Section 3.10
Noise

SECTION SUMMARY

This section addresses potential noise impacts associated with construction and operation of the proposed Project as well as alternatives to the proposed Project. Noise from construction activities and operations may affect noise-sensitive receptors in the area.

Section 3.10, Noise, provides the following:

- a description of environmental noise fundamentals and the existing environmental setting, including existing sound levels and noise-sensitive receptors in the surrounding area;
- a description of local, state, and federal regulations and policies that apply to the proposed Project as well as the alternatives;
- a discussion regarding the methodology used to determine whether the proposed Project or the alternatives would result in a significant adverse noise impact;
- an impact analysis of both the proposed Project as well as the alternatives; and
- a description of any mitigation measures proposed to reduce any potential impacts and residual impacts, as applicable.

Key Points of Section 3.10

The proposed Project and alternatives would improve container-handling efficiency and capacity of the existing Everport Container Terminal located at Berths 226–236 on Terminal Island within the Port of Los Angeles (Port).

Pile driving during the construction of the proposed Project and Alternatives 3, 4, and 5 under Impact NOI-1 (Construction Noise) would result in elevated noise levels that exceed the significance threshold levels at the nearest noise-sensitive receptors (liveaboard residents at a marina in Fish Harbor and tourist receptors at the waterfront area in San Pedro) under CEQA and NEPA. Mitigation measures **MM NOI-1: Noise Reduction during Pile Driving** and **MM NOI-2: Utilize Temporary Noise Attenuation Curtain Adjacent to Pile Driving Equipment**, would be implemented during pile driving for the proposed Project and Alternatives 3, 4, and 5 to reduce pile driving noise to less than significant levels. With implementation of mitigation measures MM NOI-1 and MM NOI-2 impacts would be less than significant.

No impacts would occur for the proposed Project or any alternatives under Impact NOI-2 (Night Construction) under both CEQA and NEPA. Under Impact NOI-3 (Operational Noise), no significant impacts, under either CEQA and NEPA would occur for the proposed Project or any of the alternatives (NEPA does not apply to Alternative 2 [No Project Alternative]) after mitigation.

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3.10.1 Introduction

This section describes the fundamentals of noise, the existing environmental setting for noise, applicable regulations associated with noise, the potential increase of noise that would result from the proposed Project that could cause significant impacts, and any necessary mitigation measures that would reduce these impacts.

The analyses in this section focus on Project-specific impacts to human noise-sensitive receptors (cumulative noise impacts are evaluated in Chapter 4). The primary discussion of noise conditions, including underwater noise, and impacts on non-human species (i.e., aquatic and terrestrial wildlife) is presented in Section 3.3, Biological Resources.

3.10.1.1 Noise Fundamentals

Noise may be described as unwanted sound and is usually objectionable because it is disturbing or annoying. Sound is defined as any pressure variation in air that the human ear can detect. The objectionable nature of sound can be caused by its pitch or its loudness. Pitch is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. Loudness is the amplitude or intensity of sound waves combined with the reception characteristics of the ear. Amplitude may be compared with the height of an ocean wave: the higher the amplitude, the louder the sound. In general, intermediate pitched signals sound louder to humans than sounds with a lower or higher pitch. Technical acoustical terms commonly used in this section are defined in Table 3.10-1.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receptor, and the propagation path between the two. The loudness of the noise source and the obstructions or atmospheric factors, which affect the propagation path to the receptor, determine the sound level and the characteristics of the noise perceived by the receptor.

Table 3.10-1: Definitions of Acoustical Terms

Term	Definition
Sound	A vibratory disturbance created by a vibrating object, which when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism such as the human ear or a microphone.
Noise	Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
Decibel (dB)	A unit describing the amplitude of sound equal to 20 times the logarithm to base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micropascals.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micropascals (or micronewtons per square meter), where 1 pascal is the pressure resulting from a force of 1 newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micropascals in air). Sound pressure level is the quantity that is measured directly by a sound level meter.

Table 3.10-1: Definitions of Acoustical Terms

Term	Definition
Frequency, Hertz (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sounds are below 20 Hz, and ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level (dBA)	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 in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level (L_{eq})	The average A-weighted noise level during the measurement period. The hourly L_{eq} used for this report is denoted as dBA L_{eq}[h].
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day, which is obtained by adding 5 dB to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and 10 dB to sound levels between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level (L_{dn})	The average A-weighted noise level during a 24-hour day, which is obtained by adding 10 dB to sound levels measured at night between 10:00 p.m. and 7:00 a.m.
L_{01}, L_{10}, L_{50}, L_{90}	A-weighted noise levels that are exceeded 01, 10, 50, and 90 percent of the time during the measurement period. The L_{01} is indicative of the typical highest noise levels reached, L_{10} is typically considered the intrusive noise level, the L_{50} represents the median noise level, and the L_{90} represents, and is considered, the background, or ambient noise level.
Maximum Sound Level (Lmax)	The maximum A-weighted noise level measured during the measurement period.
Minimum Sound Level (Lmin)	The minimum A-weighted noise level measured during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive Noise	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, and tonal or informational content as well as the prevailing ambient noise level.

Sound Descriptors

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micropascals (mPa). One mPa is approximately one hundred-billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this large range of values,

sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe the sound pressure level (also referred to simply as the sound level) in terms of decibels. The threshold of hearing for young people is about 0 dB, which corresponds to 20 mPa.

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the sound pressure level in that range. In general, people are most sensitive to the frequency range of 1,000 to 8,000 Hz and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on human sensitivity to those frequencies. The A-weighted sound level (expressed in units of dBA) can be computed based on this information.

The A-weighting scale approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments regarding the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Table 3.10-2 describes typical A-weighted sound levels for various noise sources.

Table 3.10-2: Typical Noise Levels in the Environment

Common Outdoor Noise Source	Noise Level (dBA)	Common Indoor Noise Source
	120 dBA	
Jet fly-over at 300 meters		Rock concert
	110 dBA	
Pile driver at 30 meters	100 dBA	
		Night club with live music
	90 dBA	
Large truck passes by at 15 meters		
	80 dBA	Noisy restaurant
		Garbage disposal at 1 meter
Gas lawn mower at 30 meters	70 dBA	Vacuum cleaner at 3 meters
Commercial/Urban area daytime		Normal speech at 1 meter
Suburban expressway at 90 meters	60 dBA	
Suburban daytime		Active office environment
	50 dBA	
Urban area nighttime		Quiet office environment
	40 dBA	
Suburban nighttime		
Quiet rural areas	30 dBA	Library

Table 3.10-2: Typical Noise Levels in the Environment

Common Outdoor Noise Source	Noise Level (dBA)	Common Indoor Noise Source
		Quiet bedroom at night
Wilderness area	20 dBA	
	10 dBA	Quiet recording studio
Threshold of human hearing	0 dBA	Threshold of human hearing

Source: Caltrans, "Technical Noise Supplement to the Traffic Noise Analysis Protocol," Sept 2013, page 2-20

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 excavator produces a sound pressure level of 80 dBA, two excavators would not produce 160 dBA. Rather, they would combine to produce 83 dBA. The cumulative sound level of any number of sources, such as excavators, can be determined using decibel addition.

Noise Descriptors

Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations is utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy-equivalent sound/noise descriptor is called L_{eq}. A common averaging period is hourly, but L_{eq} can describe any series of noise events of arbitrary duration. The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within approximately plus or minus 1 dBA. Two metrics describe the 24-hour average, L_{dn} and CNEL (defined in Table 3.10-1). Both include penalties for noise during nighttime hours; CNEL penalizes noise during the evening. CNEL and L_{dn} are normally within 1 dBA of each other and used interchangeably in this section.

Human Response to Noise

Studies have shown that under controlled conditions in an acoustics laboratory, a healthy human ear is able to discern changes in sound levels of 1 dBA. In a quiet environment with average background noise, the healthy human ear can detect changes of about 2 dBA. However, it is widely accepted that changes of 3 dBA in the normal environment are considered just noticeable to most people, and that an increase of 3 dBA is perceived as approximately a 25 percent increase in noise level. A change of 5 dBA is readily perceptible, and a change of 10 dBA is perceived as being twice as loud. Accordingly, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) resulting in a 3 dB increase in sound would generally be barely detectable.

Noise and Health

A number of studies have linked increases in noise with health effects, including hearing impairment, sleep disturbance, cardiovascular effects, psychophysiological effects, and potential impacts to fetal development (Babisch, 2005). Potential health effects appear

to be caused by both short and long-term exposure to very loud noises and long-term exposure to lower levels of sound (chronic exposure). Acute exposure to sound levels greater than 120 dBA can cause mechanical damage to hair cells of the cochlea (the auditory portion of the inner ear) and hearing impairment (Babisch, 2005). As noted in Table 3.10-2, sound levels greater than 120 dBA are equivalent to a rock concert or a jet plane flying overhead at approximately 1,000 feet.

The World Health Organization (WHO) and the U.S. Environmental Protection Agency (EPA) consider L_{eq} = 70 dBA to be a safe daily average noise level for the ear. However, even this "ear-safe" level may cause disturbance to sleep and concentration and may be linked to chronic health impacts such as hypertension and heart disease (Babisch, 2006). A number of studies have looked at the potential health effects from the sound of chronic lower noise levels, such as traffic, especially as these noise levels affect children. In a study of schoolchildren in Germany, blood pressure was found to be 10 millimeters of mercury higher in a group of students exposed to road traffic noise from high traffic transit routes (Babisch, 2006). A study by Kawada (2004) showed that in pregnant women, exposure to airplane noise was found to be associated with decreased fetal body weight. Research into these potential effects is still in its early stages, and there is not yet enough information to permit an evaluation of an individual project's impacts on public health. Accordingly, this summary is provided as an acknowledgement that such impacts could occur, but that the possibility cannot be evaluated for the proposed Project.

Sound Propagation

When sound propagates over a distance, it changes in both level and frequency content. The manner in which noise is reduced with distance depends on the following important factors:

Geometric spreading from point sources. Sound from a single source (i.e., a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (or drops off) at a rate of 6 dBA for each doubling of distance (intensity drops to one-quarter of the previous level with each doubling of distance).

Geometric spreading from line sources. Some sound generators are not point sources. Highway noise, for example, is not a single stationary point source of sound. The movement of vehicles on a highway makes the source of the sound appear to emanate from a line (i.e., a "line" source) rather than from a point. This results in cylindrical spreading rather than the spherical spreading resulting from a point source. The change in sound level from a line source is 3 dBA per doubling of distance (intensity drops to one-half of the previous level with each doubling of distance).

Ground absorption. Usually the noise path between the source and the observer is very close to the ground. The excess noise attenuation from ground absorption occurs due to acoustic energy losses on sound wave reflection. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is done for simplification only; for distances of less than 200 feet, prediction results based on this scheme are sufficiently accurate. For acoustically "hard" sites (i.e., sites with a reflective surface, such as a parking lot or a smooth body of water, between the source and the receptor), no excess ground attenuation is assumed because the sound wave is reflected without energy losses. For acoustically absorptive or "soft"

sites (i.e., sites with an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dBA per doubling of distance is normally assumed. When added to the geometric spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dBA per doubling of distance for a line source and 7.5 dBA per doubling of distance for a point source. Although some ground attenuation is expected, it is often ignored in a noise analysis, to ensure a conservative analysis and considering that, in any event, it is very difficult to characterize accurately.

Atmospheric effects. Research by Caltrans and others has shown that atmospheric conditions can have a major effect on noise levels. Wind has been shown to be the single most important meteorological factor within approximately 500 feet, whereas vertical air temperature gradients are more important over longer distances. Other factors, such as air temperature, humidity, and turbulence, also have major effects. Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lower noise levels. Increased sound levels can also occur because of temperature inversion conditions (i.e., increasing temperature with elevation) which cause reflection of sound from the inversion layer back to the ground. As with ground absorption, atmospheric effects are often ignored, as here, in the interest of a conservative analysis.

Shielding by natural or human-made features. A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by this shielding depends on the size of the object, proximity to the noise source and receptor, surface weight, solidity, and the frequency content of the noise source. Natural terrain features (such as hills and dense woods) and human-made features (such as buildings and walls) can substantially reduce noise levels. Walls are often constructed between a source and a receptor with the specific purpose of reducing noise. A barrier that breaks the line of sight between a source and a receptor will typically result in at least 5 dBA of noise reduction. A higher barrier may provide as much as 20 dBA of noise reduction. Lightly built barriers provide less attenuation.

3.10.1.2 Groundborne Vibration Fundamentals

Groundborne vibration is an oscillatory motion of the soil with respect to the equilibrium position and can be quantified in terms of velocity or acceleration.

Groundborne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Most perceptible indoor vibration is caused by sources within buildings, such as the operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are heavy construction equipment (such as blasting and pile driving), steel-wheeled trains, and heavy trucks on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible.

Table 3.10-3 summarizes common sources of groundborne vibration velocity levels (measured in decibel units [VdB]) and average human response to vibration that may be anticipated when a person is at rest in quiet surroundings. If the person is engaged in any type of physical activity, vibration tolerance increases considerably. The duration

of the vibration event has an effect on human response, as does its daily frequency of occurrence. Generally, as the duration and frequency of occurrence increase, the potential for adverse human response increases. Typical background vibration levels in residential areas are usually 50 VdB or lower, well below the threshold (65 VdB) of perception for most humans.

Table 3.10-3: Typical Levels of Groundborne Vibration

Human or Structural Response	Vibration Velocity Level (VdB)	Typical Sources (50 feet from source)
Threshold for minor cosmetic damage to fragile buildings	100	Blasting, pile driving, vibratory compaction equipment
Difficulty with tasks such as reading a video or computer screen	90	Heavy tracked vehicles (Bulldozers, cranes, drill rigs)
Threshold for residential annoyance for infrequent events (e.g., commuter rail)	80	Freight rail, typical Commuter rail, upper range
	70	Rapid transit, upper range
Threshold for residential annoyance for frequent events (e.g., rapid transit)	60	Commuter rail, typical Bus or truck over bump or on rough roads
Approximate threshold for human perception of vibration Limit for vibration sensitive equipment	50	Bus or truck over bump or on rough roads Rapid transit, typical
		Typical bus or truck on public road
		Typical background vibration

Source: USDOT Federal Transit Administration, 2006

Groundborne noise is a secondary phenomenon of groundborne vibration. When a building or structure vibrates, noise is radiated into the interior of the building (e.g., slight rattling of windows, doors, or stacked dishes). Rattling sounds can give rise to vibration complaints, even though there is very little risk of actual structural damage. In high noise environments, which are more prevalent where groundborne vibration approaches perceptible levels, this rattling phenomenon may also be produced by loud airborne environmental noise that causes induced vibration in exterior doors and windows. Typically, this low frequency sound would be perceived as a low rumble. The magnitude of the sound depends on the frequency characteristic of the vibration and the manner in which the room surfaces in the building radiate sound. Groundborne noise is quantified by the A-weighted sound level inside the building. The sound level accompanying vibration is generally 25 to 40 dBA lower than the vibration velocity level in VdB. Groundborne vibration levels of 65 VdB can result in groundborne noise levels up to 40 dBA, which can disturb sleep. Groundborne vibration levels of 85 VdB can result in groundborne noise levels up to 60 dBA, which can be annoying to daytime noise sensitive land uses such as schools (Federal Transit Administration, 2006).

3.10.2 Environmental Setting

3.10.2.1 General Noise Sources in the Project Vicinity

The Project site is located at 389 Terminal Way within an industrial area on Terminal Island within the Port. The site is within the Port of Los Angeles Plan area of in the City of Los Angeles, which is adjacent to the community of San Pedro. The immediate Project site is generally bounded on the north and west by the Main Channel of the Los Angeles Harbor (and the community of San Pedro beyond); Ferry Street, ExxonMobil SW Area 2, U.S. Customs House, and the Terminal Island Water Reclamation Plant to the east; Cannery Street and Berths 238-240C (ExxonMobil SW Area 1, which is now on the PBF Energy terminal, formerly ExxonMobil) to the south. The noise environment at the Project site and vicinity is composed of periodic increases in noise levels associated with terminal operations onsite and nearby, railroad train movement along the various railroad lines in the area, vehicular traffic on the local street network and freeways, industrial sources, and activities at the Port. The noise environment at any particular location depends on climate conditions and proximity to the various noise sources, although traffic noise is the predominant noise source in the areas surrounding the Project area.

