equivalent continuous sound level

**Table 4.11.J: Predicted On-Site Operational Noise from Full Site Operations**

Receiver No.	Receiver	Modeled Noise Levels (dBA L <sub>eq</sub> )	Daytime Noise Standards (dBA L <sub>eq</sub> ) <sup>1</sup>	Exceed Standard?
1	Residential Neighborhood to the North (in the City of San Juan Capistrano)	44.2	65	No
2	Residential Neighborhood to the North (in the City of San Juan Capistrano)	44.6	65	No
3	Residential Neighborhood to the North (in the City of San Juan Capistrano)	43.5	65	No
4	Commercial Area to the East (in the City of San Juan Capistrano)	48.3	65	No
5	Commercial Area to the East (in the City of San Juan Capistrano)	52.3	65	No
6	Commercial Area to the East (in the City of San Juan Capistrano)	49.3	65	No
7	Hotel to the Southeast (in the City of San Juan Capistrano)	30.2	65	No
8	Residential Neighborhood to the Southwest (in the City of Dana Point)	46.3	55	No
9	Residential Neighborhood to the West, across San Juan Creek (in the City of Dana Point)	46.2	55	No
10	Creekside Park to the west (in the City of Dana Point)	46.3	55	No
11	Residential Neighborhood to the West, across San Juan Creek (in the City of Dana Point)	44.	55	No

Source: *Noise Impact Assessment: Ganahl Lumber Hardware Store and Lumber Yard Project* (ECORP 2019).

<sup>1</sup> Daytime noise standards vary depending on the location of the receiver being in either San Juan Capistrano or Dana Point.

dBA = A-weighted decibels

L<sub>eq</sub> = equivalent continuous sound level

As shown in Table 4.11.J, daytime noise levels in the vicinity of nonresidential uses, are all far below applicable daytime standards. Daytime noise levels at the residential uses in the project vicinity also fall below applicable daytime standards of the cities in which these receivers are located.

Table 4.11.K shows the predicted noise propagation associated with evening and nighttime operations of the proposed project between the hours of 7:00 p.m. and 7:00 a.m. Evening and nighttime operations at the project site precludes operation of the proposed vehicle storage facility on Site C. Additionally, the proposed hardware store would be closed. However, a third shift from 10:00 p.m. to 6:00 a.m. may be added in the future for the purpose of replenishment, cleaning, and order pulling for the next day in the proposed hardware store. As such, parking lot activity surrounding the proposed hardware is maintained at daytime noise levels in order to provide a conservative analysis.

**Table 4.11.K: Predicted On-Site Operational Noise During Evening and Nighttime Hours**

Receiver No.	Receiver	Modeled Noise Levels (dBA Leq)	Evening Noise Standards (dBA Leq) <sup>1</sup>	Nighttime Noise Standards (dBA Leq) <sup>1</sup>	Exceed Standard?
1	Residential Neighborhood to the North (in the City of San Juan Capistrano)	42.4	55	45	No
2	Residential Neighborhood to the North (in the City of San Juan Capistrano)	42.6	55	45	No
3	Residential Neighborhood to the North (in the City of San Juan Capistrano)	43.0	55	45	No
4	Commercial Area to the East (in the City of San Juan Capistrano)	48.3	65	65	No
5	Commercial Area to the East (in the City of San Juan Capistrano)	52.3	65	65	No
6	Commercial Area to the East (in the City of San Juan Capistrano)	46.6	65	65	No
7	Hotel to the Southeast (in the City of San Juan Capistrano)	30.2	55	45	No
8	Residential Neighborhood to the Southwest, South of Stonehill Drive (in the City of Dana Point)	43.8	50	50	No
9	Residential Neighborhood to the West, across San Juan Creek (in the City of Dana Point)	44.4	50	50	No
10	Creekside Park to the west (in the City of Dana Point)	44.6	50	50	No
11	Residential Neighborhood to the West, across San Juan Creek, North of Stonehill Drive (in the City of Dana Point)	43.6	50	50	No

Source: *Noise Impact Assessment: Ganahl Lumber Hardware Store and Lumber Yard Project* (ECORP 2019).

