

SECTION SUMMARY

This section addresses the potential noise impacts associated with the construction and the operation of the proposed Project or an alternative. The sound from the proposed Project and the potential effect on the surrounding area could result from increasing container-handling capacities at the proposed Project site.

Section 3.11, Noise, provides the following:

- A description of existing environmental setting in the Port area;
- A description of the existing sound levels in the surrounding area;
- A description of decibel scale;
- A description of applicable local, state, and federal regulations and policies that apply to the proposed Project and alternatives;
- A discussion on the methodology used to determine whether the proposed Project or alternatives would result in a noise impact;
- An impact analysis of both the proposed Project and alternatives; and,
- A description of any mitigation measures proposed to reduce any potential impacts, as applicable.

Key Points of Section 3.11:

The proposed Project and alternatives would expand an existing container terminal, and its operations would be consistent with other uses and container terminals in the Project area.

The proposed Project and Alternatives 5 and 6 would result in a significant noise impact to noise sensitive uses at Reservation Point and Fish Harbor during construction under both CEQA and NEPA, to noise sensitive uses at Reservation Point and Fish Harbor. The following mitigation measures would reduce potentially significant impacts to less than significant levels:

- **MM NOI-1: Noise Reduction during Pile Driving.** The contractor shall be required to use a pile driving system, such as a Bruce hammer (with silencing kit), an IHC Hydrohammer SC series (with sound insulation system), or equivalent silenced hammer, which is capable of limiting maximum noise levels at 50 ft from the pile driver to 104 dBA, or less, for wharf construction. With implementation of Standard Condition of approval **SC BIO-1**, the pile driving would initiate with a soft start, in which the hammer is operated at a reduced energy, followed by a waiting period. The soft start technique would induce marine mammals and birds to leave the

- 1 immediate area before pile hammer reaches full energy. Refer to Section 3.3, Biological
2 Resources, for information on soft start of pile driving activities.
3
- 4 ▪ **MM NOI-2: Erect Temporary Noise Attenuation Barriers Adjacent to Pile Driving**
5 **Equipment, Where Necessary and Feasible.** Erect temporary noise attenuation barriers suitable
6 for pile driving equipment as needed. The barriers should be installed directly between the
7 equipment and the nearest noise sensitive use to the construction site. The need for and
8 feasibility of noise attenuation barriers should be evaluated on a case-by-case basis considering
9 the distance to noise sensitive receptors, the available space at the construction location, and
10 taking account of safety and operational considerations.
- 11 Operation of the proposed Project and its alternatives would not result in significant impacts to these or
12 noise sensitive uses in the Port area.

1 **3.11.1 Introduction**

2 This section described the existing noise conditions in the Project area, describes
3 applicable regulations and thresholds, and addresses potential noise impacts that could
4 result from the proposed Project and alternatives.

5 **3.11.2 Environmental Setting**

6 **3.11.2.1 Noise Fundamentals**

7 Noise may be defined as unwanted sound. Noise is usually objectionable because it is
8 disturbing or annoying. The objectionable nature of sound can be caused by its *pitch* or
9 its *loudness*. *Pitch* of a tone or sound depends on the relative rapidity (frequency) of the
10 vibrations by which it is produced. *Loudness* is the amplitude of sound waves combined
11 with the reception characteristics of the ear. Amplitude may be compared with the height
12 of an ocean wave. Technical acoustical terms commonly used in this section are defined
13 in Table 3.11-1.

14 **3.11.2.2 Decibels and Frequency**

15 In addition to the concepts of pitch and loudness, there are several noise measurement
16 scales that are used to describe noise. The *decibel (dB)* is a unit of measurement, which
17 indicates the relative amplitude of a sound. Zero on the decibel scale is based on the
18 lowest sound pressure that a healthy, unimpaired human ear can detect. Sound levels in
19 decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a
20 10-fold increase in acoustic energy, while 20 decibels is 100 times more intense,
21 30 decibels is 1,000 times more intense, etc. There is a relationship between the
22 subjective noisiness or loudness of a sound and its level. Each 10-decibel increase in
23 sound level is perceived as approximately a doubling of loudness over a wide range of
24 amplitudes. Because decibels are logarithmic units, sound pressure levels are not added
25 arithmetically. When two sounds of equal sound pressure level are added, the result is a
26 sound pressure level that is 3 dB higher. For example, if the sound level were 70 dB
27 when 1,000 cars pass by, then it would be 73 dB when 2,000 cars pass the observer.
28 Doubling the amount of energy would result in a 3 dB increase to the sound level.

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Table 3.11-1: Definitions of Acoustical Terms

Term	Definition
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micro Pascals.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or micro Newtons 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 the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e.g., 20 micro Pascals in air). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency (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, obtained after addition of 5 decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels in the night 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, obtained after addition of 10 decibels to levels measured in the night between 10:00 p.m. and 7:00 a.m.
L_{01} , L_{10} , L_{50} , L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time 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	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.

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Frequency relates to the number of pressure oscillations per second, or *Hertz (Hz)*. The range of sound frequencies that can be heard by healthy human ears is from about 20 Hz at the low frequency end to 20,000 Hz (20 kilohertz [kHz]) at the high frequency end.

1 There are several methods for characterizing sound. The most common is the *A-weighted*
 2 *sound level* or *dB(A)*. This scale gives greater weight to the frequencies of sound to which
 3 the human ear is most sensitive. Studies have shown that the A-weighted level is closely
 4 correlated with annoyance to noise. Other frequency weighting networks, such as
 5 *C weighting* or *dB(C)*, have been devised to describe noise levels for specific types of noise
 6 (e.g., explosives). Table 3.11-2 shows typical A-weighted noise levels that occur in
 7 human environments.

Table 3.11-2: 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
		Quiet bedroom at night
Wilderness area	20 dBA	
	10 dBA	Quiet recording studio
Threshold of human hearing	0 dBA	Threshold of human hearing

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3.11.2.2.1 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 3.11-1). Both include penalties for noise during the nighttime, and CNEL penalizes noise during the evening. CNEL and L_{dn} are normally within 1 dBA of each other and are used interchangeably in this section.

3.11.2.2.2 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 the normal environment, 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. A change of 5 dBA is readily perceptible, and a change of 10 dBA is perceived as being twice as loud.

3.11.2.2.3 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. 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. Highway noise 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 (i.e. attenuation) from a line source is 3 dBA per doubling of distance.