The vicinity of the Project site includes Wilmington to the north and San Pedro to the west and is characterized by industrial and Port-related facilities, visitor-serving commercial areas, marine service and support facilities, and open space and recreational areas. In general, average noise levels in an area are directly determined by the proximity to the various noise generating activity. Unless such activity in the area changes dramatically, average noise levels also do not change appreciably over time. For example, a doubling of noise generating activity of the same or similar type (e.g. traffic with the same or similar distribution of vehicular types) results in a 3 dBA increase in noise levels which, as discussed above, would be considered just noticeable to most people. Therefore, background noise measurements would tend to be reasonably consistent over time provided there has been no substantial change in noise generating activity.

3.10.2.2 Existing Baseline - Noise Environment

Noise-sensitive receptors considered in this EIS/EIR include residences (which, for the proposed Project, includes liveaboards (people who reside on boats), schools, hospitals, libraries, places of worship, and public parks. Figure 3.10-1 shows noise-sensitive receptors in the Project vicinity, and corresponding noise measurements. Following are the locations of sensitve noise receptors and the corresponding noise monitoring sites (LT are long-term and ST are short-term measurement locations):

- LT-1 Residences on N. Palos Verdes Street (residences approximately 3,600 feet from the nearest pile driving location).
- LT-2 Commercial and Recreational Uses on San Pedro waterfront (over 1,800 feet from the nearest pile driving location).
- LT-3 Residences fronting S. Harbor Boulevard (residences approximately 1,600 feet from the nearest pile driving location).
- ST-1 Anchorage Road Frontage of the Island Yacht Anchorage (liveaboards over 10,000 feet from the nearest pile driving location).

- ST-2 Terminal Island Memorial (Reservation point approximately 4,900 feet from the nearest pile driving location).
- ST-3 Municipal pier at the end of Ways Street (liveaboards approximately 3,900 feet from the nearest pile driving location).
- ST-4 Southwest corner of Cannery and Barracuda Streets.
- ST-5 Ports O'Call Village Berth 78.
- ST-6 In parking area serving the USS Iowa museum Berth 89.
- ST-7 Southeast corner of W. Sepulveda and N. Palos Verdes Streets (approximately 2,500 feet from the nearest pile driving location).
- ST-8 Apartment complex at 661 Harbor Boulevard (approximately 2,900 feet from the nearest pile driving location).

The nearest residential area to the Project site is located in San Pedro, about 0.3 mile to the west, across the Main Channel of the Los Angeles Harbor. There are also Port-related residential uses in Fish Harbor and on the north side of the Cerritos Channel just west of the Terminal Island Freeway (State Route [SR]-47) Bridge. For the purposes of noise impact analysis, the area of influence includes those sensitive receptors closest to the Project site that might be affected by construction noise, on-terminal operational noise, or noise associated with traffic generated by the proposed Project or an alternative, and sensitive receptors along major transportation corridors that serve the Project area.

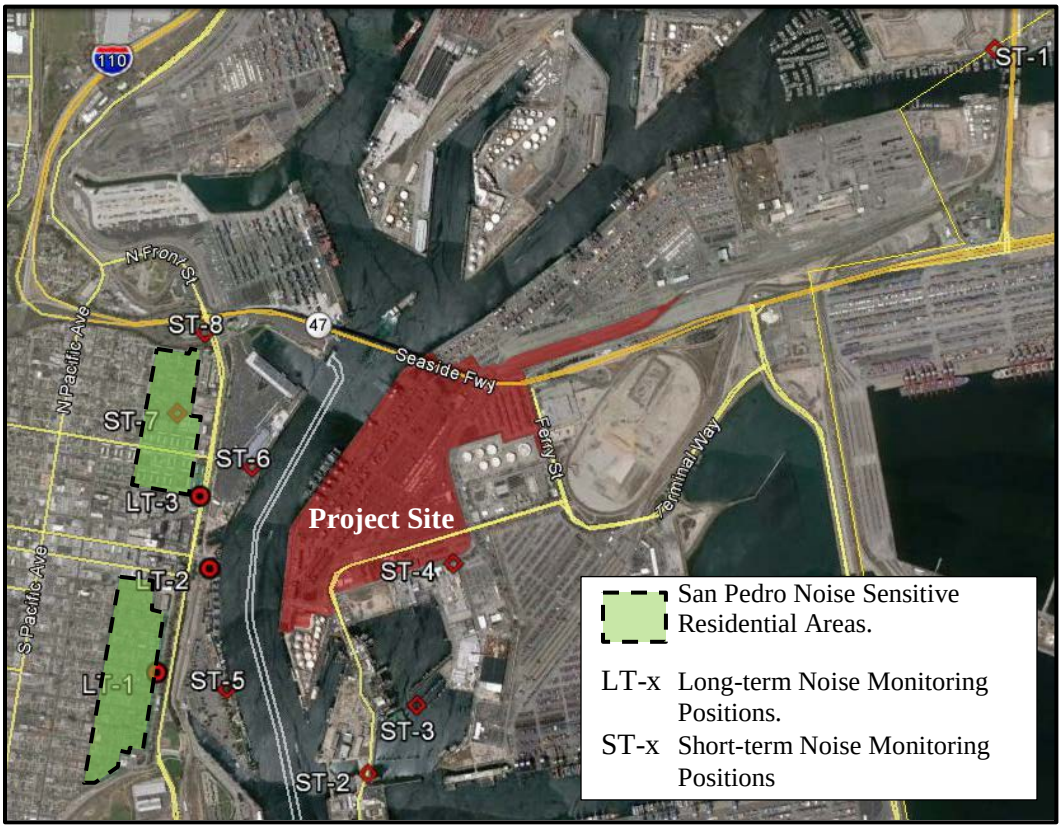

Figure 3.10-1 Noise Sensitive Receptors and Corresponding Noise Monitoring Sites

3.10.2.3 Noise Monitoring

A noise monitoring survey was conducted between January 14 and 15, 2015 to quantify existing ambient noise levels at representative locations near the Project area and major transportation corridors serving the Project area. Noise levels measured in this timeframe are considered to be representative of the existing conditions, 2013 ambient noise levels at representative locations near the Project area. This determination is based on a consideration of the difference in the total monthly throughput at the Port between January 2013 and 2015 and the annual throughput for 2013 and 2105. The total monthly throughput at the Port of Los Angeles for January of 2013 and 2015 was, respectively, 669,000 TEUs and 529,427 TEUs, and the total annual throughput for calendar years 2013 and 2015 was, respectively, 7,868,582 and 8,160,457. The monthly decrease in throughput between 2013 and 2015 is equivalent to an approximate 1 dB Port wide reduction in average noise levels, while the annual increase in throughput between 2013 and 2015 would result in a Port wide average noise level increase of 0.2 dB. Considering these differences and that sound level meters can only accurately measure environmental noise levels to within about plus or minus 1 dBA (see Section 3.10.1.1, Noise Fundamentals), the sound levels measured in 2015 are considered to be representative of 2013 ambient noise levels at representative locations near the Project area.

The 24-hour long-term (LT) noise levels were monitored during the daytime, evening, and nighttime at consecutive hourly intervals at three representative locations, and 10-minute short-term (ST) noise measurements were conducted during the daytime at eight representative locations. Figure 3.10-1 shows the long-term and short-term noise measurement sites. The results of the long-term noise measurements are summarized in Table 3.10-4, and the results of the short-term noise level measurements are summarized in Table 3.10-5.

Measurements at the short-term locations were deemed representative of typical daytime noise conditions in the areas where the measurements were conducted. The noise measurement sites are described and results are presented below. The results are provided in graphical figures showing the range of noise levels measured during each hour depicted by the statistical descriptors L_{90}, L_{50}, L_{10}, and L_{01}, as well as the maximum noise level and the energy average or equivalent sound level, $L_{eq(h)}$. The L_{eq} noise levels were used for the analysis. Although not required, the statistical noise levels (L_n) were obtained to provide further perspective on background noise levels. The measured CNEL, the 24-hour (day/evening/night) average noise level, is also shown in each figure.

Measurement LT-1 was made on a light standard at the corner of South Beacon Street and West 12th Street in the southern San Pedro residential district, at an approximate distance of 2,000 feet to the southern boundary of the Project site. Sound levels at this measurement position are representative of the existing noise environment at residences within San Pedro closest to the southern portion of the Project site. The primary noise source at this location was local traffic on Beacon Street and on Harbor Boulevard. Port-related noise was not distinctly audible at the test location. The hourly trends in noise levels measured between 1:00 p.m. on Wednesday January 14, 2015 and 1:00 p.m. on Thursday January 15, 2015, including the energy equivalent noise level (L_{eq}), which were used for the analysis, and the noise levels exceeded 01, 10, 50 and 90 percent of the time (indicated as $L_{01,}$ L_{10}, L_{50} and L_{90}), are shown on Figure 3.10-2. As mentioned

above, the statistical noise levels (L_n) were reported to provide further perspective on background noise levels. The daytime and nighttime average (L_{eq}) noise levels at this location ranged from 58 to 62 dBA and 53 to 58 dBA, respectively with an average daytime L_{eq} of 60 dBA and an average nighttime L_{eq} of 56 dBA. The CNEL at this location was 64 dBA.

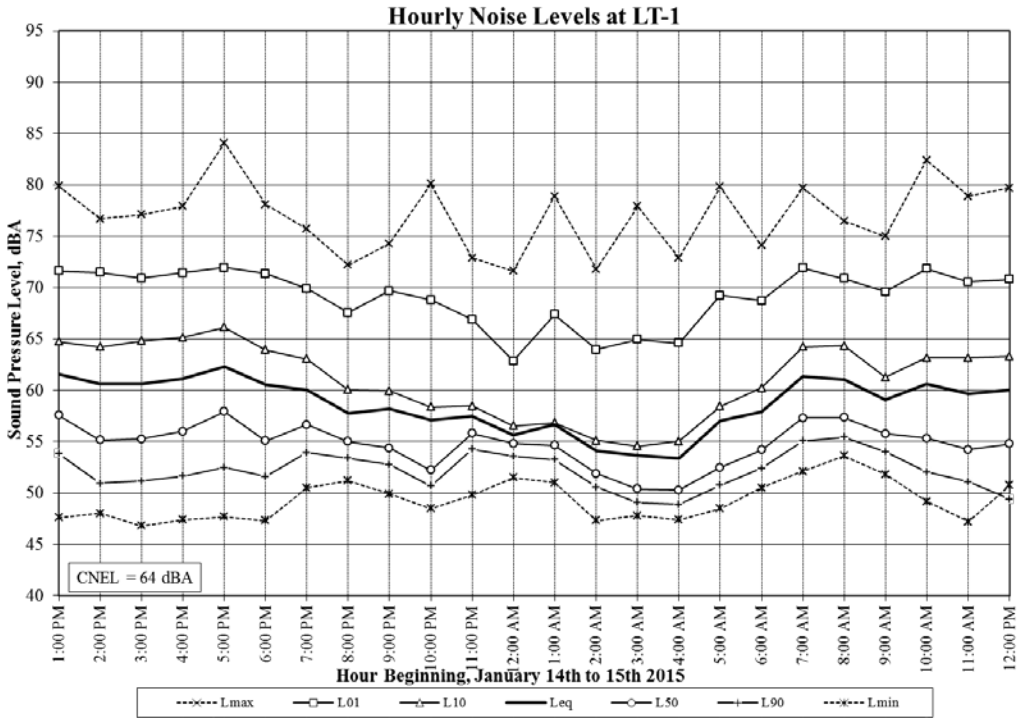

Figure 3.10-2 Noise Measurement Results at LT-1

Measurement LT-2 was made at the corner light standard in the park space east of Sampson Way between the Acapulco Restaurant and the Los Angeles Maritime Museum, at an approximate distance of 1,250 feet from the western edge of the Project site. This location is representative of the existing noise environment at parks, museums and restaurants in San Pedro business/tourism area along the western edge of the Main Channel of the Los Angeles Harbor. The primary noise source at this location was local traffic on Sampson Way and Harbor Boulevard, restaurant parking lot activities, and sound emissions from air handling and ventilation equipment from the adjacent museum and restaurant. Port-related noise was not distinctly audible at this location. The hourly trends in noise levels measured between 1:00 p.m. on Wednesday January 14, 2015 and 1:00 p.m. on Thursday January 15, 2015, including the energy equivalent noise level (L_{eq}) and the noise levels exceeded 01, 10, 50 and 90 percent of the time (indicated as L_{01}, L_{10}, L_{50} and L_{90}), are shown on Figure 3.10-3. The statistical noise levels (L_n) were reported to provide further perspective on background noise levels. The daytime and nighttime average (L_{eq}) noise levels at this location ranged from 58 to 66 dBA and 54 to 60 dBA, respectively with an average daytime L_{eq} of 62 dBA and an average nighttime L_{eq} of 57 dBA. The CNEL at this location was 65 dBA.

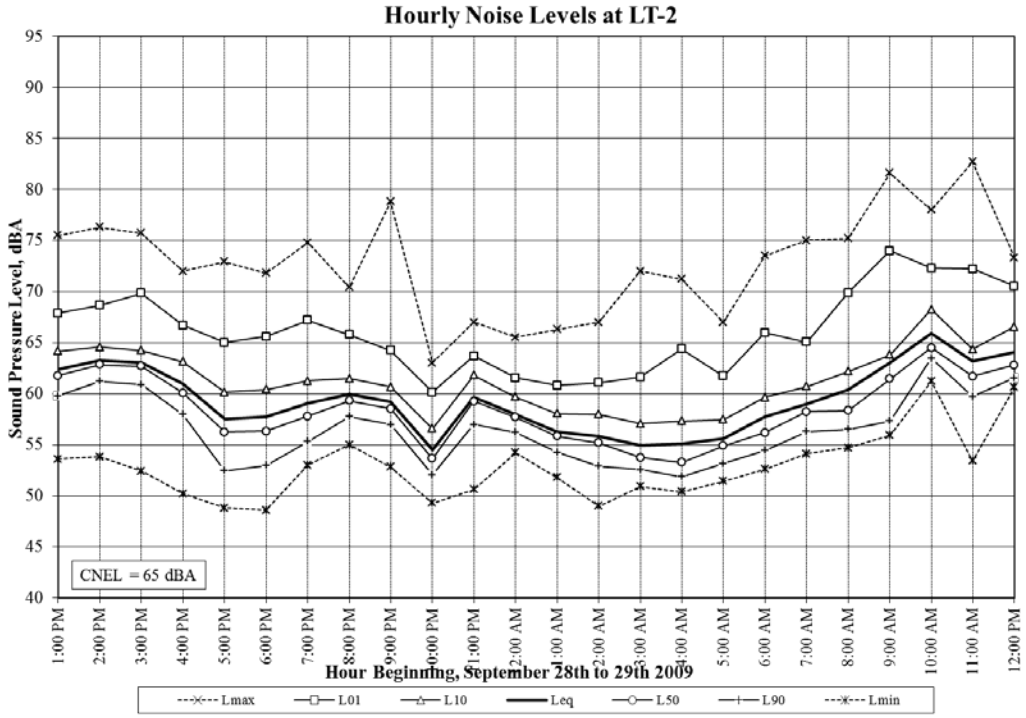

Figure 3.10-3 Noise Measurement Results at LT-2

Measurement LT-3 was made on a light standard at the corner of Harbor Boulevard and West 3rd Street in the San Pedro residential district, at an approximate distance of 1,500 feet from the western edge of the Project site. This location is representative of the existing noise environment at residences within San Pedro closest to the western portion of the Project site. The primary noise source at this location was local traffic on Harbor Boulevard. Port-related noise was not distinctly audible at this location. The hourly trends in noise levels measured between 1:00 p.m. on Wednesday January 14, 2015 and 1:00 p.m. on Thursday January 15, 2015, including the energy equivalent noise level (L_{eq}) and the noise levels exceeded 01, 10, 50 and 90 percent of the time (indicated as L_{01}, L_{10}, L_{50} and L_{90}), are shown on Figure 3.10-4. The statistical noise levels (L_n) were reported to provide further perspective on background noise levels. The daytime and nighttime average (L_{eq}) noise levels at this location ranged from 66 to 71 dBA and 62 to 68 dBA, respectively with an average daytime L_{eq} of 69 dBA and an average nighttime L_{eq} of 65 dBA. The CNEL at this location was 72 dBA.