<sup>1</sup> Daytime noise standards vary depending on the location of the receiver being in either San Juan Capistrano or Dana Point.

dBA = A-weighted decibels

Leq = equivalent continuous sound level

As shown in Table 4.11.K, evening and nighttime noise levels at vicinity nonresidential uses would range from 44.6 dBA to 52.3 dBA and noise levels at the project vicinity residential uses would range from 30.2 dBA to 44.4 dBA. These noise levels all fall below applicable evening and nighttime noise standards for the Cities of San Juan Capistrano and Dana Point as shown in the table. Therefore, impacts related to operational noise from stationary sources would be less than significant. No mitigation is required.

**Threshold 4.11.2: Would the project result in generation of excessive groundborne vibration or groundborne noise levels?**

**Less than Significant Impact.** Excessive ground-borne vibration impacts result from continuously occurring vibration levels. Once operational, the proposed project would not be a source of ground-borne vibration. Increases in ground-borne vibration levels attributable to the proposed project would be primarily associated with short-term construction-related activities. Construction on the project site would have the potential to result in varying degrees of temporary ground-borne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment such as dozers and trucks. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the project site and would not be concentrated at the point closest to sensitive receptors.

Ground-borne vibration levels would be considered significant if predicted short-term construction ground-borne vibration levels attributable to the proposed project would exceed 0.2 inch/sec PPV at the nearest off-site existing non-mobile structure, and 0.1 inch/sec PPV at the nearest off-site mobile home. Based on the vibration levels presented in Caltrans' Transportation and Construction Vibration Guidance Manual (2013), ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 0.073 inch/sec PPV at 50 feet. Therefore, the use of construction equipment would not result in a ground-borne vibration velocity level above 0.1 inch/sec at the nearest off-site structures, including at any mobile homes. Therefore, impacts would be less than significant. No mitigation would be required.

**Threshold 4.11.3: 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, would the project expose people residing or working in the project area to excessive noise levels?**

**No Impact.** The closest airport to the project site is John Wayne Airport which is located approximately 17 miles northeast of the project site. The project site is not located within two miles of a public airport or within an airport land use plan nor is the project within the vicinity of a private airstrip. As such, the project site would not be exposed to excessive noise levels from airport operations and, therefore, there would be no impact. No mitigation would be required.

**4.11.7 Level of Significance Prior to Mitigation**

Prior to the implementation of mitigation measures, the project could potentially result in the generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of established noise standards during construction. The project would not result in significant operational noise impacts. The project would result in less than significant impacts

related to ground-borne vibration and ground-borne noise levels and no impact related to the exposure of people to excessive noise levels within the vicinity of an airport or private airstrip.

#### 4.11.8 Regulatory Compliance Measures and Mitigation Measures

##### 4.11.8.1 Regulatory Compliance Measures (RCMs)

No regulatory compliance measures are required for the proposed project.

##### 4.11.8.2 Mitigation Measures (MMs)

The proposed project would comply with the following mitigation measures.

#### MM NOI-1

**Construction Hours.** Prior to issuance of demolition or grading permits, the project Applicant shall submit grading and construction plans for review and approval by the City of San Juan Capistrano's (City) Director of Development Services, or designee. The plans shall include a condition that the construction contractor shall limit all construction-related activities between the hours of 7:00 a.m. and 6:00 p.m., Monday through Friday, and from 8:30 a.m. to 4:30 p.m. on Saturday. No construction shall be permitted outside of these hours or on Sundays and federal holidays.

#### MM NOI-2

**Short-Term Construction Noise.** Prior to issuance of construction permits, the project Applicant shall submit project improvement and building plans for review and approval by the City's Director of Development Services, or designee. These construction plans shall include the following requirements for construction activities.