Ground absorption. Usually the noise path between the source and the observer is very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation because of geometric spreading. 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 60 meters (200 ft), 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 receiver), no excess ground attenuation is assumed. 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

1 in an overall drop-off rate of 4.5 dBA per doubling of distance for a line source and 7.5
2 dBA per doubling of distance for a point source.

3 **Atmospheric effects.** Research by Caltrans and others has shown that atmospheric
4 conditions can have a major effect on noise levels. Wind has been shown to be the single
5 most important meteorological factor within approximately 150 meters (500 ft), whereas
6 vertical air temperature gradients are more important over longer distances. Other
7 factors, such as air temperature, humidity, and turbulence, also have major effects.
8 Receivers located downwind from a source can be exposed to increased noise levels
9 relative to calm conditions, whereas locations upwind can have lower noise levels.
10 Increased sound levels can also occur because of temperature inversion conditions (i.e.,
11 increasing temperature with elevation, or cooler air near the surface, where the sound
12 source tends to be and warmer air above which acts as a cap, causing a reflection of
13 ground level generated sound).

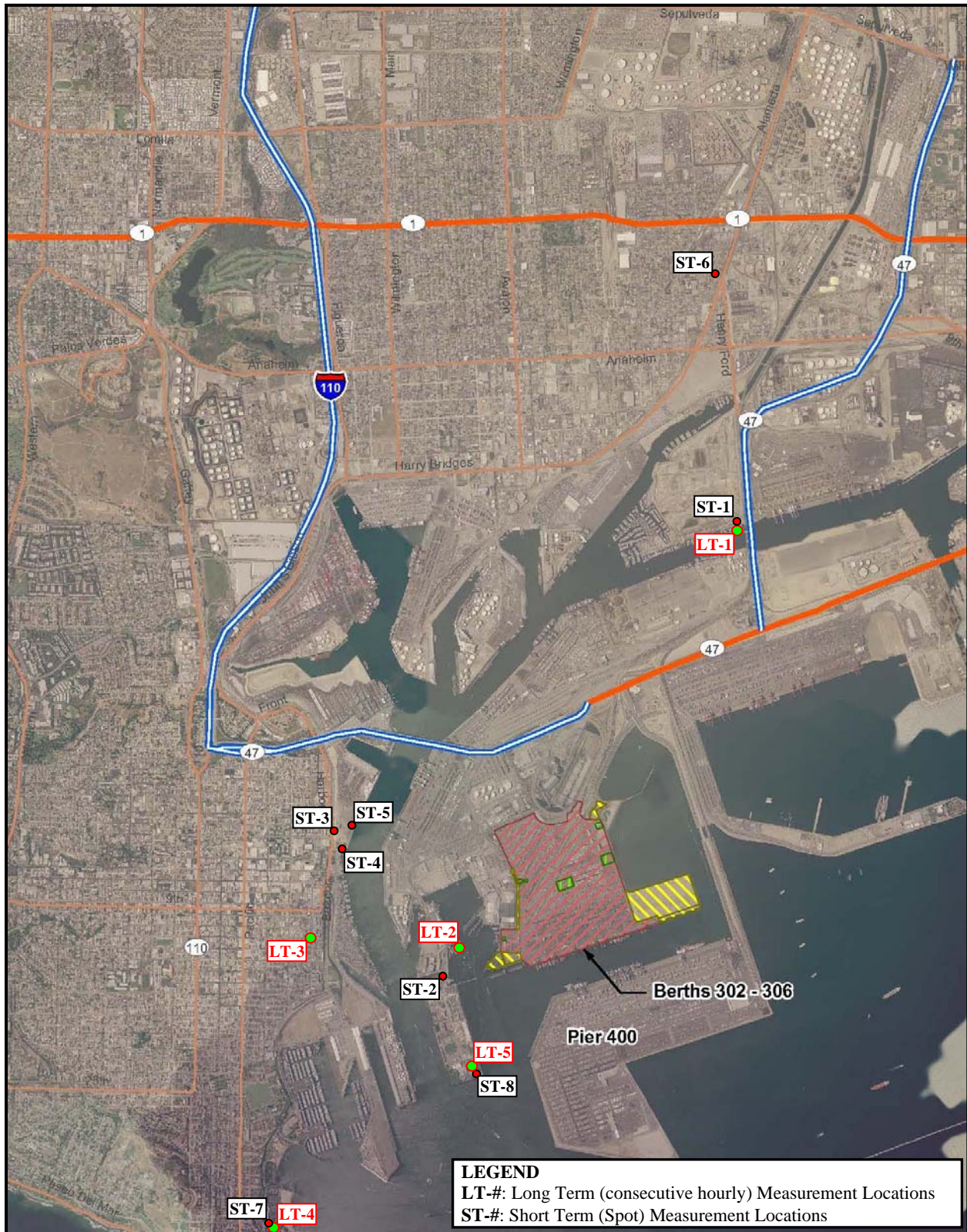
14 **Shielding by natural or human-made features.** A large object or barrier in the path
15 between a noise source and a receiver can substantially attenuate noise levels at the
16 receiver. The amount of attenuation provided by this shielding depends on the size of the
17 object, proximity to the noise source and receiver, surface weight, solidity, and the
18 frequency content of the noise source. Natural terrain features (such as hills and dense
19 woods) and human-made features (such as buildings and walls) can substantially reduce
20 noise levels. Walls are often constructed between a source and a receiver specifically to
21 reduce noise. A barrier that breaks the line of sight between a source and a receiver will
22 typically result in at least 5 dB of noise reduction. A higher barrier may provide as much
23 as 20 dB of noise reduction.

24 **3.11.2.2.4 Existing Noise Environment**

25 The proposed Project site is located on Terminal Island within an industrial area in the
26 Fish Harbor region of the Port. The site is within the Port of Los Angeles Plan area of in
27 the City of Los Angeles, which is adjacent to the communities of San Pedro and
28 Wilmington. The site is generally bounded on the north by Terminal Way, the Pier 300
29 Shallow Water Habitat on the east, Earle Street on the west, and the Pier 300 Channel on
30 the south. Noise in the proposed Project site is characterized by periodic increases in
31 noise levels associated with adjacent container terminal and industrial uses, railroad train
32 movements along the various railroad lines in the area, vehicular traffic on the local street
33 network and the freeways, industrial noise sources, and activities at the Port. The noise
34 environment at any particular location depends upon proximity to the various noise
35 sources, although traffic noise is the predominant noise source in the Project area. Some
36 noise-sensitive receivers are also located near the rail corridors in the environs of the
37 Port.