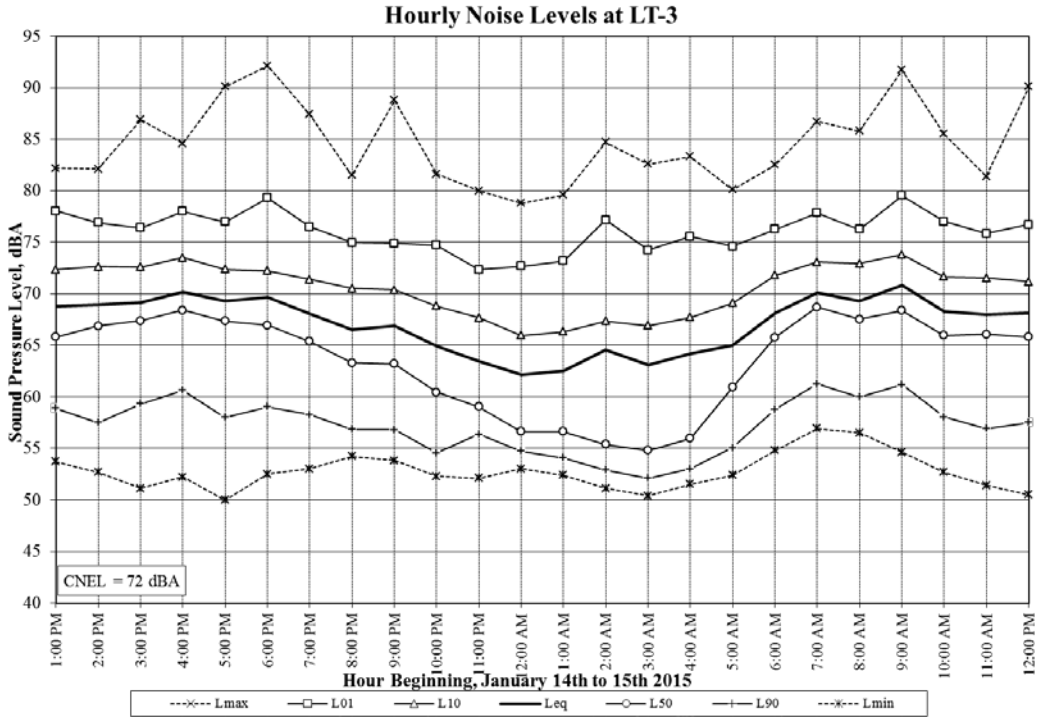

Figure 3.10-4 Noise Measurement Results at LT-3

Measurement ST-1 was conducted at the Anchorage Road Frontage of Island Yacht Anchorage which contains liveaboards at an approximate distance of 105 feet to rail cars on the adjacent railroad bridge and 195feet to trucks passing on the adjacent freeway bridge. Truck traffic on the Terminal Island Freeway (SR-47) Bridge and rail traffic on the rail bridge was the dominant noise source at this location, typically producing levels between 64 and 69 dBA. Noise from pile driving activities associated with new roadway construction on the adjacent bridge also produced maximum noise levels of between 67 and 68 dBA.

Measurement ST-2 was conducted at the Terminal Island Memorial south of the Al Larson Boat Shop near Firehouse 111 and approximately 2,500 feet south of the southernmost portion of the Project site. The primary noise source at this location was local traffic on Seaside Avenue at between 58 to 61 dBA. Other measurable noise sources at this location were distant port activities at between 51 and 55 dBA, work activities at the Al Larson Boat Shop at between 51 and 52 dBA, and passing boats in the harbor at between 51 and 52 dBA.

Measurement ST-3 was conducted at the end of the municipal pier opposite the Al Larson Boat Shop area at the end of Ways Street. Noise sources in this area include sounds from distant port activities, activities at the Al Larson Boat Shop, passing boats, and overhead aircraft. These sounds could not be measured independently of one another, but generally produced sound levels of between 50 and 55 dBA.

Measurement ST-4 was conducted at the southwest corner of Cannery and Barracuda Streets. The primary noise source at this location was passing traffic on Cannery Street and truck movements within and in and out of the container storage and staging area on the north side of Cannery Street. Trucks in the staging area generally produced sound

levels of between 61 to 66 dBA, while passing traffic (cars and trucks) on Cannery and Barracuda Streets produced levels of between 62 to 76 dBA.

Measurement ST-5 was conducted in the Ports O'Call Village area at Berth 78. The primary source of noise in this area was the sound of ventilation systems for nearby businesses and restaurants at 55 to 56 dBA, boat maintenance activities at 54 to 64 dBA, and the voices of persons on boats and walking within the Ports O'Call area at 52 to 58 dBA. Port-related noise was not distinctly audible at this location; however, distant train horns, and passing fire boats where audible, but not measureable.

Measurement ST-6 was conducted near Berth 89, at the end of the parking area serving the USS Iowa museum, approximately 700 feet from the centerline of South Harbor Boulevard, and 1,000 feet from the mid-point of the closest cargo ship being unloaded by gantry cranes at the Everport Container Terminal. Roadway traffic noise was not a significant noise source at this measurement position. The operation of crane engines was audible but not distinctly measurable; however, occasional banging of containers during movements and setting produced sound levels of between 54 and 56 dBA. Other noise sources at this location included the all call from the USS Iowa at about 55 dBA, motorcycles on Harbor Boulevard at 56 dBA and birds at 52 to 53 dBA. The noise measurement results at this position are considered representative of those currently produced by the Everport Container Terminal at the closest positions on the San Pedro waterfront.

Measurement ST-7 was conducted at the southeast corner of W. Sepulveda Street and N. Palos Verdes Street in the residential area above the Port at approximately 630 feet from the centerline of South Harbor Boulevard and 2,500 feet from the mid-point of the closest cargo ship being unloaded by gantry cranes at the Everport Container Terminal. The primary sources of noise at this location were traffic on local roadways at between 50 to 66 dBA, residential yard work at between 48 to 54 dBA, and birds at 45 to 47 dBA. Terminal operations were not audible above background noise levels at this location.

Measurement ST-8 was conducted at the apartment complex at 661 Harbor Boulevard located at approximately 120 feet from the centerline of South Harbor Boulevard, 240 feet from the edge of SR-47, 475 feet from the Gateway Plaza Fanfare Fountain, and 2,900 feet from the mid-point of the closest cargo ship being unloaded by gantry cranes at the terminal. The primary sources of noise at this location was truck traffic on SR-47 and Harbor Boulevard at between 68 and 76 dBA, motorcycles on the SR-47 off ramp at 85 to 86 dBA. Distant sound from SR-47 traffic on the Vincent Thomas Bridge produced levels of 62 to 65 dBA, while sound from the Gateway Plaza Fanfare Fountain was audible but not measurable. Terminal operations were not audible above background noise levels at this location.

Table 3.10-4: Long-Term Noise Monitoring Results

Site	Site Description (Date)	Noise Level, dBA			Noise Sources
		CNEL	Daytime L_{eq} (7:00 a.m.–10:00 p.m.)	Nighttime L_{eq} (10:00 p.m.–7:00 a.m.)	
LT-1	Residences on N. Palos Verdes Street (1/14/15 to 1/15/15)	64	61	56	Primary noise source is traffic on S. Beacon Street.
LT-2	Commercial and Recreational Uses on San Pedro waterfront (1/14/15 to 1/15/15)	65	62	56	Primary noise source is local traffic and mechanical equipment at adjacent uses.
LT-3	Residences fronting S. Harbor Blvd. (1/14/15 to 1/15/15)	72	69	65	Primary noise source is traffic S. Harbor Blvd.

1

Table 3.10-5: Short-Term Noise Monitoring Results

Site	Site Description (Date, Time)	Noise Level, dBA				Primary Noise Sources
		L_{10}[1]	L_{eq}[2]	L_{50}[3]	L_{90}[4]	
ST-1	Anchorage Road Frontage of the Island Yacht Anchorage. (1/15/15,9:15-9:25)	69	***66***	64	61	Railroad and truck traffic over the Cerritos channel bridges. Pile Driving Noise from new construction
ST-2	Terminal Island Memorial (1/15/15,9:50-10:00)	59	***55***	54	51	Vehicles on Seaside Ave, Port activity, work at Al Larson Boat shop and passing boats.
ST-3	Municipal pier at the end of Ways Street (1/15/15,10:00-10:10)	53	***52***	51	50	Port activity, work at Al Larson Boat Shop, passing boats and overhead aircraft.
ST-4	Southwest corner of Cannery and Barracuda Streets (1/15/15,10:30-10:40)	67	***63***	61	59	Trucks in and out of the container storage and staging area and passing traffic.
ST-5	Ports O'Call Village Berth 78 (1/15/15,11:30-11:40)	57	***56***	56	55	Building ventilation systems, boat maintenance, and patron voices.
ST-6	In parking area serving the USS Iowa museum Berth 89 Representative of the Everport operational noise at the San Pedro waterfront. (1/15/15,11:15-11:25)	55	***54***	54	52	Cargo ship unloading, all-call from the USS Iowa, motorcycles on Harbor Blvd.

Table 3.10-5: Short-Term Noise Monitoring Results

Site	Site Description (Date, Time)	Noise Level, dBA				Primary Noise Sources
		L_{10}[1]	L_{eq}[2]	L_{50}[3]	L_{90}[4]	
ST-7	Southeast corner of W. Sepulveda and N. Palos Verdes Streets (1/15/15,11:50-12:00)	52	***52***	47	46	Traffic on local roadways and residential yard work
ST-8	Apartment complex at 661 Harbor Blvd (1/15/15,12:20-12:30)	71	***69***	67	64	Truck and motorcycle traffic on SR-47 and Harbor Blvd.

1. The L_{10} represents intrusive noise in the measured environment. Where the noise environment fluctuates significantly, the L_{eq} will be approximately equal to the L_{10}.
2. The L_{eq} is the integrated average A-weighted noise level during the measurement period.
3. The L_{50} represents the median level of noise in the measured environment. Where noise fluctuates very little, L_{eq} will approximate L_{50}.
4. The L_{90} represents the ambient level of noise in the measured environment and represents of the lower range of noise levels in the environment without the influence of intrusive noises, such as passing traffic, trains, aircraft, etc.

3.10.3 Applicable Regulations

3.10.3.1 City of Los Angeles Municipal Code

Section 41.40 of the City of Los Angeles Municipal Code (LAMC) establishes when construction work is prohibited during nighttime and early morning hours. The municipal code section states the following:

> *(a) No person shall between the hours of 9 p.m. and 7 a.m. of the following day perform any construction or repair work of any kind upon or any excavating for, any building or structure, where any of the foregoing entails the use of any power-driven drill, driven machine, excavator, or any other machine, tool, device, or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in any dwelling, hotel, or apartment or other place of residence. In addition, the operation, repair or servicing of construction equipment and the jobsite delivering of construction materials in such areas shall be prohibited during the hours herein specified. Any person who knowingly and willfully violates the foregoing provision shall be deemed guilty of a misdemeanor punishable as elsewhere provided in this code.*
>
> *(b) The provisions of Subsection (a) shall not apply to any person who performs the construction, repair or excavation work involved pursuant to the express written permission of the Board of Police Commissioners through its Executive Director. The Executive Director, on behalf of the Board, may grant this permission, upon application in writing, where the work proposed to be done is in the public interest, or where hardship or injustice, or unreasonable delay would result from its interruption during the hours mentioned above, or where the building or structure involved is devoted or intended to be devoted to a use immediately related to public*

> *defense. The provisions of this section shall not in any event apply to construction, repair or excavation work done within any district zoned for manufacturing or industrial uses under the provisions of Chapter I of this Code, nor to emergency work necessitated by any flood, fire or other catastrophe.*

The code section also provides certain provisions for exceptions and exemptions. Chapter 11 of the municipal code sets forth noise regulations, including regulations applicable to construction noise impacts, within 500 feet of a residence. Section 112.05 establishes maximum noise levels for powered equipment or powered hand tools. This section states:

> *Between the hours of 7 a.m. and 10 p.m. in any residential zone of the City or within 500 feet thereof, no person shall operate or cause to be operated any powered equipment or powered hand tool that produces a maximum noise level exceeding the following noise limits at a distance of 50 feet there from (a) 75 dBA for construction, industrial and agricultural machinery including crawler tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, depressors, and pneumatic or other powered equipment; (b) 75 dBA for powered equipment of 20 horsepower or less intended for infrequent use in residential areas including chain saws, log chippers, and powered hand tools; and (c) 65 dBA for powered equipment intended for repetitive use in residential areas including lawn mowers, backpack mowers, small lawn and garden tools, and riding tractors.*
>
> *The noise limits for particular equipment listed above in (a), (b) and (c) shall be deemed to be superseded and replaced by noise limits for such equipment from and after their establishment by final regulations adopted by the federal Environmental Protection Agency and published in the Federal Register.*
>
> *Said noise limitations shall not apply where compliance therewith is technically infeasible. The burden of proving that compliance is technically infeasible shall be upon the person or persons charged with a violation of this section. Technical infeasibility shall mean that said noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers, and/or other noise reduction device and techniques during the operation of the equipment.*

Section 112.04 of the municipal code addresses issues related to "powered equipment intended for repetitive use in residential areas and other machinery, equipment, and devices." That section establishes criteria for stationary noise-source intrusion on neighboring lands. The applicable standard threshold under this section is a 5 dBA increase at any sensitive receptor.

3.10.3.2 City of Los Angeles General Plan Noise Element

The City of Los Angeles General Plan Noise Element establishes standards for exterior sound levels based on land use categories. The Noise Element states that the maximum

acceptable outdoor noise exposure-level for residential, hospital, and school zones is 65 dBA CNEL and that silencers and mufflers on intake and exhaust openings for all construction equipment are required. Table 3.10-6 summarizes the noise compatibility guidelines in the City's General Plan.

Table 3.10-6: City of Los Angeles General Plan - Guidelines for Noise Compatible Land Uses

Land Use Category	Day-Night Average Exterior Sound Level (CNEL dB)						
	50	55	60	65	70	75	80
Residential Single-Family, Duplex, Mobile Home	A	C	C	C	N	U	U
Residential Multi-family	A	A	C	C	N	U	U
Transient Lodging, Motel, Hotel	A	A	C	C	N	U	U
School, Library, Church, Hospital, Nursing Home	A	A	C	C	N	N	U
Auditorium, Concert Hall, Amphitheater	C	C	C	C/N	U	U	U
Sports Arena, Outdoor Spectator Sports	C	C	C	C	C/U	U	U
Playground, Neighborhood Park	A	A	A	A/N	N	N/U	U
Golf Course, Riding Stable, Water Recreation, Cemetery	A	A	A	A	N	A/N	U
Office Building, Business, Commercial, Professional	A	A	A	A/C	C	C/N	N
Agriculture, Industrial, Manufacturing, Utilities	A	A	A	A	A/C	C/N	N
Land Use Category	50	55	60	65	70	75	80

Notes:

A = Normally acceptable. Specified land use is satisfactory, based upon assumption buildings involved are conventional construction, without any special noise insulation.