- Construction contracts must specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other State-required noise attenuation devices.
- A sign, legible at a distance of 50 feet, shall be posted at the project construction site providing a contact name and a telephone number where residents can inquire about the construction process and register complaints. This sign shall indicate the dates and duration of construction activities. In conjunction with this required posting, a noise disturbance coordinator will be identified to address construction noise concerns received. The coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the disturbance coordinator shall notify the City within 24 hours of the complaint and determine the cause of the noise complaint (starting too early, malfunctioning muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the City. All signs posted at the construction site shall include the contact name and the telephone number for the noise disturbance coordinator.

- Construction equipment shall be prohibited from idling for longer than 5 minutes. After five minutes of idling equipment shall be shut off.
- In order to maximize the distance between construction equipment staging areas and the sensitive noise receivers north of the project site, all equipment staging areas and material storage areas shall be placed within the southern portion of the site, as far from these receivers as possible.
- The use of electric air compressors and similar power tools shall be employed to the maximum extent feasible.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from the sensitive noise receivers north of the project site and the use of temporary acoustic barriers around stationary equipment shall be implemented at all times.
- The temporary storage of earth material excavated from the site shall be positioned in a manner to function as a noise barrier between the sensitive noise receivers north of the project site and the active portions of the construction site, to the extent feasible.
- Proposed project “Pole Shed 6B” and “L-Shed 7B” shall be the first buildings constructed on site in order to provide a barrier between the sensitive noise receivers north of the project site and the rest of the construction site. When built, these buildings would collectively be approximately 500 feet long and reach approximately 20 feet in height.

#### 4.11.9 Level of Significance after Mitigation

With the implementation of mitigation measures, all impacts would be reduced to a less than significant level.

#### 4.11.10 Cumulative Impacts

As defined in the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects. A cumulative noise or vibration impact would occur if multiple sources of noise and vibration combine to create impacts in close proximity to a sensitive receptor. Therefore, the cumulative area for noise impacts is the project site and any sensitive receptors in the immediately surrounding.

#### ***Less than Significant with Mitigation.***

**Construction Noise.** Construction activities associated with the proposed project and other construction projects in the area may overlap, resulting in construction noise in the area. However, construction noise impacts primarily affect the areas immediately adjacent to each construction site. Construction noise for the proposed project was determined to be less than significant with the implementation of Mitigation Measure NOI-1, which requires compliance

with the construction hour restrictions in the City's Municipal Code. Cumulative development in the vicinity of the project site could result in elevated construction noise levels at sensitive receptors in the project area. However, each project would be required to comply with the applicable City's Municipal Code limitations on construction. Therefore, cumulative construction noise impacts would be less than significant with the implementation of Mitigation Measure NOI-1.

***Less than Significant.***

**Operational Stationary Source Noise.** Long-term stationary noise sources associated with the development at the proposed project, combined with other cumulative projects, could cause local noise level increases. Noise levels associated with the proposed project and related cumulative projects together could result in higher noise levels than considered separately. As previously described, on-site noise sources associated with the proposed project would not exceed any applicable noise standards. Additionally, related cumulative projects would be required to comply with the City's noise level standards and include mitigation measures if standards are exceeded. Therefore, cumulative noise impacts from stationary noise sources would be less than significant.

**Operational Traffic Source Noise Impacts.** According to the United States Environmental Protection Agency (USEPA), cumulative noise impacts represent the combined and incremental effects of human activities that accumulate over time. While the incremental impacts may be insignificant by themselves, the combined effect may result in a significant impact. Conversely, although there may be a significant noise increase due to the proposed project in combination with other related projects (combined effects), it must also be demonstrated that the project has an incremental effect. In other words, a significant portion of the noise increase must be due to the proposed project.

Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to operation of the project and other projects in the vicinity. A project's contribution to a cumulative traffic noise increase could be considered significant when the combined effect exceeds the perception level (i.e., auditory level increase) threshold. The combined effect compares the "Cumulative Plus Project" condition to "Existing" conditions. This comparison accounts for the traffic noise increase generated by a project combined with the traffic noise increase generated by projects in the area. The incremental effect compares the "Cumulative Plus Project" condition to the "Cumulative No Project" condition. The following combined effect and incremental effect criteria have been utilized to evaluate the overall effect of the cumulative noise increase.

- **Combined Effect.** The Cumulative With Project noise level ("Cumulative Plus Project") would cause a significant cumulative impact if a 3.0 dB increase over Existing Conditions occurs and the resulting noise level exceeds the applicable exterior standard at a sensitive use. Although there may be a significant noise increase due to the proposed project in combination with other related projects (combined effects), it must also be demonstrated that the project has an incremental effect. In other words, a significant portion of the noise increase must be due to the proposed project.

and

- **Incremental Effects.** The “Cumulative Plus Project” causes a 1.0 dBA increase in noise over the “Cumulative No Project” noise level.

A significant impact would result only if both the combined and incremental effects criteria have been exceeded at a single roadway segment, since such would indicate that there is a significant noise increase due to the proposed project in combination with other related projects and a significant portion of the noise increase is due to the proposed project. Noise by definition is a localized phenomenon and reduces as distance from the source increases. Consequently, only the proposed project and growth due to occur in the project site’s general vicinity would contribute to cumulative noise impacts. Table 4.11.L lists the traffic noise effects along roadway segments in the project vicinity for “Existing,” “Cumulative No Project,” and “Cumulative Plus Project,” conditions, including incremental and net cumulative impacts.

**Table 4.11.L: Cumulative Traffic Noise Scenario**

Roadway Segment	CNEL @ 100 ft from Roadway Centerline			Combined Effects <sup>1</sup>	Incremental Effects <sup>2</sup>	Cumulatively Significant Impact?
	Existing	Cumulative No Project	Cumulative Plus Project			
<b>Stonehill Drive</b>						
Camino Capistrano to Project Driveway	64.1	64.1	64.5	0.4	0.4	No
Project Driveway to Del Obispo Street	64.0	64.0	64.2	0.2	0.2	No
<b>Camino Capistrano/Doheny Park Road</b>						
Victoria Boulevard to Costco Driveway	62.0	62.3	62.5	0.5	0.2	No
Costco Driveway to Stonehill Drive	62.5	62.8	63.0	0.5	0.2	No
Stonehill Drive to Avenida Aeropuerto	63.1	63.4	63.4	0.3	0.0	No
<b>Valle Road</b>						
South of La Novia Avenue	55.3	56.3	56.4	1.0	0.1	No
<b>La Novia Avenue</b>						
East of Valle Road	53.6	57.1	57.1	3.5	0.0	No
<b>Del Obispo Street</b>						
North of Stonehill Avenue	61.7	62.0	62.2	0.5	0.2	No
South of Stonehill Avenue	60.6	61.0	61.1	0.5	0.1	No

Source: *Noise Impact Assessment: Ganahl Lumber Hardware Store and Lumber Yard Project* (ECORP 2019)

<sup>1</sup> Difference in CNEL between Existing and Cumulative Plus Project

<sup>2</sup> Difference in CNEL between Cumulative No Project and Cumulative Plus Project

CNEL = Community Noise Equivalent Level

ft = foot/feet

As shown in Table 4.11.L, no significant cumulative traffic noise impact would result. While traffic noise at the segment of La Novia Avenue east of the Valle Road/La Novia Avenue roundabout would surpass the combined effect threshold of 3.0 dBA over Existing Conditions, there is no increase in noise beyond the Cumulative No Project scenario as a result of the project, and thus no incremental effect. Therefore, cumulative operational mobile source noise impacts would be less than significant. No mitigation is required.