38 For the purpose of this report, noise-sensitive receivers are defined as residences, schools,
39 hospitals, libraries, places of worship, and public parks. Figure 3.11-1 shows noise-
40 sensitive receivers in the Project vicinity. The nearest residential area outside of the Port
41 is located more than one mile to the west, across the Main Channel of the Los Angeles
42 Harbor. There are also Port-related residential uses at Reservation Point and in the
43 Cabrillo Beach area, along with liveaboard boats in Fish Harbor and the Cerritos Channel
44 just west of the Terminal Island Freeway (State Route 47) Bridge. For the purposes of
45 noise impact analysis, the area of influence includes those sensitive receptors closest to
46 the proposed Project site, which might potentially be affected by construction noise or

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Figure 3.11-1: Noise Measurement Locations

1 noise associated with traffic generated by the proposed Project or an alternative and
2 sensitive receptors along major transportation corridors serving the Project area.

3 3.11.2.2.5 Noise Monitoring

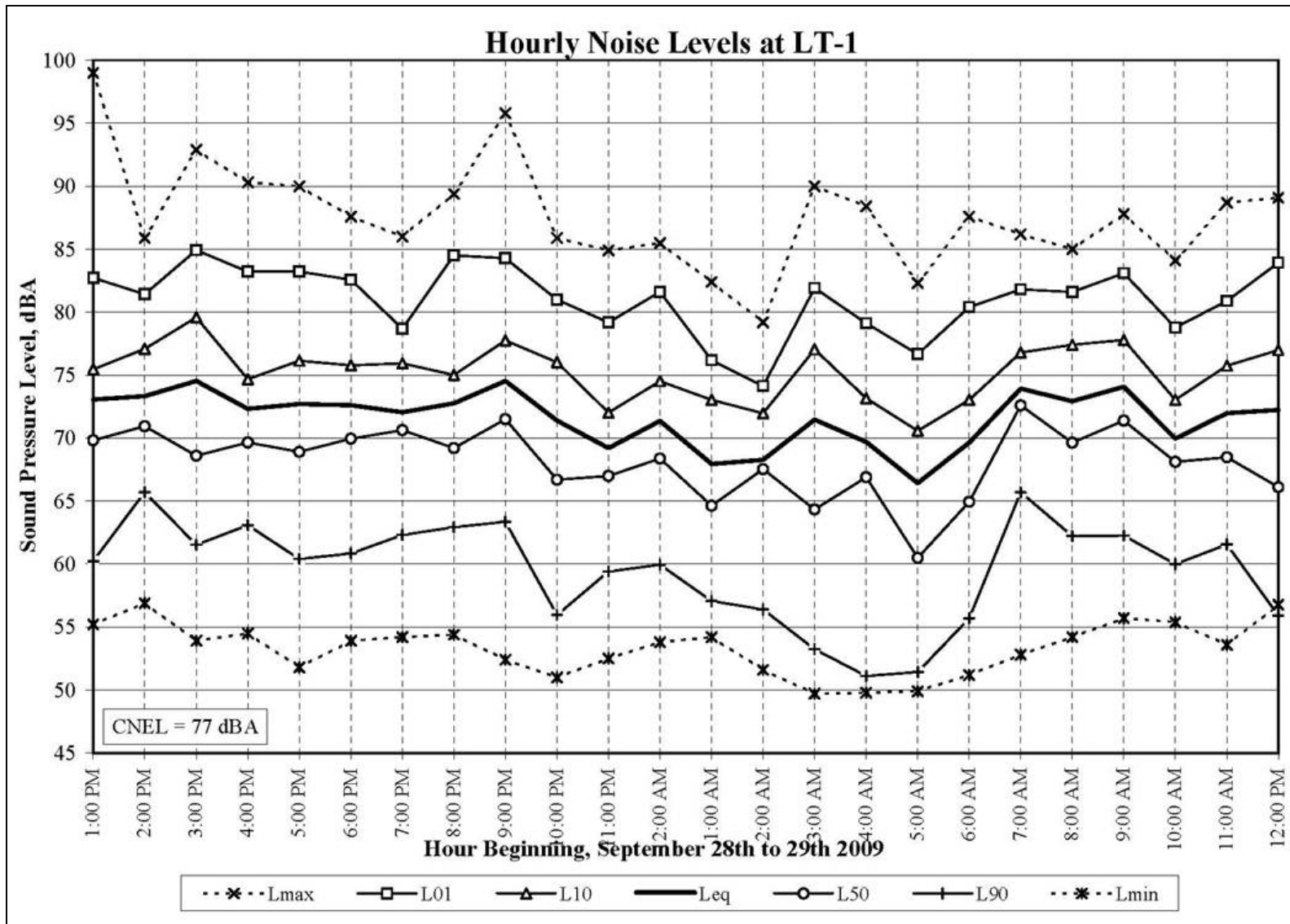
4 Noise monitoring surveys were conducted in March/April 2008 and September 2009 to
5 quantify existing ambient noise levels at representative locations near the Project area and
6 major transportation corridors serving the Project area. Noise levels were monitored
7 during the daytime, evening, and nighttime in consecutive hourly intervals at several
8 locations (long-term monitoring locations are denoted by “LT”, specifically, LT-1, LT-2,
9 L3, LT-4, and LT-5), which are indicated on Figure 3.11-1 and discussed below. The
10 results of the noise measurements are shown in Figures 3.11-2 through 3.11-6. The
11 figures provide the range of noise levels measured during each hour depicted by the
12 statistical descriptors L_{90} , L_{50} , L_{10} , and L_{01} , as well as the maximum noise level and the
13 energy average or equivalent sound level, $L_{eq(h)}$. Although not required, the statistical
14 noise levels (L_n) were obtained to provide further perspective on background noise levels.
15 The measured CNEL, the 24-hour (day/evening/night) average noise level, also is shown
16 in each figure.

17 Measurement LT-1 was made on a pylon at the end of a residential pier within the Island
18 Yacht Anchorage liveaboard community at an approximate distance of 30 yards to rail
19 cars on the adjacent railroad bridge and 60 yards to trucks passing on the adjacent
20 freeway bridge. This location is representative of the closest residences to the rail and
21 road bridges across the Cerritos Channel. The primary noise source at this location was
22 rail and truck traffic on the bridges crossing the Cerritos Channel. The hourly trends in
23 noise levels measured between 1:00 p.m. on Monday September 28, 2009 and 1:00 p.m.
24 on Tuesday September 29, 2009, including the energy equivalent noise level (L_{eq}), and
25 the noise levels exceeded 01, 10, 50 and 90 percent of the time (indicated as L_{01} , L_{10} , L_{50}
26 and L_{90}), are shown on Figure 3.11-2. The daytime and nighttime average (L_{eq}) noise
27 levels at this location ranged from 70 to 75 dBA and 66 to 72 dBA, respectively, with an
28 average daytime L_{eq} of 73 dBA and an average nighttime L_{eq} of 70 dBA. The CNEL at
29 this location was 77 dBA.