C = Conditionally acceptable. New construction or development only after a detailed analysis of noise mitigation is made and needed noise insulation features are included in proposed project design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning normally will suffice.

N = Normally unacceptable. New construction or development generally should be discouraged. A detailed analysis of noise reduction requirements must be made and noise insulation features included in the design of a project.

U = Clearly unacceptable. New construction or development generally should not be undertaken.

3.10.4 Impacts and Mitigation Measures

3.10.4.1 Methodology

CEQA Baseline

Section 15125 of the CEQA Guidelines requires EIRs to include a description of the physical environmental conditions in the vicinity of a project that exist at the time of the NOP. These environmental conditions normally would constitute the baseline physical conditions by which the CEQA lead agency determines if an impact is significant. The NOP for the proposed Project was published in October 2014. For purposes of this Draft EIS/EIR, the CEQA baseline takes into account the throughput for the 12-month calendar year preceding NOP publication (January through December 2013) in order to

provide a representative characterization of activity and resulting noise levels throughout the complete calendar year preceding release of the NOP. For the 12-month period between January 1 and December 31, 2013, the Everport Container Terminal encompassed approximately 205 acres (181 acres under its long-term lease plus an additional 25 acres on month-to-month space assignment), supported eight cranes, and handled 1,240,773 TEUs. The existing conditions for specific resource areas are described in more detail in Chapter 3, Environmental Analysis, of this Draft EIS/EIR.

Site specific monitoring was also conducted, as described above, to determine baseline ambient noise levels. The CEQA baseline therefore represents the existing environmental setting leading up to issuance of the 2014 NOP and as supplemented with data from 2015. The CEQA baseline differs from the No Project Alternative (Alternative 2) in that the No Project Alternative addresses what is likely to happen at the proposed project site over time, starting from the existing conditions. Therefore, the No Project Alternative allows for growth at the proposed project site that could be expected to occur without additional approvals, whereas the CEQA baseline does not.

NEPA Baseline

For purposes of the Draft EIS, the evaluation of significance under NEPA is defined by comparing the proposed Project or other alternative to the NEPA baseline, which is the No Federal Action Alternative (Alternative 1). The NEPA baseline conditions are described in Section 2.7.1 and summarized in Table 2-1. The NEPA baseline condition for determining significance of impacts includes the full range of construction and operational activities the applicant could implement and is likely to implement absent a federal action, in this case the issuance of a federal permit (i.e., DA permit).

Unlike the CEQA baseline, which is normally the existing environmental conditions at the time of issuance of the Notice of Preparation of an EIR, the NEPA baseline is not bound by statute to a “flat” or “no-growth” scenario. Instead, the NEPA baseline is dynamic and includes increases in operations for each study year (2017, 2018, 2019, 2026 and 2038), which are projected to occur absent a federal permit. The federal (DA) permit decisions focus on direct impacts of the proposed Project to the aquatic environment, as well as indirect and cumulative impacts in the uplands determined to be within the scope of federal control and responsibility. Significance of the proposed Project or the alternatives under NEPA is determined by comparing the proposed Project or the alternatives to NEPA baseline conditions. The NEPA baseline, for purposes of this Draft EIS/EIR, is the same as the No Federal Action Alternative (Alternative 1).

The NEPA baseline, for purposes of this Draft EIS/EIR, is the same as the No Federal Action Alternative. Under the No Federal Action Alternative (Alternative 1), no dredging, dredged material disposal, in-water pile installation, or crane raising or installation would occur, and the existing terminal capacity would not be increased. The No Federal Action Alternative includes the installation of AMP vaults along the wharf and the addition of 23.5 acres of additional backlands (addition of the 1.5-acre area at the southern end of the terminal and the 22-acre backland expansion area) to improve efficiency (these improvements could occur absent a federal permit).

Under Alternative 1 the site would continue to operate as an approximately 229-acre container terminal where cargo containers are loaded to/from vessels, temporarily stored on backlands, and transferred to/from trucks or on-dock rail. The NEPA baseline

assumes that by 2038 the terminal would handle up to approximately 1,818,000 TEUs annually, accommodate 208 annual ship calls at two operating berths, and occupied by eight operating cranes.

3.10.4.2 Thresholds of Significance

The Port, as a City Department, uses the *L.A. CEQA Thresholds Guide* (City of Los Angeles, 2006) to evaluate the potential for a project to result in significant impacts. Development of the Port is has occurred along with development of the City, and will continue to do so. The Thresholds Guide includes impact thresholds to address noise impacts on sensitive receptors, and with residential areas surrounding the Port in the Communities of San Pedro and Wilmington, as well as liveaboards within the Port, the conditions present when the threshold guide was approved still exist. Thus, Port development is considered to a normal activity within the City, and use of the Threshold Guide is considered appropriate for evaluating project impacts. Therefore, a project or alternative would normally have a significant impact on noise levels from construction during the *daytime* if:

NOI-1: Construction could result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive /receptor.

Additionally, a project or alternative would normally have a significant impact on noise levels from construction during the *nighttime* if:

NOI-2: Construction activities could result in noise levels that would exceed the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

Threshold NOI-2 addresses nighttime construction noise on sensitive receptors by defining the noise level that constitutes “loud noises” that can disturb persons occupying sleeping quarters within noise-sensitive times, as specified in Section 41.40 of the LAMC.

The *L.A. CEQA Thresholds Guide* (City of Los Angeles, 2006) contains the following significance thresholds for operational noise impacts due to stationary sources, vehicular traffic, or increased railroad operations, a project or alternative would result in a significant impact on noise levels at sensitive uses from operational noise as follows:

NOI-3: A significant noise impact would occur if project operations cause the ambient noise level measured at the property line of affected uses (i.e., sensitive receptors) to increase by 3 dBA in CNEL to or within the ‘normally unacceptable’ or ‘clearly unacceptable category,’ or any increase in CNEL 5 dBA or greater.

Table 3.10-7 presents land use noise compatibility guidelines per the *LA CEQA Thresholds Guide*, which are used for the purposes of the impact analysis.

Sensitive receptors in the Port area that could potentially be affected by construction and operational noise from the proposed Project or alternatives include various residential

areas in the San Pedro community to the west and southwest of the Project site, as well as liveaboards in the more distant vicinity, the closest of which is at the Al Larson Marina (Section 3.10.2.2 identifies these sensitive areas the estimated distanced of these areas to the Project site where pile driving would occur). In these areas, a significant impact would occur if the proposed Project or alternative causes CNEL noise levels to increase by (1) 5 dBA or greater where the existing CNEL is less than 70 dBA; or (2) 3 dBA or greater where the existing CNEL exceeds 70 dBA.

Table 3.10-7: *LA CEQA Thresholds Guide* Land Use Noise Compatibility Guidelines

Land Use	Community Noise Exposure CNEL, dB			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Single-Family, Duplex, Mobile Homes	50–60	55–70	70–75	above 70
Multifamily Homes	60–65	60–70	70–75	above 70
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–70	60–70	70–80	above 80
Playgrounds, Neighborhoods Parks	50–70	—	67–75	above 72
Golf Courses, Riding Stables, Water, Recreation, Cemeteries	50–75	—	70–80	above 80

Normally Acceptable: Specified land use is satisfactory, based on the assumption that any buildings involved are of normal conventional construction and 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 generally 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 generally should not be undertaken.

Source: City of Los Angeles, 2006

3.10.4.3 Impact Determination

Proposed Project

Impact NOI-1: Construction of the proposed Project could result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive receptor.

Noise levels generated by construction equipment will vary greatly depending on factors such as weather conditions, the type of equipment, the specific model, the activity performed, and the condition of the equipment. The equivalent sound level (L_{eq}) of the construction activity also depends on the fraction of time that the equipment operates over the construction period. The dominant source of noise from most construction equipment is the engine. In a few cases, such as impact pile driving or pavement-breaking, noise generated by the process dominates.

Table 3.10-8 shows the maximum noise levels for a variety of construction equipment at a reference distance of 50 feet. These reference sound levels are representative of the noise levels that would occur during the noisiest construction activities.

Table 3.10-8: Construction Equipment Maximum Noise Emission Levels

Equipment Type	Typical Noise Level (dBA) 50 feet from Source
Air Compressor	81
Backhoe	80
Ballast Equalizer	82
Ballast Tamper	83
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88
Crane, Mobile	83
Dozer	85
Generator	81
Grader	85
Impact Wrench	85
Excavator clamshell dredge/backfill	77[1]
Jack Hammer	88
Loader	85
Paver	89
Pile-driver (Impact)	107[2]
Pile-driver (Sonic)	96
Pneumatic Tool	85
Pump	76
Rail Saw	90
Rock Drill	98
Roller	74
Saw	76
Scarifier	83
Scraper	89
Shovel	82
Spike Driver	77
Tie Cutter	84
Tie Handler	80
Tie Inserter	85
Truck	88

Source: Transit Noise and Vibration Impact Assessment, FTA, May 2006

[1]Hudson River PCBs Superfund Site, Phase 1 Noise Impact Assessment, March 2006

[2]Pacific L.A. Marine Terminal LLC Crude Oil Terminal Final SEIS/SEIR, November 2008

During construction, the overall average noise levels vary with the level of construction activity, the types of equipment that are onsite and operating at a particular time, and the proximity of the construction equipment to noise sensitive receptors. Hourly average noise levels are estimates based on a typical complement of construction equipment that would be expected to be on-site to complete the various proposed Project components.

Construction activities are expected to last more than 10 days in a three month period for all proposed Project components. Following the thresholds of significance, an impact would be considered significant if noise from these activities would cause the existing ambient exterior noise levels to increase by 5 dBA or more (relative the applicable baseline) at a sensitive receptor.

During peak construction, construction worker based vehicle trips are expected to represent a small fraction (less than one percent) of the AM and PM peak hour traffic volumes in the Project area. As discussed in Section 3.6 Ground Transportation, the peak day of construction are estimated to require 72 inbound and outbound trips in the A.M. peak hour, 55 inbound and outbound trips in the M.D. peak hour, and 41 inbound and outbound trips in the P.M. peak hour. This small fraction of vehicles compared to the overall traffic in the Project area would not result in a noticeable increase in noise levels (a doubling of traffic would be required for a minimally audible 3 dBA increase in noise to occur). Therefore, traffic generated from construction worker trips would be considered to be a less than significant impact.

The Federal Highway Administration Roadway Construction Noise Model (RCNM) version.1.1 was used to determine the level noise from construction activities at the identified noise receptors. The RCNM model provides a means to determine composite noise levels from multiple construction noise sources. To assess the composite noise levels resulting from project construction, noise level data presented in Table 3.10-8 along with construction equipment sound level data and usage factors of such equipment contained in the RCNM[1], for identified construction activities of land based general construction[2], dredging, and pile driving, were used as inputs to the model. The combined noise levels from these activities at an equivalent distance of 50 feet from the activites were found to be a maximum level of 91 dBA for land based general construction, a level of 77 dBA for dredging, and a maximum noise level of 107 dBA for impact pile driving.

The RCNM model also provides a means to determine the sound levels at noise sensitive receptors considering attenuation due to distance and shielding by natural or man-made obstacles. Distances from construction locations to sensitive receptors were measured on a map of the area and input to the RCNM as the basis for calculating noise attenuation with distance. Noise shielding factors were also input into the RCNM. No noise shielding was assumed for recievers in the San Pedro business/tourism area (LT-1), or at San Pedro Northwestern Residential area (LT-3), which would have relatively uobstructed views of construction activities. Noise shielding factors were included in the model for other sensitive receptors, where noise from construction would be partially attentuated by intervening obstacles of various types (buildings, other structures, tanks, etc.). These shielding factors were 5 dBA for all sources at the San Pedro west/central

[1] The RNCM includes representative sound levels for the most common types of construction equipment and the approximate usage factors of such equipment that were developed from an extensive database of information gathered during the construction of the Central Artery/Tunnel Project in Boston, Massachusetts (CA/T Project or "Big Dig").

[2] Land based general construction activities include demolition, site clearing, excavation, grading, etc.

Residential area (LT-1), 7 dBA at the Fish Harbor Liveaboards for dredging and pile driving, and 8 dBA for all sources at the Cerritos Channel Liveaboards and Reservation Point.

Based on a review of the project construction schedule, daytime dredging and general construction activites may occur simultaneously. Because sound levels are expressed in decibels, which are logarithmic units, the combined and non combined construction source levels plus ambient levels shown in Tables 3.10-9 and 3.10-10 are calculated on a logarithmic basis. Using the FHWA noise model, the sound levels at six identified noise sensitive receptors in the Project vicinity were assessed for exposure to construction noise. These areas and the resultant L_{eq} levels are summarized in Tables 3.10-9 and 3.10-10. Other receptor locations in the vicinity, characterized by measurement locations ST-4 through ST-8, would either be further removed from site work or can be represented by other receptor locations, and thus would be exposed to equal or lower levels.

Table 3.10-9: Summary of Daytime Construction Noise Impacts

Noise Sensitive Area *(distance from source to Sensitive area)*	Assoc. Meas. Loc.	Exist. day time L_{eq} (dBA)	Construction Noise at location (Leq, dBA)*				Total of Ambient plus				Construction Noise plus ambient increase over Existing				Significant Impact? (Yes/No)
			Gen. Const.	Dredge	Pile Drive	Combined. Sources**	Gen. Const.	Dredge	Pile Drive	Combined Sources**	Gen. Const.	Dredge	Pile Drive	Combined Sources**	
Cerritos Channel Liveaboard residential *all sources over 10,000 ft*	ST-1	**66**	35	23	46	46	66	66	66	66	0	0	0	0	No
Fish Harbor Liveaboard residential *GC @ 2000 ft. Dredge and Pile Driving @ 3900 ft.*	ST-3	**52**	49	31	55	56	54	52	57	58	2	0	**5**	***6***	Yes
San Pedro North western Residential *GC @ 1900 ft. Dredge and Pile Driving @ 1600 ft.*	LT-3	**69**	57	47	70	70	69	69	72	73	0	0	4	***4***	No
San Pedro business/ tourism area *GC @ 1200 ft. Dredge and Pile Driving @ 1800 ft.*	LT-2	**62**	61	46	69	70	65	62	70	70	3	0	**8**	***8***	Yes
San Pedro west/central Residential *GC @ 2400 ft. Dredge and Pile Driving @ 3600 ft.*	LT-1	**61**	50	35	58	59	61	61	63	63	0	0	2	***2***	No

Table 3.10-9: Summary of Daytime Construction Noise Impacts

Noise Sensitive Area *(distance from source to Sensitive area)*	Assoc. Meas. Loc.	Exist. day time L_{eq} (dBA)	Construction Noise at location (Leq, dBA)*				Total of Ambient plus				Construction Noise plus ambient increase over Existing				Significant Impact? (Yes/No)
			Gen. Const.	Dredge	Pile Drive	Combined. Sources**	Gen. Const.	Dredge	Pile Drive	Combined Sources**	Gen. Const.	Dredge	Pile Drive	Combined Sources**	
Reservation Point *GC @ 3000 ft. Dredge and Pile Driving @ 4900 ft.*	ST-2	**55**	45	29	52	53	55	55	57	57	0	0	2	***2***	No

Notes: * Using reference maximum noise levels of 91 dBA (General Construction), 77 dBA (Dredging), or 107 dBA (Pile Driving) at 50 feet from the source and typical use factors.

**General construction (GC) may occur during the same period as either dredging or pile driving, however dredging and pile driving are not planned to occur during the same period. Because the levels produced by dredging are typically equal to or quieter than general construction at a given noise sensitive receptor and pile driving is always louder than general construction at a given noise sensitive receptor, the combined sources entry represents the worst-case condition of pile driving and general construction occurring during the same period.