#### 4.11.11 Project Alternatives

##### 4.11.11.1 Alternative 1—No Restaurant Uses

Alternative 1 would allow for the future construction of a 161,385 square-foot (sf) Ganahl Lumber hardware store and lumber yard and a 399-space vehicle storage facility, but no restaurant uses would be developed. This alternative represents a reduction of 6,000 sf of drive-through restaurant use as compared to the proposed project. Under Alternative 1, Area A would provide 150 parking spaces, compared to 62 parking spaces provided in Area A as part of the proposed project.

Most components of the proposed project, such as outdoor lighting, circulation and access, signage, utilities and drainage, sustainability features, landscaping, and construction phasing, and grading, would not significantly change with the implementation of Alternative 1. Components specific to Area A, such as the location of walkways, retaining walls fences, and gates, would also not change under Alternative 1. The modification and installation of existing and new utilities and infrastructure associated with the proposed project would still occur under Alternative 1. Alternative 1 would involve the grading and paving of Area A for surface parking; however, no construction of a drive-through restaurant uses would occur. Although Alternative 1 would not involve the development of structures on Area A as the proposed project would, the entirety of Area A would still be cleared, excavated, graded, and paved to accommodate surface parking.

**Construction Noise and Vibration.** Grading and site preparation activities are the loudest aspects of construction, and the grading and site preparation involved with Alternative 1 require the same amount of ground disturbance as the proposed project as the location of the restaurant uses would still be developed with parking and internal driveways. Therefore, similar to the proposed project, Alternative 1 would encompass the same amount of acreage within the same proximity to noise receptors. However, Alternative 1 would result in the construction of less building space (6,000 fewer square feet). Therefore, construction-related noise generated under this alternative would be produced for a slightly shorter period of time than the proposed project. Similar to the proposed project, Alternative 1 would also implement Mitigation Measure NOI-1, which requires adherence to daytime noise restrictions and Mitigation Measure NOI-2, which includes noise control and sound attenuation measures to reduce noise impacts on sensitive land uses.

Alternative 1 would result in the same amount of ground vibration as the proposed project. Similar to the proposed project, the use of any type of construction equipment during construction of Alternative 1 would not result in a ground-borne vibration velocity level above 0.2 inch/sec at the nearest off-site structures.

**Operational Noise.** Operational noise sources associated with Alternative 1 would include mobile and stationary sources (i.e., mechanical equipment, lumber yard operations). Alternative 1 would generate 37 percent less traffic on vicinity roadways. The decrease in automobile trips would equate to similar to slightly less traffic noise compared with the proposed project, depending on the specific roadway segments. For instance, the greatest reduction of traffic noise would occur on the segment of Stonehill Drive between the Project Driveway and Camino Capistrano. Specifically, 37 percent less project traffic on the segment of Stonehill Drive between the Project Driveway and Camino Capistrano would result in a 0.3 dBA CNEL decrease compared with the proposed project. All the

remaining vicinity roadway segments would experience the same level of traffic noise with implementation of Alternative 1 compared with the proposed project.

Alternative 1 would include several on-site noise sources included in the proposed project such as material handling vehicles stacking, loading and unloading products, back-up beepers, delivery trucks, a trash compactor, a baler, and other mechanical equipment and parking lot noise. However, Alternative 1 would not include any fast-food restaurants. Predicted on-site operational noise attributable to Alternative 1 would range from 3.7 dBA below noise levels to 3.3 dBA above noise levels at the receptors as compared to the proposed project. Furthermore, all noise levels would remain below the applicable daytime and nighttime noise standards.

**Summary.** Overall, noise impacts with respect to Alternative 1 would result in the same significance conclusions as the proposed project. Therefore, Alternative 1 impacts would be similar to the impacts associated with implementation of the proposed project.

Implementation of Mitigation Measures NOI-1 and NOI-2 would ensure that construction of Alternative 1, together with cumulative projects, would not result in a significant cumulative impact as a result of construction noise. Because operational impacts related to noise for Alternative 1 would be less than those associated with the proposed project, cumulative impacts would also be less than cumulatively significant, and no mitigation would be required.