30 Measurement LT-2 was made on a pylon at the end of a residential pier E within the
31 Al Larson Marina liveaboard community, at an approximate distance of 900 ft to the
32 westernmost (closest) portion of the proposed Project site. This location is representative
33 of the closest Port-related residences to the proposed Project site. The primary noise
34 source at this location was local activities at the marina, and activities at the adjacent
35 Al Larson boat repair facility. Occasional Port-related activities were also audible at this
36 location. The hourly trends in noise levels measured between 2:00 p.m. on Monday
37 September 28, 2009 and 2:00 p.m. on Tuesday September 29, 2009, including the energy
38 equivalent noise level (L_{eq}) and the noise levels exceeded 01, 10, 50 and 90 percent of the
39 time (indicated as L_{01} , L_{10} , L_{50} and L_{90}), are shown on Figure 3.11-3. The daytime and
40 nighttime average (L_{eq}) noise levels at this location ranged from 54 to 61 dBA and 47 to
41 60 dBA, respectively, with an average daytime L_{eq} of 57 dBA and an average nighttime
42 L_{eq} of 54 dBA. The CNEL at this location was 62 dBA.

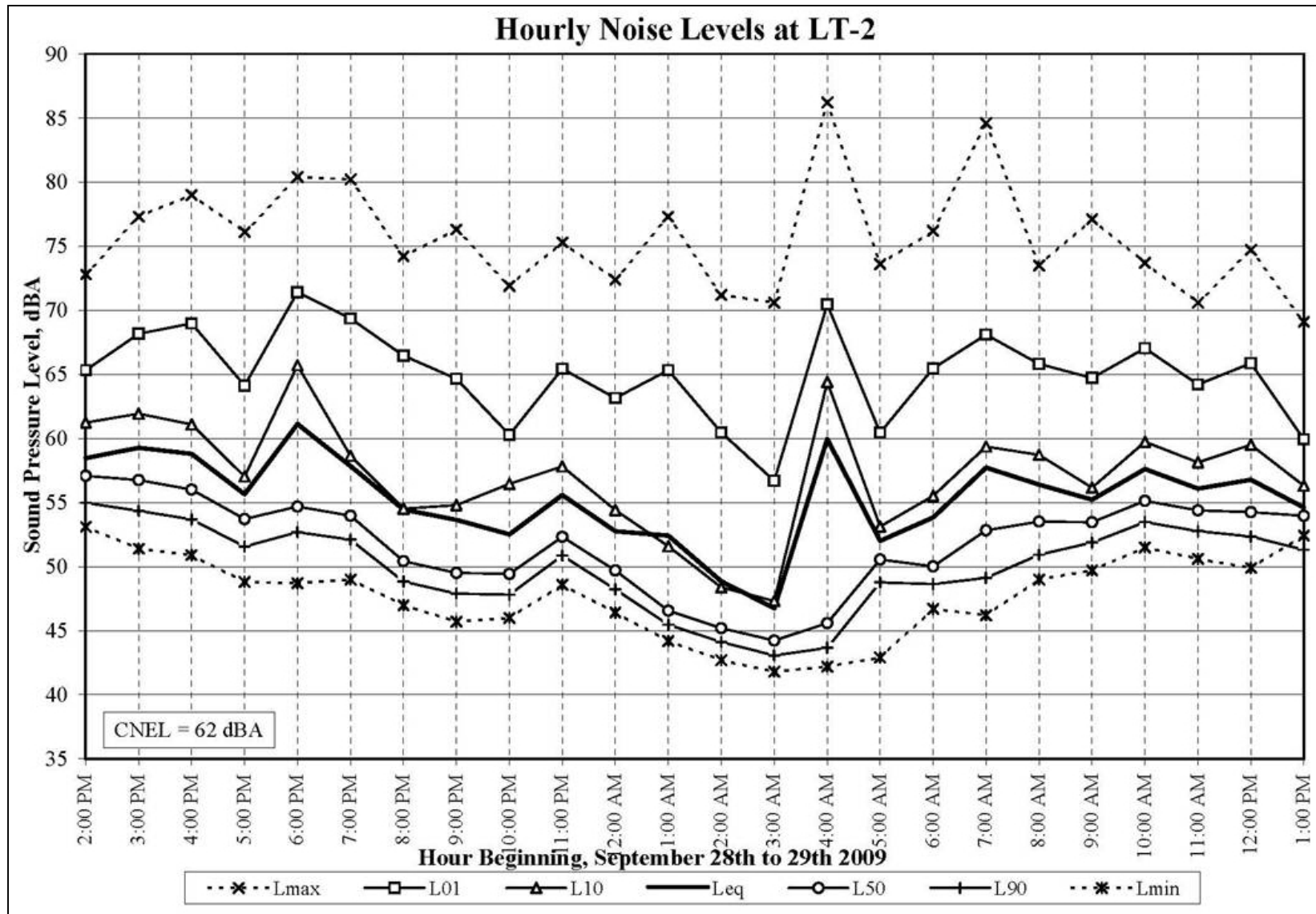
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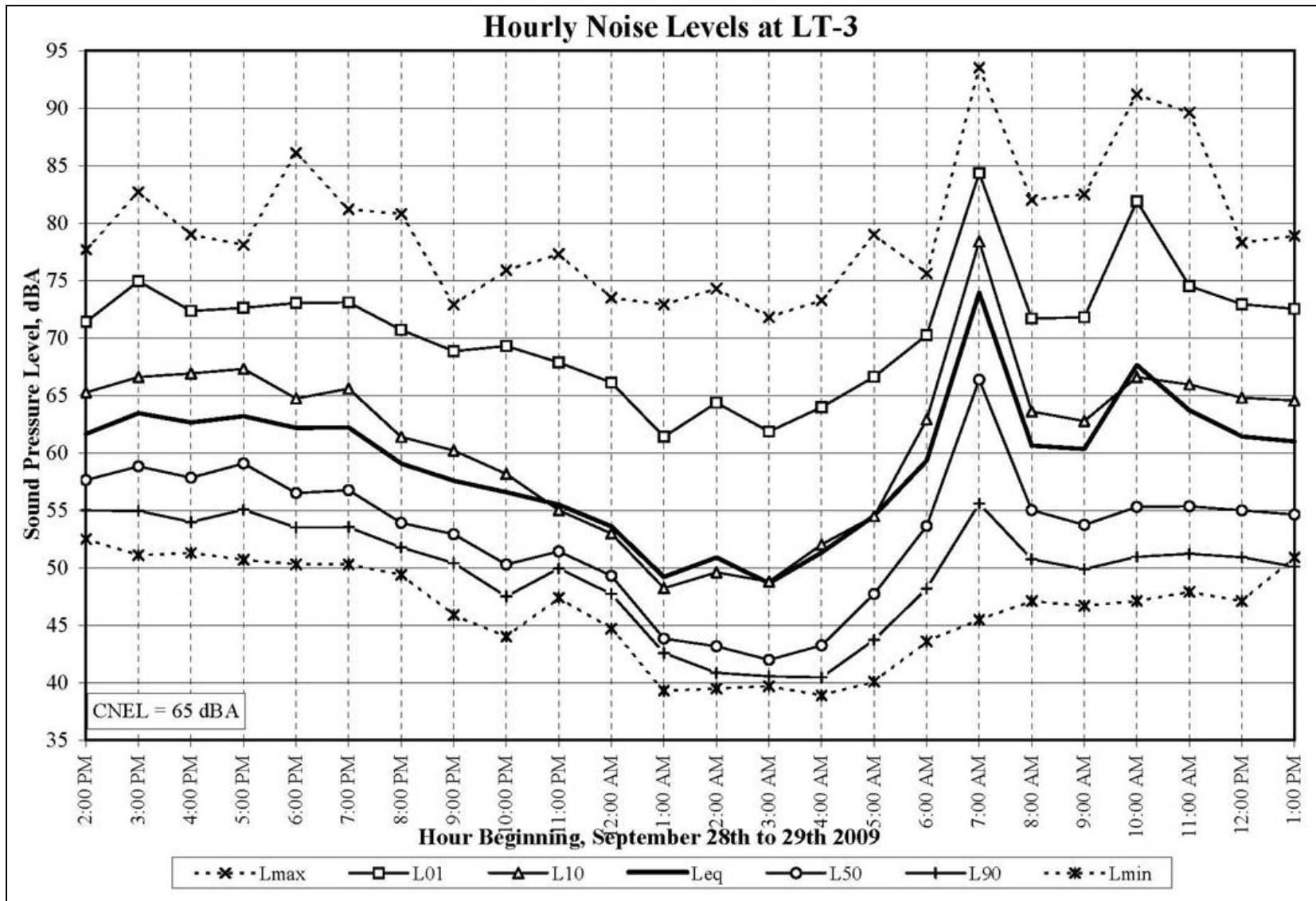