CEQA Impact Determination

As shown in Table 3.10-9 neither daytime general construction nor dredging noise would increase the existing average ambient noise levels at any identified noise receptor in the Project area by 5 dBA or more. However, noise produced by daytime pile driving during wharf construction alone or pile driving in combination with general construction would increase average ambient noise levels at Fish Harbor by 5 to 6 dBA and at San Pedro waterfront commercial and tourism based uses by 8 dBA over existing levels. These impacts would be temporary, but significant under CEQA.

Mitigation Measures

To reduce the noise produced by pile driving during wharf construction at Fish Harbor and San Pedro waterfront commercial and tourism based-uses, the following mitigation measures would be implemented:

MM NOI-1: Noise Reduction during Pile Driving. The contractor shall be required to use a pile driving system which is capable of limiting maximum noise levels at 50 feet from the pile driver to 104 dBA, or less, for wharf construction.

MM NOI-2: Utilize Temporary Noise Attenuation Curtain Adjacent to Pile-Driving Equipment. Utilize temporary noise attenuation curtain suitable for pile driving equipment as needed. This noise attenuation device should be installed directly between the equipment and the nearest noise sensitive receptor to the construction site.

Residual Impacts

With incorporation of mitigation measures MM NOI-1 and MM NOI-2, the stand-alone pile driving noise levels would be reduced by 7 to 8 dBA. When these reduced levels are logarithmically added to ambient conditons, the pile driving plus ambient noise levels at Fish Harbor are reduced by 3 dBA and pile driving plus ambient noise levels at the San Pedro waterfront by 7 dBA (relative to the pre-mitigation impact levels). The resulting increase in ambient noise

levels due to combined construction noise sources as mitigated by MM NOI-1 and MM NOI-2 would therefore be reduced to 1 dBA over existing noise levels at both Fish Harbor and the San Pedro waterfront. The mitigated noise increase during pile driving at these receptors would be less than 5 dBA. Therefore, with incorporation of mitigation measures MM NOI-1 and MM NOI-2 the identified noise impacts would be less than significant.

NEPA Impact Determination

The proposed Project would include backlands development, similar to the NEPA baseline. However, the proposed Project, unlike the NEPA baseline, would include in-water construction that would require pile driving. Therefore, construction of the proposed Project is projected to result in noise increases of 5 to 8 dBA (associated with pile driving) at two sensitive receptors as identified in Table 3.10-9. Shielding of noise sources by intervening structures would reduce noise levels at these receptors, but cannot be expected to reduce the impacts to less than significant levels. Therefore, the proposed Project's impacts are considered temporary but significant under NEPA.

Mitigation Measures

Mitigation measures MM NOI-1 and MM NOI-2 would be implemented.

Residual Impacts

With incorporation of mitigation measures MM NOI-1 and MM NOI-2, impacts would be less than significant**.**

Impact NOI-2: Construction of the proposed Project could result in noise levels that would exceed the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

The project would include dredging activities for 24 hours per day and during nighttime hours. To assess nighttime dredging noise exposure at noise sensitive receptors, a combined level of 77 dBA at 50 feet, as discussed under Impact NOI-1, was used as the source noise level. The Federal Highway Administration Roadway Construction Noise Model (RCNM) version.1.1 was used to determine the noise levels resulting for nighttime dredging activities at the identified noise receptors. The closest distances from dredging areas to sensitive receptors were measured on a map of the area and those distances were input to the RCNM as the basis for calculating noise attenuation with distance. Using the FHWA noise model, the sound levels at six identified noise sensitive receptors in the Project vicinity were assessed for exposure to construction noise. These modeing results were logarithmically added to the average ambient noise levels at the identified noise receptors and the resultant Leq levels are summarized in Table 3.10-10 below.[3] Other receptor locations in the site vicinity, characterised by

[3] Sound is described using a logarithmic scale to account for the large range of audible sound intensities. When sound levels are added, they are added logarithmically to be consistent with this scale. When two sources of the same noise levels are added, or when noise sources are doubled, the resulting noise level would be 3 dBA higher than the individual noise level (ex. 85 dBA and 85 dBA results in 88 dBA). Adding a noise source that is 10 dBA less would not increase the original noise level (ex. 85 dBA and 75 dBA results in 85 dBA). Refer to Section 3.10.1.1 above, Decibel Addition, for additional information.

measurement locations ST-4 through ST-8, would either be further removed from site work or can be represented by other receptor locations, and thus would be exposed to equal or lower levels.

Table 3.10-10: Summary of Nighttime Construction Noise Impacts

Noise Sensitive Area *(distance from dredging to Sensitive use)*	Assoc. Meas. Loc.	Existing average nighttime L_{eq} (dBA)	Nighttime Dredging Noise at location (Leq, dBA)*	Total of Ambient plus Nighttime Dredging	Dredging Noise plus ambient increase over Existing	Signifi-cant Impact? (Yes/ No)
Cerritos Channel Liveaboard residential *over 10,000 ft*	ST-1	63*	23	63	0	No
Fish Harbor Liveaboard residential *3900 ft.*	ST-3	49*	31	49	0	No
San Pedro North western Residential *1600 ft.*	LT-3	65	47	65	0	No
San Pedro business/ tourism area *1800 ft.*	LT-2	57	46	57	0	No
San Pedro west/central Residential *3600 ft.*	LT-1	56	35	56	0	No
Reservation Point *4900 ft.*	ST-2	51*	29	51	0	No

Notes: * Estimates of Existing average nighttime L_{eq} levels obtained from applying the differences between average daytime and nighttime L_{eq} levels measured in these areas in long term noise surveys in these areas conducted by Illingworth& Rodkin for other Port noise studies (reference Berths 302-306 [APL] Container Terminal Project)

CEQA Impact Determination

As shown in Table 3.10-10 nighttime dredging noise would not increase the existing average ambient noise levels at any identified noise receptor in the Project area. As a result, nighttime dredging would not violate the City's noise ordinance or the nighttime noise threshold, and there would be no impact related to Impact NOI-2 under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

The proposed Project would include backlands development, as would the NEPA baseline. The proposed Project, unlike the NEPA baseline would include nighttime dredging, however as identified in Table 3.10.10, such nighttime dredging would not violate the City's noise ordinance and would not result in a significant increase in average noise levels at noise sensitive uses in the project vicinity. There would be no impact related to Impact NOI-2 under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact NOI-3: Operations of the proposed Project would not cause the ambient noise level measured at the property line of affected uses (i.e., sensitive receptors) to increase by a CNEL of 3 dBA to or within 'normally unacceptable' or 'clearly unacceptable' land use categories, or any increase in CNEL of 5 dBA or greater.

On-site operational noise sources associated with the proposed Project would include the intermittent sounds of operations, such as tugs used for ingress, egress and berthing of container ships, gantry cranes offloading and loading containers, cargo-handling operations, rail and truck movements, and ongoing terminal-related maintenance activities. Noise measurements at ST-6 (near Berth 89, in the USS Iowa parking are as descibed in Section 3.10.2.3, above) identified noise levels during the unloading of cargo ships by gantry cranes along with truck movements on the existing Everport Container Terminal at a distance of 1,000 feet from the mid-point of the closest cargo ship. This measurement of 54 dBA is located at the closest monitoring location to the terminal operations and is considered to be representative of existing operating noise for terminal operations in the baseline year.

All proposed Project-related operational activities would be more than 1,500 feet from the closest noise sensitive receptors (i.e., LT-3: multi-family residences immediately west of S. Harbor Boulevard). Consequently, due to attenuation with distance, Project-related operational activities would produce noise levels 3 dBA or more below than those documented at measurement site ST-6 (near Berth 89) at the closest noise sensitive receptors in San Pedro residential areas. Thus, noise levels from existing Everport Container Terminal operations can occasionally reach sound levels of 51 to 53 dBA at the closest receptors in the San Pedro residential areas. However, because of higher ambient noise conditions at these noise sensitive receptors, the addition of noise from terminal operations would result in no increase in noise levels at the sensitive receptors.

Project implementation would result in a throughput of 2,379,525 TEUs by 2038 from 1,240,773 TEUs in the 2013 base year, an increase of 1,138,752 TEUs. This increase in operations would result in an overall, average, noise level increase of 2.8 dBA. This increase may result in sound levels from port operations reaching 54 to 57 dBA range at the closest receptors. However, as discussed above, because of higher ambient conditions at adjacent noise sensitive receptors, the addition of terminal noise in the mid-50 dBA range to the higher ambient levels would result in no increase in noise levels at the sensitive receptors. Therefore, the increase in operational noise due to project implementation would not result in a significant impact.

Project implementation would also result in increased movement of containers to and from the Port via existing rail and roadway corridors, along with increased workforce automobile traffic on area roadways. All on-dock rail trips leave the Project site (on Terminal Island) via the Henry Ford Bridge (also known as the Badger Avenue Bridge). Further, the percentage of Project-generated on-dock rail traffic would lessen as the rail network spreads out from the Port, the Island Yacht Anchorage liveaboards in the Cerritos Channel have been identified as the noise sensitive receptors with the greatest potential to be impacted by increases in Project-generated rail noise.

CEQA Impact Determination

On-site operational noise sources associated with the proposed Project would include intermittent operationalnoise, such as the banging and setting of containers, occasionally reaching the low to mid-50 dBA range at the closest noise-sensitive receptors in the San Pedro residential areas. Considering existing average daytime noise level is 69 dBA at the closest San Pedro residential areas,this level of noise would result in no increase in noise levels at the sesitive receptors. Thus, noise levels at noise sensitive receptors would not increase by 3 dBA, and would not result in a significant impact at any adjacent noise sensitive uses under CEQA.

The proposed Project would annually result in approximately 1,736,000truck trips, 4.9 average daily rail trips (1.8 off dock and 3.1 on-dock rail trips) and 5.5 peak month average daily rail trips (2.1 off dock and 3.5 on-dock) by 2038. All on-dock rail trips leave the Project site (on Terminal Island) over the Henry Ford Bridge (also known as the Badger Avenue Bridge). The increase in daily on-dock rail trips over the CEQA baseline for the proposed Project would result in a less than 3 dBA increase in the CNEL at the Island Yacht Anchorage liveaboards in the Cerritos Channel. Therefore, rail trips generated by terminal operations under the proposed Project would not result in a significant noise impact under CEQA.

A comparison of automobile and truck traffic data for area roadways under existing 2013 conditions (CEQA baseline) and CEQA baseline plus proposed Project conditions for years 2019, 2026 and 2038 indicates that where nearby noise sensitive uses are within ‘normally unacceptable’ or ‘clearly unacceptable land use category noise levels, project-related increases in truck and automobile traffic on area roadways will result in less than a 3 dBA increase in noise levels, and that where nearby noise sensitive uses are within ‘normally acceptable’ land use category noise levels, project-related increases in truck and automobile traffic on area roadways will result in less than a 5 dBA increase in noise levels. The increases in ambient noise levels from increase truck and automobile traffic would result in less than 3 dBA increases because the additional traffic from terminal operations would not approach a doubling of the existing traffic levels, which is required to increase noise levels by 3 dBA. Therefore, automobile and truck trips generated by terminal operations under the proposed Project would not result in a significant noise impact under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Noise from on-site terminal activities, rail trips, and vehicle trips under future proposed project conditions would be similar to those described under the CEQA impact determination. However, the NEPA baseline noise levels would be generally higher than the CEQA baseline noise levels (2013 existing condition) because the NEPA baseline accounts for terminal operational growth and completion of improvements not requiring a DA permit. Therefore, as described below, the noise increase between proposed project conditions and the NEPA baseline conditions would be less than the noise increase estimated under CEQA.

On-site operational noise associated with the proposed Project would be greater than the NEPA baseline, with intermittent operational sounds, such as the banging and setting of containers, occasionally reaching the low to mid-50 dBA range at the closest noise-sensitive receptors in the San Pedro residential areas. This level of noise would increase noise levels at these sensitive receptors by less than 3 dBA, and would not result in a significant impact at any adjacent noise sensitive receptor under NEPA.

The increase in proposed Project on-dock rail trips over the NEPA baseline would result in a less than 1 dBA increase in the CNEL at the Island Yacht Anchorage liveaboards in the Cerritos Channel. Therefore, rail trips generated by terminal operations under the proposed Project would not result in a significant noise impact under NEPA.

A comparison of traffic data for existing roadways with the proposed Project and NEPA baseline conditions indicates that Project-related increases in automobile or truck traffic on area roadways would increase noise levels at adjacent noise sensitive receptors by less than 3 dBA, and therefore would not result in a significant impact at any adjacent noise sensitive receptor under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Alternative 1 – No Federal Action

Alternative 1 is a NEPA-required no action alternative. This alternative includes the activities that would occur absent a DA permit, and could include improvements that require a local permit. Absent a DA permit, no dredging, dredged material disposal, in-water pile installation, raising of existing cranes, or new crane installation would occur. The existing terminal is berth-constrained, and its ability to handle larger ships (compared to current terminal constraints) would be facilitated by activities that require a DA permit (dredging, in-water pile driving, and raised or installation of cranes). Therefore, without the activities that address berth constraints of the terminal (which would allow the terminal to service larger ships), the existing terminal capacity would not be increased. The No Federal Action Alternative includes 23.5 acres of additional backlands development to improve cargo handling efficiency, but would not include berth deepening, raising exiting cranes, or adding new cranes. The additional backland area would not change the capacity of the existing terminal.

The site would continue to operate as an approximately 229-acre container terminal where cargo containers are loaded to/from vessels, temporarily stored on backlands, and transferred to/from trucks or on-dock rail. In addition, the No Federal Action alternative would include a lease extension to 2038, which would require a local action, but not a federal action. Based on the throughput projections, the Everport Container Terminal is expected to operate at its capacity of approximately 1,818,000 TEUs by 2038. The NEPA baseline/No Federal Action includes installation of AMP vaults (five AMP with associated electrical infrastructure) along the existing wharf, which is considered an operational efficiency improvement that does not require a DA permit because it does not affect the course, condition or capacity of navigable waters of the U.S.

Impact NOI-1: Construction of Alternative 1 would not result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at noise-sensitive receptors.

Alternative 1 would involve additional backlands (addition of the 1.5-acre area at the southern end of the terminal and 22-acre area between Terminal Way and Cannery Street) to improve efficiency, but would not include dredging, dredged material disposal, in-water pile installation, raising existing cranes, or new crane installation. With this alternative the general construction noise levels shown in Table 3.10-9 may occur; however, no dredging or pile driving noise would occur. General construction noise under this alternative would not increase the existing ambient noise levels at any identified noise receptor in the Project area by 5 dBA or more, and therefore, no significant impacts due to construction would occur.

CEQA Impact Determination

Alternative 1 would not involve any construction activities outside of the backland area and would not include pile driving that could result in noise level increases above threshold levels; therefore, there will be no potential for impacts due to construction to occur noise sensitive uses under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The No Federal Action Alternative would involve the same construction activities as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 1 and the NEPA baseline. As a consequence, Alternative 1 would result in no noise impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact NOI-2: Construction of Alternative 1 would not result in noise levels that would exceed the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

CEQA Impact Determination

Construction activities for this alternative would not include dredging and therefore would not be conducted during nighttime hours. As such, there would be no potential

for impacts due to nighttime construction to occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Construction activities for this alternative would not include dredging and therefore would not be conducted during nighttime hours. As such, there would be no potential for impacts due to nighttime construction to occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact NOI-3: Operations of Alternative 1 would not cause the ambient noise level measured at the property line of affected uses (i.e., sensitive receptors) to increase by a CNEL of 3 dBA to or within 'normally unacceptable' or 'clearly unacceptable' land use categories, or any increase in CNEL of 5 dBA or greater.

Under Alternative 1, the site would continue to operate as a container terminal. On-site operational noise sources would continue with this alternative with increased in throughput compared to the CEQA baseline, resulting in increased activity on existing rail and roadway corridors, and workforce automobile traffic on area roadways.