#### 4.11.11.2 Alternative 2—2,000 SF of Restaurant Uses

Alternative 2 would allow for the future construction of a 161,385 sf Ganahl Lumber hardware store and lumber yard, a 399-space vehicle storage facility, and 2,000 sf of fast-food restaurant use, which represents a reduction of 4,000 sf of drive-through restaurant uses as compared to the proposed project. Specifically, Alternative 2 would provide 80 parking spaces, compared to 62 parking spaces provided in Area A as part of the proposed project.

Most components of the proposed project, such as outdoor lighting, circulation and access, signage, utilities and drainage, sustainability features, landscaping, and construction phasing and grading, would not significantly change with the implementation of Alternative 2. Components specific to Area A, such as the location of walkways, retaining walls, fences, and gates, would also not change under Alternative 2. The modification and installation of existing and new utilities and infrastructure associated with the proposed project would still occur under Alternative 2. Under Alternative 2, similar to the proposed project, the entirety of Area A would be cleared, excavated, graded, and paved to accommodate surface parking and a building pad.

**Construction Noise and Vibration.** As discussed above, grading and site preparation activities are the loudest aspects of construction, and the grading and site preparation involved with Alternative 2 require the same amount of ground disturbance as the proposed project. Therefore, similar to the proposed project, Alternative 2 would include the same amount of acreage within the same proximity to vicinity noise receptors. However, Alternative 2 would result in the construction of less building space (4,000 fewer square feet). Therefore, construction-related noise generated under this alternative would be produced for a slightly shorter period of time than the proposed project. Similar to the proposed project, Alternative 2 would also implement Mitigation Measure NOI-1,

which requires adherence to daytime noise restrictions, and Mitigation Measure NOI-2, which includes noise control and sound attenuation measures to reduce noise impacts on sensitive land uses.

Alternative 2 would result in the same amount of ground vibration as the proposed project. As with the proposed project, the use of virtually any type of construction equipment during construction of Alternative 2 would not result in a ground-borne vibration velocity level above 0.2 inch/sec at the nearest off-site structures.

**Operational Noise.** Operational noise sources associated with Alternative 2 would include mobile and stationary (i.e., fast food restaurant drive through, mechanical equipment, lumber yard operations) sources. Alternative 2 would generate approximately 25 percent less traffic on vicinity roadways. Such a decrease in automobile trips would equate to similar to slightly less traffic noise compared with the proposed project, depending on the specific roadway segments. For instance, the greatest reduction of traffic noise would occur on the segment of Stonehill Drive between the Project Driveway and Camino Capistrano. Specifically, 25 percent less project traffic on the segment of Stonehill Drive between the Project Driveway and Camino Capistrano would result in a 0.1 dBA CNEL decrease compared with the proposed project. All the remaining vicinity roadway segments would experience the same level of traffic noise with implementation of Alternative 2 compared with the proposed project.

Alternative 2 would include several on-site noise sources included in the proposed project such as material handling vehicles stacking, loading and unloading products, back-up beepers, delivery trucks, a trash compactor, a baler, and other mechanical equipment and parking lot noise. Compared with the proposed project, Alternative 2 levels range from 2.2 dBA below to 0.6 dBA above noise levels at the receptors as compared to the proposed project. However, noise levels at these locations would still not exceed noise thresholds for daytime, evening, or nighttime periods.

**Summary.** Overall, noise impacts with respect to Alternative 2 would be slightly reduced as compared to the proposed project. Alternative 2 would result in the same significance conclusions as the proposed project. Therefore, Alternative 2 impacts would be similar to impacts associated with implementation of the proposed project.

Implementation of Mitigation Measures NOI-1 and NOI-2 would ensure that construction of Alternative 2, together with cumulative projects, would not result in a significant cumulative impact as a result of construction noise. Because operational impacts related to noise for Alternative 2 would be less than those associated with the proposed project, cumulative impacts would also be less than cumulatively significant, and no mitigation would be required.