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Figure 3.11-2: Hourly Noise Levels at LT-1

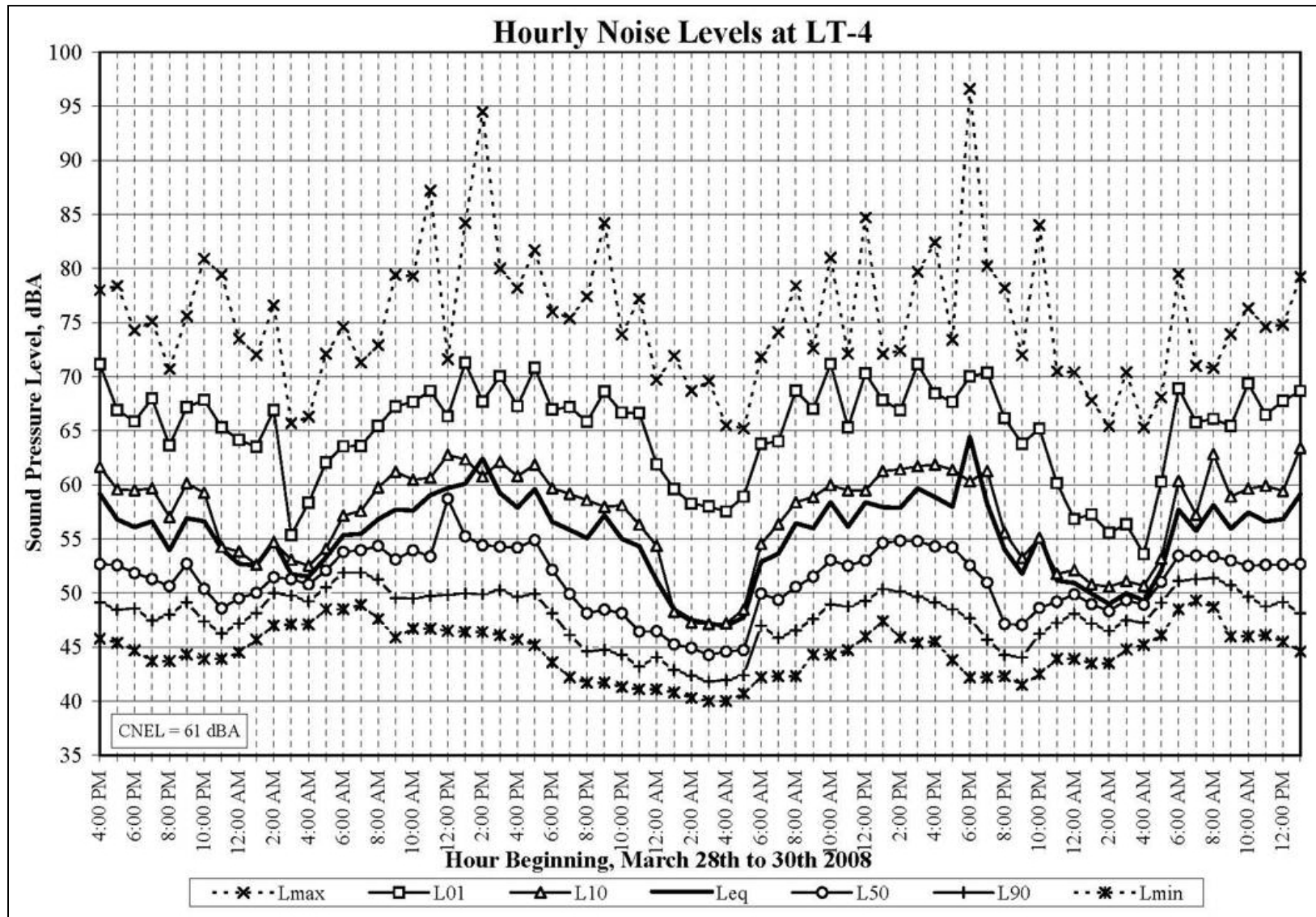


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2 **Figure 3.11-3: Hourly Noise Levels at LT-2**