CEQA Impact Determination

Under Alternative 1, the site would continue to operate as a container terminal, with increased terminal operations relative to the CEQA baseline conditions. On-site operational noise sources associated with this alternative would include the intermittent sounds of operations, tugs used for ingress, egress and berthing of container ships, such as gantry cranes offloading and loading containers, cargo handling equipment operations, rail and truck movements, and other ongoing terminal activities. All terminal operations and related activities under Alternative 1 would be more than 1,500 feet from the closest noise sensitive receptors, the multifamily residences immediately west of S. Harbor Boulevard. Consequently, project-related operational activities are expected to produce noise levels less than those documented at measurement site ST-6, with noise levels from terminal operations occasionally reaching the low to mid-50 dBA range. Considering that the average daytime noise level at the closest San Pedro residential areas as determined at noise measuremetn LT-3 is 69 dBA, the addition of such noise would result in no increase in noise levels at the sensitive receptors. Noise levels at adjacent noise sensitive receptors would thus not increase by 3 dBA, and would not result in a significant impact under CEQA.

Under Alternative 1, increases on container shipments to and from the Port via area rail and roadway corridors, and workforce automobile traffic on area roadways would occur. However, these increases would be less than under proposed Project conditions, and would result in CNEL increases of less than 3 dBA at sensitive receptors in the Port area. Therefore, no significant noise impact at adjacent noise sensitive receptors due to terminal operations under Alternative 1 would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The No Federal Action Alternative would have the same conditions as the NEPA baseline, as explained in Section 2.7.1; therefore, there would be no incremental difference between Alternative 1 and the NEPA baseline. As a consequence, Alternative 1 would result in no impact under NEPA.

On-Site Noise Increase

There would be no incremental difference between Alternative 1 and the NEPA baseline.

Off-Site Noise Increase

There would be no incremental difference between Alternative 1 and the NEPA baseline.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Alternative 2 – No Project

Alternative 2 is a CEQA-only alternative. The No Project Alternative is not evaluated under NEPA because NEPA requires an evaluation of the No Federal Action Alternative (see Section 2.9.1.2).

Under Alternative 2, none of the proposed construction activities would occur in water or in water-side or backland areas. Terminal improvements or increases in backland acreage would not be implemented. No new cranes would be added, existing cranes would not be raised, and no wharf improvements or dredging would occur. The current lease that expires in 2028 has an option for a ten-year extension, which could result in terminal operations through 2038.

Under the No Project Alternative, the existing Everport Container Terminal would continue to operate as an approximately 205-acre container terminal. Based on the throughput projections for the Port, the Everport Container Terminal is expected to operate at its existing capacity of approximately 1,818,000 TEUs in 2038. No additional AMP facilities would be installed.

Any future legally enacted Port-wide environmental program, such as tariff change to support the CAAP measure, would be applied to the No Project Alternative, although generally applicable tariff changes that conflict with the terms of an individual operating lease would not apply. In addition, any adopted rules or regulations, such as from SCAQMD or other regulatory agencies, would be applied to the No Project Alternative.

Impact NOI-1: Construction of Alternative 2 would not result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at noise-sensitive receptors.

CEQA Impact Determination

Alternative 2 would not involve any construction activities and, therefore, there will be no potential for impacts due to construction to occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 1 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact NOI-2: Construction of Alternative 2 would not result in noise levels that would exceed the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

CEQA Impact Determination

Alternative 2 would not involve any construction activities and, therefore, there would be no potential for impacts due to nighttime construction to occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 1 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact NOI-3: Operations of Alternative 2 would not cause the ambient noise level measured at the property line of affected uses (i.e., sensitive receptors) to increase by a CNEL of 3 dBA to or within 'normally unacceptable' or 'clearly unacceptable' land use categories, or any increase in CNEL of 5 dBA or greater.

Under Alternative 2, the site would continue to operate as a container terminal. On-site operational noise sources would continue with this alternative with increased in throughput compared to the CEQA baseline, resulting in increased activity on existing rail and roadway corridors, and workforce automobile traffic on area roadways.

CEQA Impact Determination

Under Alternative 2, the site would continue to operate as a container terminal, with increased terminal operations relative to the CEQA baseline conditions and past approvals. On-site operational noise sources associated with this alternative would include the intermittent sounds of operations, such as tugs used for ingress, egress and berthing of container ships, gantry cranes offloading and loading containers, cargo handling equipment operations, rail and truck movements, and other ongoing terminal activities. All terminal operations and related activities under Alternative 2 would be more than 1,500 feet from the closest noise sensitive receptors,the multifamily residences immediately west of S. Harbor Boulevard. Consequently, ongoing operational activities under Alternative 2 are expected to produce noise levels less than those documented at measurement site ST-6, with noise levels from terminal operations occasionally reaching the low to mid-50 dBA range. Considering that the average daytime noise level is 69 dBA at the closest San Pedro residential areas , the addition of such noise would result in no increase in noise levels at the sensitive receptors. Noise levels at adjacent noise sensitive receptors would thus not increase by 3 dBA, and would not result in a significant impact at any adjacent noise sensitive receptorsunder CEQA.

Under Alternative 2, increases in container shipments to and from the Port via existing rail and roadway corridors, and workforce automobile traffic on area roadways would occur. Under Alternative 2 the terminal capacity is expected to increasefrom the existing capacity of 1,240,773 TEUs to approximately 1,818,000 TEUs in 2038. Such an increase in teminal capacity would result in an average increase of 1.7 dBA in operational noise. Increases in rail and roadway transporation noise resulting from this expansion would be similar. Considering this and that an increase of 3 dBA would represent an approximate doubling of Port capacity, the increases under Alternative 2 would be expected to result in CNEL increases of less than 3 dBA at sensitive receivers

in the Port area. Therefore, no significant noise impact at adjacent noise sensitive uses due to terminal operations associated with Alternative 2 under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The impacts of the No Project Alternative are not required to be analyzed under NEPA. NEPA requires the analysis of a No Federal Action Alternative (Alternative 1 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Alternative 3 – Reduced Project: Reduced Wharf Improvements

Under this alternative, there would be two operating berths after construction, similar to the proposed Project, but Berths 230-232 would remain at their existing depth. This alternative would require less dredging (by approximately 8,000 cubic yards) and sheet pile driving and a slightly shorter construction period than the proposed Project. Alternative 3 would raise up to five of the existing largest cranes and add five new cranes. Other proposed Project elements, such as installation of AMP and backland improvements would be implemented under this alternative. Based on the throughput projections, this alternative is expected to operate at its capacity of approximately 2,250,000 TEUs by 2038 as compared to the proposed Project, which would be expected to operate at its capacity of approximately 2,379,525 TEUs. This alternative would accommodate the largest vessels in the fleet mix (i.e., 16,000 TEUs) at Berths 226-229. The existing design depth that remains at Berths 230-232 (-47 MLLW) would only be capable of handling vessels up to 8,000 TEUs. While the terminal could handle greater throughput than the No Project and No Federal Action alternatives, this reduced project alternative would not achieve the same level of efficient operations as achieved by the proposed Project.because this it would only accommodate the larger vessels at one berth (Berths 226-229) compared to two berths under the proposed Project. Additionally, because this alternative would have the same number of operating berths as the proposed Project, this alternative would result in a maximum of two peak day ship calls (over a 24-hour period), the same as for the proposed Project.

Impact NOI-1: Construction of Alternative 3 could result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive receptor.

Alternative 3 would require less dredging (by approximately 8,000 cubic yards) and sheet pile driving and a slightly shorter construction period than the proposed Project.

However, during construction noise levels generated by construction activities would be similar to those shown in Table 3.10-9.

During construction, the overall average noise levels vary with the level of construction activity, the types of equipment that are on-site and operating at a particular time, and the proximity of the construction equipment to noise sensitive receptors. Hourly average noise levels are estimates based on a typical complement of construction equipment that would be expected to be on-site to complete the various proposed components.

As with the proposed Project, construction activities are expected to last more than 10 days in a three month period. An impact would be considered significant if noise from construction activities would cause the existing ambient exterior noise levels to increase by 5 dBA or more at a sensitive receptor.

During peak construction, construction worker based vehicle trips are expected to represent a small fraction (less than one percent) of the AM and PM peak hour traffic volumes in the Project area. This small fraction of vehicles compared to the overall traffic in the Project area would not result in a noticeable increase in noise levels (a doubling of traffic would be required for a minimally audible 3 dBA increase in noise to occur). Therefore, traffic generated from construction worker trips would be less than significant.

Noise levels generated by construction activities under Alternative 3 would be similar to those for the proposed project and therefore the analysis presented under the proposed project is applicable to this alternative. Construction noise levels at noise sensitive receptors in the Project vicinity are thus expected to be the same as those given in Table 3.10-9.

CEQA Impact Determination

As shown in Table 3.10-9, neither daytime general construction nor dredging noise would increase the existing average ambient noise levels at any identified noise receptor in the Project area by 5 dBA or more. However, noise produced by daytime pile driving during construction of wharf improvements (alone or pile driving in combination with general construction) would increase average ambient noise levels at Fish Harbor and San Pedro waterfront (commercial and tourism uses) by 5 or more dBA over existing levels. As with the proposed Project, these impacts would be temporary, but significant under CEQA.

Mitigation Measures

Mitigation measures MM NOI-1 and MM NOI-2 would be implemented.

Residual Impacts

With implementation of MM NOI-1 and MM NOI-2 impacts would be less than significant.

NEPA Impact Determination

The Reduced Wharf Alternative would include backlands development, as would the NEPA baseline. However, unlike Alternative 3, the NEPA baseline would not include in-water construction that would require pile driving. Therefore, construction of Alternative 3 would result in noise increases of 5 dBA (associated with pile driving) at two sensitive receptors as identified in Table 3.10-9, which would not occur under the

NEPA baseline. Shielding of noise sources by intervening structures may reduce noise levels at these receptors, but cannot be expected to reduce the impacts to less than significant levels. Therefore, the proposed Project's NEPA impacts are considered temporary, but significant.

Mitigation Measures

Mitigation measures MM NOI-1 and MM NOI-2 would be implemented.

Residual Impacts

With implementation of MM NOI-1 and MM NOI-2 impacts would be less than significant.

Impact NOI-2: Construction of Alternative 3 would not result in noise levels that would exceed the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

Similar to the proposed Project, Alternative 3 would include 24 hour dredging activities, including dredging during nighttime hours. Nighttime noise levels at sensitive receptor locations under Alternative 3 would be similar to that of the proposed Project, as both would require dredging along Berths 226-229. The modeling results of nighttime dredging where logarithmically added to the average ambient noise levels at the identified noise receptors and the resultant L_{eq} levels are summarized in Table 3.10-10 above. Other receptor locations in the site vicinity, characterized by measurement locations ST-4 through ST-8, would either be further removed from site work or can be represented by other receptor locations, and thus would be exposed to equal or lower levels.

CEQA Impact Determination

As shown in Table 3.10-10 above, nighttime dredging noise would not increase the existing average ambient noise levels at any identified noise receptor in the Project area. As a result, nighttime dredging would not violate the City's noise ordinance or the nighttime noise threshold, and there would be no impact related to Impact NOI-2 under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Alternative 3, unlike the NEPA baseline would include nighttime dredging; however, as indentified in Table 3.10-10 above, such nighttime work would not violate the City's noise ordinance and would not result in a significant increase in average noise levels at noise sensitive uses in the project vicinity. As a result, there would be no impact related to Impact NOI-2 under NEPA**.**

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact NOI-3: Operations of Alternative 3 would not cause the ambient noise level measured at the property line of affected uses (i.e., sensitive receptors) to increase by a CNEL of 3 dBA to or within 'normally unacceptable' or 'clearly unacceptable' land use categories, or any increase in CNEL of 5 dBA or greater.

On-site operational noise sources associated with Alternative 3 would include the intermittent sounds of operations, such as tugs used for ingress, egress and berthing of container ships, gantry cranes offloading and loading containers, cargo-handling operations, rail and truck movements, and ongoing terminal-related maintenance activities. Noise measurements at ST-6 (near Berth 89, in the USS Iowa parking area as descibed in Section 3.10.2.3, above) identified noise levels during the unloading of cargo ships by gantry cranes along with truck movements on the existing Everport Container Terminal at a distance of 1,000 feet from the mid-point of the closest cargo ship. This measurement of 54 dBA at is located at the closest monitoring location to the terminal operations and is considered to be representative of existing operating noise for terminal operations in the base year.

All Alternative 3 operational activities would be more than 1,500 feet from the closest noise sensitive receptors (i.e., LT-3: multifamily residences immediately west of S. Harbor Boulevard). Consequently, due to attenuation with distance, operational activities at the terminal are expected to produce noise levels below those documented at measurement site ST-6, with noise levels from Project operation, occasionally reaching the low to mid-50 dBA range at the closest receptors in San Pedro residential areas. This level of noise would increase noise levels at these adjacent noise sensitive uses

Alternative 3 would result in an increased Port throughput of 2,250,000 TEUs by 2038 from 1,240,773 TEUs in the 2013 base year. This increase in operations would result in an overall, average, noise level increase of 2.6 dBA. This increase may result in sound levels from port operations reaching 54 to 57 dBA range at the closest receptors. Considering that the average daytime noise level at the closest San Pedro residential areas as determined at noise measuremetn LT-3 is 69 dBA, the addition of terminal noise to the higher ambient levels would result in no increase in noise levels at the sensitive receptors. Therefore, noise levels at noise sensitive receptors would thus not increase by 3 dBA, and would not result in a significant impact.

Alternative 3 would also result in increased movement of containers to and from the Port via existing rail and roadway corridors, along with increased workforce automobile traffic on area roadways. All on-dock rail trips leave the Project site (on Terminal Island) over the Henry Ford Bridge (also known as the Badger Avenue Bridge). Based on this, and considering that the percentage of on-dock rail traffic associated with Alternative 3 would lessen as the rail network spreads out from the Port, the Island Yacht Anchorage liveaboards in the Cerritos Channel have been identified as the noise sensitive receptors with the greatest potential to be impacted by increases in rail noise.

CEQA Impact Determination

On-site operational noise sources associated with Alternative 3 would include intermittent operational sounds occasionally reaching the low to mid-50 dBA range at the closest noise-sensitive receptors. Considering existing ambient conditions, this level of noise would increase noise levels at these adjacent noise sensitive receptors by less than 3 dBA, and would not result in a significant impact at any adjacent noise sensitive receptors under CEQA.

Alternative 3 would annually result in approximately 1,609,500 truck trips, 4.7 average daily rail trips (1.6 off-dock and 3.1 on-dock rail trips) and 5.2 peak month average daily rail trips (1.7 off-dock and 3.5 on-dock) by 2038. All on-dock rail trips leave the Project site (on Terminal Island) over the Henry Ford Bridge (also known as the Badger Avenue Bridge). The increase in daily on-dock rail trips over the CEQA baseline associated with Alternative 3 would result in a less than 3 dBA increase in the CNEL at the Island Yacht Anchorage liveaboards in the Cerritos Channel. Therefore, rail trips generated by terminal operations under Alternative 3 would not result in a significant noise impact under CEQA.

A comparison of automobile and truck traffic data for area roadways under existing 2013 conditions (CEQA baseline) and CEQA baseline conditions plus Alternative 3 for years 2019, 2026 and 2038 indicates that where nearby noise sensitive uses are within 'normally unacceptable' or 'clearly unacceptable land use category noise levels, project-related increases in truck and automobile traffic on area roadways will result in less than a 3 dBA increase in noise levels, and that where nearby noise sensitive uses are within 'normally acceptable' land use category noise levels, project-related increases in truck and automobile traffic on area roadways will result in less than a 5 dBA increase in noise levels. The increases in ambient noise levels from increase truck and automobile traffic would result in less than 3 dBA increases because the additional traffic from terminal operations would not approach a doubling of the existing traffic levels, which is required to increase noise levels by 3 dBA.