#### 4.11.11.3 Alternative 3—4,000 SF of Restaurant Uses

Alternative 3 would allow for the future construction of a 161,385 sf Ganahl Lumber hardware store and lumber yard, a 399-space vehicle storage facility, and a 4,000 sf of fast-food restaurant use, which represents a reduction of 2,000 sf of drive-through restaurant use as compared to the proposed project. Specifically, Area A would provide 101 parking spaces, compared to 62 parking

spaces provided as part of the project. Under Alternative 3, these additional parking spaces would be used by the drive-through restaurant use.

Most components of the proposed project, such as outdoor lighting, circulation and access, signage, utilities and drainage, sustainability features, landscaping, construction phasing, and grading, would not significantly change under the implementation of Alternative 3. Components specific to Area A, such as the location of walkways, retaining walls, fences, and gates, would also not change under Alternative 3. The modification and installation of existing and new utilities and infrastructure associated with the proposed project would still occur under Alternative 3. Under Alternative 3, similar to the proposed project, the entirety of Area A would be cleared, excavated, graded, and paved to accommodate surface parking and a building pad.

**Construction Noise and Vibration.** As discussed above, grading and site preparation activities are the loudest aspects of construction, and the grading and site preparation involved with Alternative 3 would require the same amount of ground disturbance as the proposed project. Therefore, similar to the proposed project, Alternative 3 would include the same amount of acreage within the same proximity to vicinity noise receptors. However, Alternative 3 would result in the construction of less building space (2,000 fewer square feet). Therefore, construction-related noise generated under this alternative would be produced for a slightly shorter period of time than the proposed project. Similar to the proposed project, Alternative 3 would also implement Mitigation Measure NOI-1, which requires adherence to daytime noise restrictions and Mitigation Measure NOI-2, which includes noise control and sound attenuation measures to reduce noise impacts on sensitive land uses.

Alternative 3 would result in the same amount of ground vibration as the proposed project. As with the proposed project, the use of virtually any type of construction equipment during construction of Alternative 2 would not result in a ground-borne vibration velocity level above 0.2 inch/sec at the nearest off-site structures.

**Operational Noise.** Operational noise sources associated with Alternative 3 would include mobile and stationary (i.e., fast food restaurant drive through, mechanical equipment, lumber yard operations) sources. Alternative 3 would generate approximately 12 percent less traffic on vicinity roadways. Such a decrease in automobile trips would equate to similar to slightly less traffic noise compared to the proposed project, depending on the specific roadway segments. For instance, the greatest reduction of traffic noise would occur on the segment of Stonehill Drive between the Project Driveway and Camino Capistrano. Specifically, 12 percent less project traffic on the segment of Stonehill Drive between the Project Driveway and Camino Capistrano would result in a 0.1-dBA CNEL decrease compared with the proposed project. All the remaining vicinity roadway segments would experience the same level of traffic noise with implementation of Alternative 3 compared with the proposed project.

Alternative 3 would include several on-site noise sources such material handling vehicles stacking, loading and unloading products, back-up beepers, delivery trucks, a trash compactor, a baler, and other mechanical equipment and parking lot noise. Compared with the proposed project, Alternative 3 would include slightly less activity associated with fast-food restaurants as there would be less square footage for this land use type. Alternative 3 range from 0.6 dBA below to 1.0 dBA

above noise levels at the receptors as compared to the proposed project. However, noise levels at these locations would still not exceed noise thresholds for daytime, evening, or nighttime periods.

**Summary.** Overall, noise impacts with respect to Alternative 3 would be slightly reduced as compared to the proposed project. Alternative 3 would result in the same significance conclusions as the proposed project. Therefore, Alternative 3 impacts would be similar to impacts associated with implementation of the proposed project.

Implementation of Mitigation Measures NOI-1 and NOI-2 would ensure that construction of Alternative 3, together with cumulative projects, would not result in a significant cumulative impact as a result of construction noise. Because operational impacts related to noise for Alternative 3 would be less than those associated with the proposed project, cumulative impacts would also be less than cumulatively significant, and no mitigation would be required.

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