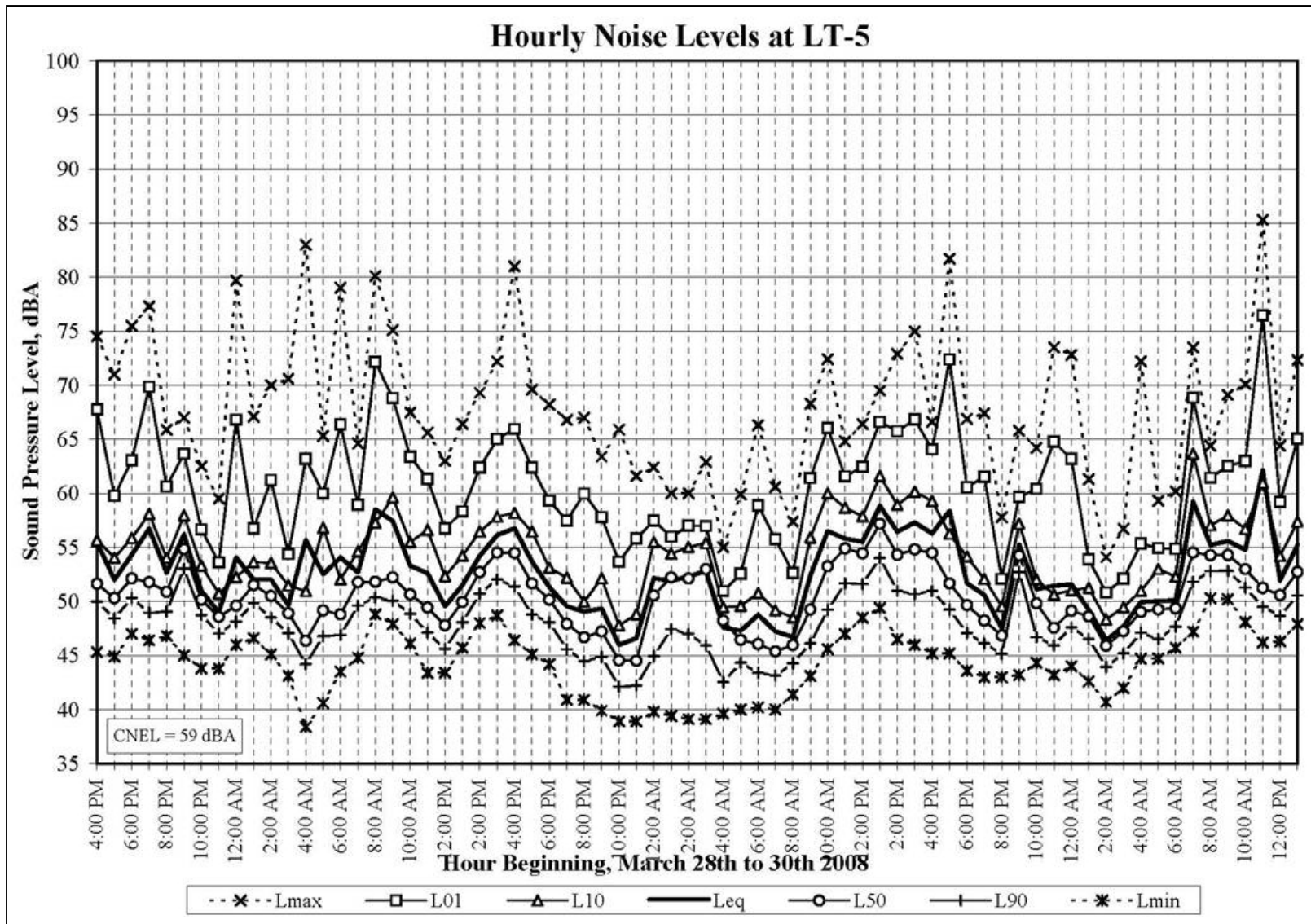
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Figure 3.11-4: Hourly Noise Levels at LT-3



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Figure 3.11-5: Hourly Noise Levels at LT-4



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Figure 3.11-6: Hourly Noise Levels at LT-5

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2 Measurement LT-3 was made on a light standard at the corner of South Beacon Street
3 and West 12th Street in the San Pedro residential district, at an approximate distance of
4 5,000 ft to the westernmost (closest) portion of the proposed Project site. This location is
5 representative of the closest residences within San Pedro to the proposed Project site. The
6 primary noise source at this location was local traffic on Beacon Street and more distant
7 traffic on Harbor Boulevard. Port-related noise was not distinctly audible at this location.
8 The hourly trends in noise levels measured between 2:00 p.m. on Monday
9 September 28, 2009 and 2:00 p.m. on Tuesday September 29, 2009, including the energy
10 equivalent noise level (L_{eq}) and the noise levels exceeded 01, 10, 50 and 90 percent of the
11 time (indicated as L_{01} , L_{10} , L_{50} and L_{90}), are shown on Figure 3.11-4. The daytime and
12 nighttime average (L_{eq}) noise levels at this location ranged from 58 to 74 dBA and 49 to
13 59 dBA, respectively with an average daytime L_{eq} of 65 dBA and an average nighttime
14 L_{eq} of 55 dBA. The CNEL at this location was 65 dBA.

15 Measurement LT-4 was located at the intersection of Oliver Vickery Circle Way and
16 Stephen M. White Drive, approximately 23 ft from the centerline of Stephen M. White
17 Drive. This location is representative of the noise environment at residences in the
18 Cabrillo Beach area. The primary noise source at this location was local traffic.
19 Port-related noise was not distinctly audible at this location. The hourly trends in noise
20 levels measured between 4:00 p.m. on Friday March 28, 2008, and 2:00 p.m. on Monday
21 March 31, 2008, including the energy equivalent noise level (L_{eq}) and the noise levels
22 exceeded 01, 10, 50 and 90 percent of the time (indicated as L_{01} , L_{10} , L_{50} and L_{90}), are
23 shown on Figure 3.11-5. Typical hourly average daytime noise levels ranged from 52 to
24 64 dBA L_{eq} and nighttime noise levels typically ranged from 47 to 58 dBA L_{eq} . The
25 calculated CNEL for the entire measurement period was 61 dBA, with the CNEL over
26 the weekend days at 60 to 61 dBA, and the calculated CNEL for an equivalent weekday
27 period of 61 dBA.