Therefore, auomobile and truck trips generated by terminal operations under Alternative 3 would not result in a significant noise impact under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

On-site operational noise associated with Alternative 3 would be greater than the NEPA baseline, with intermittent operational sounds, such as the banging and setting of containers, occasionally reaching the low to mid-50 dBA range at the closest noise-sensitive receptors in the San Pedro residential areas. This level of noise would increase noise levels at these noise sensitive receptors by less than 3 dBA, and would not result in a significant impact at any adjacent noise sensitive receptors under NEPA.

The increase in on-dock rail trips over the NEPA baseline would result in a less than 1 dBA increase in the CNEL at the Island Yacht Anchorage liveaboards in the Cerritos

Channel. Therefore, rail trips generated by terminal operations under the proposed Project would not result in a significant noise impact.

A comparison of automobile and truck traffic data for existing roadways associated with Alternative 3 and NEPA baseline conditions indicates that increases in automobile or truck traffic on area roadways associated with Alternative 3 would increase noise levels at adjacent noise sensitive receptors by less than 3 dBA, and therefore would not result in a significant impact at any adjacent noise sensitive receptors under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Alternative 4 – Reduced Project: No Backland Improvements

Under Alternative 4, there would be two operating berths after construction, similar to the proposed Project. This alternative would require the same dredging as the proposed Project but would not expand the terminal backlands. Alternative 4 would raise up to five of the existing largest cranes, add five new cranes and AMP. This alternative would accommodate the largest vessels (16,000 TEUs) at Berths 226-229. The new design depth at Berths 230-232 would be capable of handling vessels up to 10,000 TEUs. Based on the throughput projections, this alternative is expected to operate at its capacity of approximately 2,115,133 TEUs by 2038, as compared to the proposed Project which is expected to operate at a capacity of approximately 2,379,525 TEUs. Under this Alternative, the terminal would handle less cargo than the proposed Project. However, 208 vessels would call on the terminal in 2038, similar to the proposed Project. Additionally, because this alternative would have the same number of operating berths as the proposed Project, this alternative would result in a maximum of two peak day ship calls (over a 24-hour period), the same as for the proposed Project.

Impact NOI-1: Construction of the Alternative 4 could result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive receptor.

This alternative would not expand the terminal's backlands, but would include construction activities in wharf andwater areas that are the same as the proposed Project. Thus, noise levels generated by construction activities would be similar to those shown in Table 3.10-9.

During construction, the overall average noise levels vary with the level of construction activity, the types of equipment that are on-site and operating at a particular time, and the proximity of the construction equipment to noise sensitive receptors. Hourly average noise levels are estimates based on a typical complement of construction equipment that would be expected to be on-site to complete the various proposed components.

As with the proposed Project construction, activities are expected to last more than 10 days in a three month period. An impact would be considered significant if noise from

construction activities would cause the existing ambient exterior noise levels to increase by 5 dBA or more at a sensitive receptor.

During peak construction, construction worker based vehicle trips are expected to represent a small fraction (less than one percent) of the AM and PM peak hour traffic volumes in the Project area. This small fraction of vehicles compared to the overall traffic in the Project area would not result in a noticeable increase in noise levels (a doubling of traffic would be required for a minimally audible 3 dBA increase in noise to occur). Therefore, traffic generated from construction worker trips would be less than significant.

Noise levels generated by construction activities under Alternative 4 would be similar to those for the proposed project and therefore the analysis presented under the proposed project is applicable to this alternative. Construction noise levels at noise sensitive receptors in the Project vicinity are expected to be the same as those given in Table 3.10-9, with a lesser overall duration.

CEQA Impact Determination

As shown in Table 3.10-9, neither daytime general construction nor dredging noise would increase the existing average ambient noise levels at any identified noise receptor in the Project area by 5 dBA or more. However, noise produced by daytime pile driving during construction of wharf improvements (alone or pile driving in combination with general construction) would increase average ambient noise levels at Fish Harbor and San Pedro waterfront (commercial and tourism based uses) by 5 or more dBA over existing levels. As with the proposed Project, these impacts would be temporary, but significant under CEQA.

Mitigation Measures

Mitigation measures MM NOI-1 and MM NOI-2 would be implemented.

Residual Impacts

With implementation of MM NOI-1 and MM NOI-2 impacts would be less than significant.

NEPA Impact Determination

The No Backlands Alternative would limit backland development, where as the NEPA baseline includes such work. However, the NEPA baseline would not include in-water construction that would require pile driving. Therefore, construction of Alternative 4 would result in noise increases of 5 dBA (associated with pile driving) at two sensitive receptors as identified in Table 3.10-9, which would not occur under the NEPA baseline. Shielding of noise sources by intervening structures may reduce noise levels at these receptors, but cannot be expected to reduce the impacts to less than significant levels. Therefore, the proposed Project's NEPA impacts of NOI-1 are considered temporary, but significant under NEPA.

Mitigation Measures

Mitigation measures MM NOI-1 and MM NOI-2 would be implemented.

Residual Impacts

With implementation of MM NOI-1 and MM NOI-2 impacts would be less than significant.

Impact NOI-2: Construction of Alternative 4 would not result in noise levels that would exceed the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

Similar to the proposed Project, Alternative 4 would include 24 hour dredging activities, including dredging during nighttime hours. Nighttime noise levels at sensitive receptor locations under Alternative 4 would be similar to that of the proposed Project, as both would require nighttime dredging. The modeling results of nighttime dredging where logarithmically added to the average ambient noise levels at the identified noise receptors and the resultant L_{eq} levels are summarized in Table 3.10-10 above. Other receptor locations in the site vicinity, characterised by measurement locations ST-4 through ST-8, would either be further removed from site work or can be represented by other receptor locations, and thus would be exposed to equal or lower levels.

CEQA Impact Determination

As shown in Table 3.10-10 above, nighttime dredging noise would not increase the existing average ambient noise levels at any identified noise receptor in the Project area. As a result, nighttime dredging would not violate the City's noise ordinance or the nighttime noise threshold, and there would be no impact related to Impact NOI-2 under CEQA**.**

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Alternative 4, unlike the NEPA baseline would include nighttime dredging; however, as indentified in Table 3.10-10 above, such nighttime work would not violate the City's noise ordinance and would not result in a significant increase in average noise levels at noise sensitive uses in the project vicinity. As a result, there would be no impact related to Impact NOI-2 under NEPA**.**

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact NOI-3: Operations of Alternative 4 would not cause the ambient noise level measured at the property line of affected uses (i.e., sensitive receptors) to increase by a CNEL of 3 dBA to or within 'normally unacceptable' or 'clearly unacceptable' land use categories, or any increase in CNEL of 5 dBA or greater.

On-site operational noise sources associated with Alternative 4 would include the intermittent sounds of operations, such as tugs used for ingress, egress and berthing of container ships, gantry cranes offloading and loading containers, cargo-handling operations, rail and truck movements, and ongoing terminal-related maintenance activities. Noise measurements at ST-6 (near Berth 89, in the USS Iowa parking area as descibed in Section 3.10.2.3, above) identified noise levels during the unloading of cargo ships by gantry cranes along with truck movements on the existing Everport Container Terminal at a distance of 1,000 feet from the mid-point of the closest cargo ship. This measurement of 54 dBA is located at the closest monitoring location to the terminal operations and considered to be representative of existing operating noise for terminal operations in the base year.

All Alternative 4 operational activities would be more than 1,500 feet from the closest noise sensitive receptors (i.e., LT-3: multi-family residences immediately west of S. Harbor Boulevard). Consequently, due to attenuation with distance, Project-related operational activities would produce noise levels 3 dBA or more below those documented at measurement site ST-6 at the closest noise sensitive receptors in San Pedro residential areas. Thus, noise levels from existing Everport Container Terminal operations occasionally reach sound levels of 51 to 53 dBA at the closest receptors. However, because of higher ambient conditions at adjacent noise sensitive receptors, the addition of noise from terminal operations in the low to mid-50 dBA range result in no increase in noise levels at the sensitive receptors.Alternative 4 would result in an increased Port throughput of 2,115,525 TEUs from 1,240,773 TEUs in the 2013 base year. This increase in operations would result in an overall, average, noise level increase of 2.3 dBA. This increase may result in sound levels from port operations reaching 53 to 56 dBA range at the closest receptors. Considering that the average daytime noise level at the closest San Pedro residential areas as determined at noise measuremetn LT-3 is 69 dBA, the addition of terminal noise to the higher ambient levels would result in no increase in noise levels at the sensitive receptors. Noise levels at adjacent noise sensitive receptors would thus not increase by 3 dBA, and would not result in a significant impact under CEQA.

Alternative 4 would also result in increased movement of cargo containers to and from the Port via existing rail and roadway corridors, along with increased workforce automobile traffic on area roadways. All on-dock rail trips leave the Project site (on Terminal Island) over the Henry Ford Bridge (also known as the Badger Avenue Bridge). The on-dock rail traffic associated with Alternative 4 would lessen as the rail network spreads out from the Port, the Island Yacht Anchorage liveaboards in the Cerritos Channel have been identified as the noise sensitive receptors with the greatest potential to be impacted by increases in rail noise.

CEQA Impact Determination

On-site operational noise sources associated with Alternative 4 would include intermittent operational sounds, such as the banging and setting of containers, occasionally reaching the low to mid-50 dBA range at the closest noise-sensitive

receptors in the San Pedro residential areas. Considering that the existing average daytime noise level is 69 dBA at the closest San Pedro residential areas, this level of noise would result in no increase in noise levels at the sesitive receptors. Noise levels at adjacent noise sensitive receptors would thus increase noise levels at the noise sensitive receptors by less than 3 dBA, and would not result in a significant impact at any adjacent noise sensitive receptors under CEQA.

Alternative 4 would annually result in approximately 1,478,200 truck trips, 4.4 average daily rail trips (1.2 off-dock and 3.1 on-dock rail trips) and 4.9 peak month average daily rail trips (1.4 off-dock and 3.5 on-dock) by 2038. All on-dock rail trips leave the Project site (on Terminal Island) over the Henry Ford Bridge (also known as the Badger Avenue Bridge). The increase in on-dock rail trips associated with Alternative 4 over the CEQA baseline for the Project would result in a less than 3 dBA increase in the CNEL at the Island Yacht Anchorage liveaboards in the Cerritos Channel. Therefore, rail trips generated by terminal operations under Alternative 4 would not result in a significant noise impact under CEQA.

A comparison of automobile and truck traffic data for area roadways under existing 2013 conditions (CEQA baseline) and CEQA baseline conditions plus Alternative 4 conditions for years 2019, 2026 and 2038 indicates that where nearby noise sensitive uses are within ‘normally unacceptable’ or ‘clearly unacceptable land use category noise levels, project-related increases in truck and automobile traffic on area roadways will result in less than a 3 dBA increase in noise levels, and that where nearby noise sensitive uses are within ‘normally acceptable’ land use category noise levels, project-related increases in truck and automobile traffic on area roadways will result in less than a 5 dBA increase in noise levels. The increases in ambient noise levels from increase truck and automobile traffic would result in less than 3 dBA increases because the additional traffic from terminal operations would not approach a doubling of the existing traffic levels, which is required to increase noise levels by 3 dBA.

Therefore, auomobile and truck trips generated by terminal operations under Alternative 4 would not result in a significant noise impact under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

On-site operational noise associated with Alternative 4 would be greater than the NEPA baseline, with intermittent operational sounds, such as the banging and setting of containers, occasionally reaching the low to mid-50 dBA range at the closest noise-sensitive receptors in the San Pedro residential areas. This level of noise would increase noise levels at these noise sensitive receptors by less than 3 dBA, and would not result in a significant impact at any adjacent noise sensitive receptor under NEPA.

The increase in on-dock rail trips associated with Alternative 4 above the NEPA baseline would result in a less than 1 dBA increase in the CNEL at the Island Yacht Anchorage liveaboards in the Cerritos Channel. Therefore, rail trips generated by terminal operations under Alternative 4 would not result in a significant noise impact.

A comparison of traffic data for existing roadways associated with Alternative 4 and the NEPA baseline, indicates that increases in automobile or truck traffic associated with Alternative 4 would increase noise levels at adjacent noise sensitive receptors by less than 3 dBA, and therefore would not result in a significant impact at any adjacent noise sensitive receptors under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Alternative 5 – Expanded On-Dock Railyard: Wharf and Backland Improvements with an Expanded TICTF

Under Alternative 5, there would be two operating berths after construction, similar to the proposed Project. This alternative would require the same dredging as the proposed Project. This alternative would accommodate the largest vessels (16,000 TEUs) at Berths 226-229. The new design depth at Berths 230-232 would be capable of handling vessels up to 10,000 TEUs. Alternative 5 would raise up to five of the existing largest cranes, add five new cranes, and AMP. Based on the throughput projections, this alternative is expected to operate at its capacity of approximately 2,379,525 TEUs by 2038, the same as the proposed Project. Under this project alternative, the terminal could handle similar levels of cargo as the proposed Project, but would have added capacity at the TICTF and be able to transport a greater number of containers via rail than the proposed Project. Under this alternative, 208 vessels would call on the terminal in 2038, the same as the proposed Project. Additionally, because this alternative would have the same number of operating berths as the proposed Project, this alternative would result in a maximum of two peak day ship calls (over a 24-hour period), the same as for the proposed Project.

Impact NOI-1: Construction of Alternative 5 could result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive receptor.

This alternative would involve the same backland, wharf and water area development as the proposed Project, but would include an additional rail track at the TICTF. Installation of an additonal rail track at the TICTF would involve similar construction activities to backlands construction. Thus, noise levels generated by construction activities would be similar to those shown in Table 3.10-9.

During construction, the overall average noise levels vary with the level of construction activity, the types of equipment that are onsite and operating at a particular time, and the proximity of the construction equipment to noise sensitive receptors. Hourly average noise levels are estimates based on a typical complement of construction equipment that would be expected to be onsite to complete the various proposed Project components.

Similar to the proposed Project, construction activities are expected to last more than 10 days in a three month period for all proposed Project components. An impact would be considered significant if noise from construction activities would cause the existing ambient exterior noise levels to increase by 5 dBA or more at a sensitive receptor.

During peak construction, construction worker based vehicle trips are expected to represent a small fraction (less than one percent) of the AM and PM peak hour traffic volumes in the Project area. This small fraction of vehicles compared to the overall traffic in the Project area would not result in a noticeable increase in noise levels (a doubling of traffic would be required for a minimally audible 3 dBA increase in noise to occur). Therefore, traffic generated from construction worker trips would be less than significant.

Noise levels generated by construction activities under Alternative 5 would be similar to those for the proposed project and therefore the analysis presented under the proposed project is applicable to this alternative. Construction noise levels at noise sensitive receptors in the Project vicinity are expected to be the same as those given in Table 3.10-9.

CEQA Impact Determination

As shown in Table 3.10-9, neither daytime general construction nor dredging noise would increase the existing average ambient noise levels at any identified noise receptor in the Project area by 5 dBA or more. However, noise produced by daytime pile driving during construction of wharf improvements (alone or pile driving in combination with general construction) would increase average ambient noise levels at Fish Harbor and San Pedro waterfront (commercial and tourism based uses) by 5 or more dBA over existing levels. As with the proposed Project, these impacts would be temporary, but significant under CEQA.

Mitigation Measures

Mitigation measures MM NOI-1 and MM NOI-2 would be implemented.

Residual Impacts

With implementation of MM NOI-1 and MM NOI-2 impacts would be less than significant.

NEPA Impact Determination

Alternative 5 would involve the same backland, wharf and water area development as the proposed Project. As such, construction of Alternative 5 would result in noise increases of 5 dBA (associated with pile driving) at two sensitive receptors as identified in Table 3.10-9, which would not occur under the NEPA baseline. Shielding of noise sources from intervening structures may reduce noise levels at these receptors, but cannot be expected to reduce the impacts to less than significant levels. Therefore, Alternative 5's NEPA impacts related to Impact NOI-1 are considered temporary, but significant.

Mitigation Measures

Mitigation measures MM NOI-1 and MM NOI-2 would be implemented.

Residual Impacts

With implementation of MM NOI-1 and MM NOI-2 impacts would be less than significant.