28 Measurement LT-5 was located at the Federal housing facility on Reservation Point,
29 approximately 60 ft from the nearest residence. The primary noise sources at this
30 location were local facility and Port-related activities. The hourly trends in noise levels
31 measured between 4:00 p.m. on Friday March 28, 2008 and 2:00 p.m. on Monday March
32 31, 2008, including the energy equivalent noise level (L_{eq}) and the noise levels exceeded
33 01, 10, 50 and 90 percent of the time (indicated as L_{01} , L_{10} , L_{50} and L_{90}), are shown on
34 Figure 3.11-6. Typical hourly average daytime noise levels ranged from 47 to 62 dBA L_{eq}
35 and nighttime noise levels typically ranged from 46 to 56 dBA L_{eq} . The calculated CNEL
36 for the entire measurement period was 59 dBA, with the CNEL over the weekend days
37 and calculated for an equivalent weekday period also at 59 dBA.

38 Short-term (ST) noise measurements were made at representative locations (depicted as
39 Sites ST-1 through ST-8 in Figure 3.11-1). The results of the short-term noise level
40 measurements are summarized in Table 3.11-3.

41 Site ST-1 was at the Anchorage Road Frontage of the Island Yacht Anchorage liveboard
42 community at an approximate distance of 35 yards to rail cars on the adjacent railroad
43 bridge and 65 yards to trucks passing on the adjacent freeway bridge. Truck traffic on the
44 Terminal Island Freeway Bridge and rail traffic on the rail bridge was the dominant noise
45 source at this location, typically producing levels between 65 and 68 dBA.

1 Site ST-2 was at the Terminal Island Memorial south of the Al Larson Boat Dock near
2 Firehouse 111 and approximately 1,100 ft west of the westernmost portion of the
3 proposed Project site. The primary noise source at this location was local traffic on
4 Seaside Avenue at between 58 to 64 dBA. Other measurable noise sources at this
5 location were activities at the adjacent firehouse at between 52 to 55 dBA, bird and sea
6 lion sounds at between 52 to 54 dBA, and a passing tugboat at between 51 to 52 dBA.
7 Though unloading activities at both Piers 300 and 400 were observed during the
8 measurement period, these activities were not audible or measurable over other area
9 ambient noise.

10 Site ST-3 was at the linear park along South Harbor Boulevard, 150 ft from the centerline
11 of the roadway and approximately 1,700 ft from the mid-point of the closer of two cargo
12 ships that was being unloaded by two gantry cranes at the Evergreen Terminal on the
13 opposite side of the Main Channel from the measurement position. Measurements at this
14 position were made on an intermittent basis between auto traffic on South Harbor
15 Boulevard over a 20-minute period. Constant crane operation produced noise levels of
16 between 55 and 56 dBA at the measurement location, with noise produced by typical
17 setting of containers at levels of up to 57 dBA, and banging of containers during
18 movements and setting typically between 58 and 60, with one event reaching 64 dBA.
19 During the measurement period a tugboat also passed through the channel producing a
20 level of 58 dBA; ground based, truck loading, cranes produced sound levels between 58
21 and 59 dBA; and back up beepers were audible, but not measurable over ambient
22 conditions.

23 Site ST-4 was at the northeast corner of the Firehouse 112 wharf, approximately 500 ft
24 from the centerline of South Harbor Boulevard, and 1,600 ft from the mid-point of the
25 closest of two cargo ships that was being unloaded by two gantry cranes at the Evergreen
26 Terminal and 335 yards from ground based containers on the opposite side of the main
27 channel. Roadway traffic noise was not a significant noise source at this measurement
28 position. The operation of crane engines produced noise levels of between 56 and
29 57 dBA at the measurement location, with gear noise occasionally to 57 to 58 dBA, and
30 banging of containers during movements and setting typically between 57 and 64. A ship
31 horn was also heard, producing a level of 57 to 58 dBA. Truck movements at the opposite
32 shore of the channels and the banging of ground-based containers were audible at this
33 position producing sound levels of between 56 and 60 dBA. During the measurement
34 period a tugboat and another small craft also passed through the channel producing levels
35 of between 56 to 57 dBA.

36 Site ST-5 was at the northeast corner of the police training area north of Firehouse 112,
37 approximately 700 ft from the centerline of South Harbor Boulevard, and 1,200 ft from
38 the mid-point of the closest of two cargo ships that was being unloaded by two gantry
39 cranes at the Evergreen Terminal. Roadway traffic noise was not a significant noise
40 source at this measurement position; however, a siren on Harbor Boulevard did produce a
41 level of 63 dBA. The operation of crane engines produced noise levels of between
42 56 and 57 dBA at the measurement location, with the occasional banging of containers
43 during movements and setting typically between 58 and 59, with loud bangs up to
44 65 dBA at times. Truck accelerations and air brakes on the opposite shore of the channel
45 were also audible, producing sound levels of between 57 and 59 dBA. During the
46 measurement period a tugboat passed through the channel producing levels of between
47 58 to 59 dBA.

1 Site ST-6 was made at the corner of East Young Street and East Grant Street in the
 2 neighborhood opposite the railroad from the intersection of Alameda Street and Henry
 3 Ford Avenue. The measurement position was approximately 90 ft from center of the rail
 4 line heading northeast, approximately 115 ft from center of rail line crossing the
 5 roadways, 135 ft from the centerline of Alameda Street, and 185 ft from the centerline of
 6 Henry Ford Avenue. Truck and rail traffic were the dominant noise sources at this
 7 location, with trucks producing average noise levels between 64 to 65 dBA and
 8 maximum noise levels between 67 to 69 dBA, and train engines producing noise levels of
 9 between 65 to 66 dBA and train horns reaching maximum levels of 73 to 78 dBA.

10 Site ST-7 was located in front of 3807 Stephen M. White Drive, approximately 30 ft to
 11 the center of the roadway. Local traffic and small aircraft were the predominant sources
 12 of noise during the survey. Port-related noise was not audible at this location.

13 Site ST-8 was located adjacent to LT-5, at the southeast end of Reservation Point,
 14 approximately 60 ft from the nearest residence. Aircraft and wind were the predominant
 15 sources of noise during the survey. Port-related noise was not a major source of noise at
 16 this location.