Impact NOI-2: Construction of Alternative 5 would not result in noise levels that would exceed the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

Similar to the proposed Project, Alternative 5 would include 24-hour dredging activities during nighttime hours. Nighttime noise levels at sensitive receptor locations under Alternative 5 would be the same as that of the proposed Project. The modeling results of nighttime dredging where logarithmically added to the average ambient noise levels at the identified noise receptors and the resultant L_{eq} levels are summarized in Table 3.10-10 above. Other receptor locations in the site vicinity, characterized by measurement locations ST-4 through ST-8, would either be further removed from site work or can be represented by other receptor locations, and thus would be exposed to equal or lower levels.

CEQA Impact Determination

As shown in Table 3.10-10 above, nighttime dredging noise would not increase the existing average ambient noise levels at any identified noise receptor in the Project area. As a result, nighttime dredging would not violate the City's noise ordinance or the nighttime noise threshold, and there would be no impact related to Impact NOI-2 under CEQA**.**

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Alternative 5, unlike the NEPA baseline would include nighttime dredging; however, as indentified in Table 3.10-10 above, such nighttime work would not violate the City's noise ordinance and would not result in a significant increase in average noise levels at noise sensitive uses in the project vicinity. As a result, there would be no impact related to Impact NOI-2 under NEPA**.**

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact NOI-3: Operations of Alternative 5 would not cause the ambient noise level measured at the property line of affected uses (i.e., sensitive receptors) to increase by a CNEL of 3 dBA to or within 'normally unacceptable' or 'clearly unacceptable' land use categories, or any increase in CNEL of 5 dBA or greater.

On-site operational noise sources associated with Alternative 5 would include the intermittent sounds of operations, such as tugs used for ingress, egress and berthing of container ships, gantry cranes offloading and loading containers, cargo-handling operations, rail and truck movements, and ongoing terminal-related maintenance activities. Noise measurements at ST-6 (near Berth 89, in the USS Iowa parking area as descibed in Section 3.10.2.3, above) identified noise levels during the unloading of cargo ships by gantry cranes along with truck movements on the existing Everport Container Terminal at a distance of 1,000 feet from the mid-point of the closest cargo ship. This measurement of 54 dBA is located at the closest monitoring location to the terminal operations and considered to be representative of existing operating noise for terminal operations in the base year.

All Alternative 5 operational activities would be more than 1,500 feet from the closest noise sensitive receptors (i.e., LT-3: multi-family residences immediately west of S. Harbor Boulevard). Consequently, due to attenuation with distance, Project-related operational activities would produce noise levels 3 dBA or more below those documented at measurement site ST-6 (near Berth 89) at the closest noise sensitive receptors in San Pedro residential areas. Thus, noise levels from existing Everport Container Terminal operations can occasionally reach sound levels of 51 to 53 dBA at the closest receptors in San Pedro residential areas. However, because of higher ambient conditions at these noise sensitive receptors, the addition of noise from terminal operations in the low to mid-50 dBA range would result in no increase in noise levels at the sensitive receptors.

Alternative 5 would result in an increased Port throughput of 2,379,525 TEUs by 2038 from 1,240,773 TEUs in the 2013 base year. This increase may result in sound levels from port operations reaching 54 to 57 dBA range at the closest receptors. Considering that the average daytime noise level at the closest San Pedro residential areas as determined at noise measuremetn LT-3 is 69 dBA, the addition of terminal noise to the higher ambient levels would result in no increase in noise levels at the sensitive receptors. Noise levels at noise sensitive receptors would thus not increase by 3 dBA, and would not result in a significant impact under CEQA.

Alternative 5 would also result in increased movement of cargo containers to and from the Port via area rail and roadway corridors, along with increased workforce automobile traffic on area roadways. All on-dock rail trips leave the Project site (on Terminal Island) over the Henry Ford Bridge (also known as the Badger Avenue Bridge). On-dock rail traffic would lessen as the rail network spreads out from the Port, the Island Yacht Anchorage liveaboards in the Cerritos Channel have been identified as the noise sensitive receptors with the greatest potential to be impacted by increases in Project-generated rail noise.

CEQA Impact Determination

On-site operational noise sources associated with Alternative 5 would include intermittent operational sounds, such as the banging and setting of containers, occasionally reaching the low to mid-50 dBA range at the closest noise-sensitive

receptors in the San Pedro residential areas. Considering existing average daytime noise level is 69 dBA at the closest San Pedro residential areas, this level of noise would result in no increase in noise levels at the sesitive receptors. Thus, noise levels at noise sensitive receptors would not by 3 dBA, and would not result in a significant impact at any adjacent noise sensitive receptors under CEQA.

Alternative 5 would annually result in approximately 1,684,100 truck trips, 4.9 average daily rail trips (1.5 off-dock and 3.4 on-dock rail trips) and 5.5 peak month average daily rail trips (1.7 off-dock and 3.8 on-dock) by 2038. All on-dock rail trips leave the Project site (on Terminal Island) over the Henry Ford Bridge (also known as the Badger Avenue Bridge). The increase in on-dock rail trips over the CEQA baseline for Alternative 5 would result in a less than 3 dBA increase in the CNEL at the Island Yacht Anchorage liveaboards in the Cerritos Channel. Therefore, rail trips generated by terminal operations under Alternative 5 would not result in a significant noise impact under CEQA.

A comparison of automobile and truck traffic data for area roadways under existing 2013 conditions (CEQA baseline) and CEQA baseline conditions plus Alternative 3 conditions for years 2019, 2026 and 2038 indicates that where nearby noise sensitive uses are within 'normally unacceptable' or 'clearly unacceptable land use category noise levels, project-related increases in truck and automobile traffic on area roadways will result in less than a 3 dBA increase in noise levels, and that where nearby noise sensitive uses are within 'normally acceptable' land use category noise levels, project-related increases in truck and automobile traffic on area roadways will result in less than a 5 dBA increase in noise levels. The increases in ambient noise levels from increase truck and automobile traffic would result in less than 3 dBA increases because the additional traffic from terminal operations would not approach a doubling of the existing traffic levels, which is required to increase noise levels by 3 dBA.

Therefore, auomobile and truck trips generated by terminal operations under Alternative 5 would not result in a significant noise impact under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

On-site operational noise sources associated with Alternative 5 would be greater than the NEPA baseline, with intermittent operational sounds, such as the banging and setting of containers, occasionally reaching the low to mid-50 dBA range at the closest noise-sensitive receptors in the San Pedro residential areas. This level of noise would increase noise levels at these sensitive receptors by less than 3 dBA, and would not result in a significant impact at any adjacent noise sensitive receptors under NEPA.

The increase in on-dock rail trips associated with Alternative 5 would result in a less than 1 dBA increase in the CNEL at the Island Yacht Anchorage liveaboards in the Cerritos Channel. Therefore, rail trips generated by terminal operations under Alternative 5 would not result in a significant noise impact.

A comparison of traffic data for existing roadways associated with Alternative 5 and NEPA baseline conditions indicates that Alternative 5 related increases in automobile or

truck traffic on area roadways would increase noise levels at adjacent noise sensitive receptors by less than 3 dBA, and therefore would not result in a significant impact at any adjacent noise sensitive receptors under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.10.4.4 Summary of Impact Determinations

Table 3.10-11 summarizes the CEQA and NEPA impact determinations of the proposed Project and its alternatives related to noise. This table is meant to identify the potential impacts of the proposed Project and alternatives with respect to this resource. Identified potential impacts may be based on federal, state, or City significance criteria; LAHD criteria; and the scientific judgment of the report preparers.

For each impact threshold, the table describes the impact, notes the CEQA and NEPA impact determinations, describes any applicable mitigation measures, and notes the residual impacts (i.e., the impact remaining after mitigation). All impacts, whether significant or not, are included in this table.

Table 3.10-11: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
Proposed Project	**NOI-1:** Construction of the proposed Project could result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at noise-sensitive receptors.	CEQA: Potentially significant	CEQA: **MM NOI-1: Noise Reduction during Pile Driving**, and **MM NOI-2: Utilize Temporary Noise Attenuation Curtain Adjacent to Pile Driving Equipment**	CEQA: Less than significant
		NEPA: Potentially significant	NEPA: **MM NOI-1 and MM NOI-2**	NEPA: Less than significant
	NOI-2: Construction of the proposed Project would not result in noise levels that would exceed the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.	CEQA: No impact	CEQA: No mitigation is required	CEQA: No impact
		NEPA: No impact	NEPA: No mitigation is required	NEPA: No impact
	NOI-3: Operations of the proposed Project would not cause the ambient noise level measured at the property line of affected uses (i.e., sensitive receptors) to increase by a CNEL of 3 dBA to or within 'normally unacceptable' or 'clearly unacceptable' land use categories, or any increase in CNEL of 5 dBA or greater.	CEQA: Less than significant	CEQA: No mitigation is required	CEQA: Less than significant
		NEPA: Less than significant	NEPA: No mitigation is required	NEPA: Less than significant
Alternative 1 - No Federal Action	**NOI-1:** Construction of Alternative 1 would not result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at noise-sensitive receptors.	CEQA: Less than significant	CEQA: No mitigation is required	CEQA: Less than significant
		NEPA: No impact	NEPA: No mitigation is required	NEPA: No impact

Table 3.10-11: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
	NOI-2: Construction of the Alternative 1 would not result in noise levels that would exceed the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.	CEQA: No impact	CEQA: No mitigation is required	CEQA: No impact
		NEPA: No impact	NEPA: No mitigation is required	NEPA: No impact
	NOI-3: Operations of Alternative 1 would not cause the ambient noise level measured at the property line of affected uses (i.e., sensitive receptors) to increase by a CNEL of 3 dBA to or within 'normally unacceptable' or 'clearly unacceptable' land use categories, or any increase in CNEL of 5 dBA or greater.	CEQA: Less than significant	CEQA: No mitigation is required	CEQA: Less than significant
		NEPA: No impact	NEPA: No mitigation is required	NEPA: No impact
Alternative 2 - No Project	**NOI-1:** Construction of Alternative 2 would not result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at noise-sensitive receptors.	CEQA: No impact	CEQA: No mitigation is required	CEQA: No impact
		NEPA: Not Applicable	NEPA: Mitigation not applicable	NEPA: Not Applicable
	NOI-2: Construction of Alternative 2 would not result in noise levels that would exceed the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.	CEQA: No impact	CEQA: No mitigation is required	CEQA: No impact
		NEPA: Not Applicable	NEPA: Mitigation not applicable	NEPA: Not Applicable

Table 3.10-11: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
	NOI-3: Operations of Alternative 2 would not cause the ambient noise level measured at the property line of affected uses (i.e., sensitive receptors) to increase by a CNEL of 3 dBA to or within 'normally unacceptable' or 'clearly unacceptable' land use categories, or any increase in CNEL of 5 dBA or greater.	CEQA: Less than significant	CEQA: No mitigation is required	CEQA: Less than significant
		NEPA: Not Applicable	NEPA: Mitigation not applicable	NEPA: Not Applicable
Alternative 3 - Reduced Project: Reduced Wharf Improvements	**NOI-1:** Construction of Alternative 3 could result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at noise-sensitive receptors.	CEQA: Potentially significant	CEQA: **MM NOI-1 and MM NOI-2**	CEQA: Less than significant
		NEPA: Potentially significant	NEPA: **MM NOI-1 and MM NOI-2**	NEPA: Less than significant
	NOI-2: Construction of Alternative 3 would not result in noise levels that would exceed the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.	CEQA: No impact	CEQA: No mitigation is required	CEQA: No impact
		NEPA: No impact	NEPA: No mitigation is required	NEPA: No impact
	NOI-3: Operations of Alternative 3 would not cause the ambient noise level measured at the property line of affected uses (i.e., sensitive receptors) to increase by a CNEL of 3 dBA to or within 'normally unacceptable' or 'clearly unacceptable' land use categories, or any increase in CNEL of 5 dBA or greater.	CEQA: Less than significant	CEQA: No mitigation is required	CEQA: Less than significant
		NEPA: Less than significant	NEPA: No mitigation is required	NEPA: Less than significant

Table 3.10-11: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
Alternative 4 - Reduced Project: No Backlands Improvements	**NOI-1:** Construction of Alternative 4 could result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at noise-sensitive receptors.	CEQA: Potentially significant	CEQA: **MM NOI-1 and MM NOI-2**	CEQA: Less than significant
		NEPA: Potentially significant	NEPA: **MM NOI-1 and MM NOI-2**	NEPA: Less than significant
	NOI-2: Construction of Alternative 4 would not result in noise levels that would exceed the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.	CEQA: No impact	CEQA: No mitigation is required	CEQA: No impact
		NEPA: No impact	NEPA: No mitigation is required	NEPA: No impact
	NOI-3: Operations of Alternative 4 would not cause the ambient noise level measured at the property line of affected uses (i.e., sensitive receptors) to increase by a CNEL of 3 dBA to or within 'normally unacceptable' or 'clearly unacceptable' land use categories, or any increase in CNEL of 5 dBA or greater.	CEQA: Less than significant	CEQA: No mitigation is required	CEQA: Less than significant
		NEPA: Less than significant	NEPA: No mitigation is required	NEPA: Less than significant
Alternative 5 - Expanded On-Dock Railyard: Wharf and Backland Improvements with an	**NOI-1:** Construction of Alternative 5 could result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at noise-sensitive receptors.	CEQA: Potentially significant	CEQA: **MM NOI-1 and MM NOI-2**	CEQA: Less than significant
		NEPA: Potentially significant	NEPA: **MM NOI-1 and MM NOI-2**	NEPA: Less than significant

Table 3.10-11: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Residual Impacts after Mitigation
Expanded TICTF	**NOI-2:** Construction of Alternative 5 would not result in noise levels that would exceed the ambient noise level by 5 dBA at noise-sensitive receptors between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.	CEQA: No impact	CEQA: No mitigation is required	CEQA: No impact
		NEPA: No impact	NEPA: No mitigation is required	NEPA: No impact
	NOI-3: Operations of Alternative 5 would not cause the ambient noise level measured at the property line of affected uses (i.e., sensitive receptors) to increase by a CNEL of 3 dBA to or within 'normally unacceptable' or 'clearly unacceptable' land use categories, or any increase in CNEL of 5 dBA or greater.	CEQA: Less than significant	CEQA: No mitigation is required	CEQA: Less than significant
		NEPA: Less than significant	NEPA: No mitigation is required	NEPA: Less than significant

3.10.4.5 Mitigation Monitoring

The below mitigation monitoring program is applicable to the proposed Project and Alternatives 3, 4, and 5.

Impact NOI-1: Construction could result in daytime construction activities lasting more than 10 days in a three-month period that would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive receptor.	
Mitigation Measure	**MM NOI-1: Noise Reduction during Pile Driving.** The contractor shall be required to use a pile driving system which is capable of limiting maximum noise levels at 50 feet from the pile driver to 104 dBA, or less, for wharf construction.
Timing	During pile driving.
Methodology	LAHD shall include MM NOI-1 in the construction contract specifications.
Responsible Parties	LAHD through the construction contractor.
Residual Impacts	Less than significant
Mitigation Measure	**MM NOI-2: Utilize Temporary Noise Attenuation Curtain Adjacent to Pile Driving Equipment.** Utilize temporary noise attenuation skirt suitable for pile driving as needed. This noise attenuation device should be installed directly between the equipment and the nearest noise sensitive receptor to the construction site.
Timing	During pile driving.
Methodology	LAHD shall include MM NOI-2 in the contract specifications for construction. LAHD shall monitor implementation of mitigation measures during construction.
Responsible Parties	LAHD through Construction Management Division.
Residual Impacts	Less than significant

3.10.5 Significant Unavoidable Impacts

Implementation of the mitigation measures is expected to reduce residual construction impacts due to pile driving activities to a less than significant level. Construction noise would be short-term and would not exceed significance thresholds with mitigation, and after completion, there would be no long-term significant residual noise impact.

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