Table 3.11-3: Short-Term Noise Monitoring Results

Site	Location, (Date, Time)	Noise Level, dBA					Noise Sources
		L ₀₁	L ₁₀	L _{eq}	L ₅₀	L ₉₀	
ST-1	Anchorage Road Frontage of the Island Yacht Anchorage. (9/28/09,12:25-12:35)	76	68	66	65	60	Railroad and truck traffic over the Cerritos channel bridges.
ST-2	Terminal Island Memorial (9/28/09,16:35-16:45)	63	58	55	53	52	Local traffic, firehouse, bird & sea lion activities
ST-3	South Harbor Blvd Linear Park (9/29/09,9:07-9:30)	61	59	58	57	56	Local traffic and ship unloading
ST-4	Firehouse 112 wharf (9/29/09,9:38-9:50)	61	58	57	56	54	Ship unloading and other port activities
ST-5	Police training area north of Firehouse 112 (9/29/09,10:03-10:11)	63	60	58	57	56	Ship unloading and other port activities
ST-6	Corner of East Young & East Grant Streets (9/29/09, 11:10-11:22)	72	69	65	62	59	Truck and rail traffic
ST-7	30 ft from the center of Stephen M. White Drive. (3/28/08, 15:30-15:45)	62	54	54	49	47	Local traffic and aircraft
ST-8	Southeast end of Reservation Point. (3/28/08, 16:45-17:00)	67	54	54	51	50	Aircraft and wind

Source: Illingworth & Rodkin, Inc., 2009

3.11.3 Applicable Regulations

The *LA CEQA Thresholds Guide* (City of Los Angeles, 2006) includes the following checklist questions regarding environmental noise impacts:

- a. Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- b. Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?
- c. Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
- d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above the existing without the project?
- e. For a project located within an airport land use plan, or where such a plan has not been adopted within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?
- f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Significance criteria are established to address questions a, c, and d for potential noise impacts during each of the two stages of construction and operation proposed for the proposed Project and alternatives. Question b would not apply because groundborne noise and vibrations attenuate through the change in ground motility when passing under water covered areas (i.e. the channels at the Port), and because there are no sensitive receptors on the proposed Project side of water filled channels. Questions e and f are not applicable to this assessment. Background information is presented in the following paragraphs regarding applicable or related regulations adopted by the City of Los Angeles or other agencies.

3.11.3.1 City of Los Angeles Municipal Code

Section 41.40 of the City of Los Angeles Municipal Code establishes when construction work is prohibited. The Municipal Code section states the following:

- (a) No person shall between the hours of 9:00 p.m. and 7:00 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.*

1 The code section also provides certain provisions for exceptions and exemptions.

2 Chapter 11 of the Municipal Code sets forth noise regulations, including regulations
3 applicable to construction noise impacts. Section 112.05 establishes maximum noise
4 levels for powered equipment or powered hand tools. This section states:

5 *Between the hours of 7:00 a.m. and 10:00 p.m. in any residential zone of*
6 *the City or within 500 ft thereof, no person shall operate or cause to be*
7 *operated any powered equipment or powered hand tool that produces a*
8 *maximum noise level exceeding the following noise limits at a distance of*
9 *50 ft there from (a) 75 dBA for construction, industrial and agricultural*
10 *machinery including crawler tractors, dozers, rotary drills and augers,*
11 *loaders, power shovels, cranes, derricks, motor graders, paving*
12 *machines, off-highway trucks, ditchers, trenchers, compactors, scrapers,*
13 *wagons, pavement breakers, depressors, and pneumatic or other*
14 *powered equipment; (b) 75 dBA for powered equipment of*
15 *20 horsepower or less intended for infrequent use in residential areas*
16 *including chain saws, log chippers, and powered hand tools; and*
17 *(c) 65 dBA for powered equipment intended for repetitive use in*
18 *residential areas including lawn mowers, backpack mowers, small lawn*
19 *and garden tools, and riding tractors.*

20 *The noise limits for particular equipment listed above in (a), (b) and*
21 *(c) shall be deemed to be superseded and replaced by noise limits for such*
22 *equipment from and after their establishment by final regulations adopted*
23 *by the Federal Environmental Protection Agency and published in the*
24 *Federal Register.*

25 *Said noise limitations shall not apply where compliance therewith is*
26 *technically infeasible. The burden of proving that compliance is*
27 *technically infeasible shall be upon the person or persons charged with a*
28 *violation of this section. Technical infeasibility shall mean that said noise*
29 *limitations cannot be complied with despite the use of mufflers, shields,*
30 *sound barriers, and/or other noise reduction device and techniques during*
31 *the operation of the equipment.*

32 Section 112.04 of the Municipal Code addresses the “powered equipment intended for
33 repetitive use in residential areas and other machinery, equipment, and devices.” That
34 section establishes criteria for stationary noise source intrusion on neighboring lands.
35 The applicable standard threshold under this section is a 5 dBA increase at any sensitive
36 property.

37

3.11.4 Impacts and Mitigation Measures

3.11.4.1 Methodology

3.11.4.1.1 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. For purposes of this Draft EIS/EIR, the CEQA baseline for determining the significance of potential Project impacts is the environmental set of conditions that prevailed at the time the NOP was published for the proposed Project - July 2009. The CEQA baseline takes into account the throughput for the 12-month period preceding July 2009 (July 2008 through the end of June 2009) in order to provide a representative characterization of activity levels throughout the year. The CEQA baseline conditions are described in Section 2.6.1. The CEQA baseline for this proposed Project includes approximately 1.13 million TEUs per year, 998,728 annual truck trips, and 247 annual ship calls that occurred on the 291-acre APL Terminal in the year prior to and including June 2009.

The CEQA baseline represents the setting at a fixed point in time and differs from the No Project Alternative (Alternative 1) 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.

3.11.4.1.2 NEPA Baseline

For purposes of this Draft EIS/EIR, the evaluation of significance under NEPA is defined by comparing the proposed Project or other alternative to the NEPA baseline. The NEPA baseline conditions are described in Section 2.6.2. Briefly, 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 USACE permit. The NEPA baseline includes minor terminal improvements in the upland area (i.e., conversion of a portion of the dry container storage unit area to reefers and utility infrastructure), operation of the 291-acre container terminal, and assumes that by 2027, the terminal (Berths 302 to 305) handles up to approximately 2.15 million TEUs annually and accommodates 286 annual ships calls and 2,336 on-way rail trips, without any federal action. Because the NEPA baseline is dynamic, it includes different levels of terminal operations at each study year (2012, 2015, 2020, 2025, and 2027).

Unlike the CEQA baseline, which is defined by conditions at a point in time, the NEPA baseline is not bound by statute to a “flat” or “no-growth” scenario. Therefore, the USACE could project increases in operations over the life of a project to properly describe the NEPA baseline condition. Normally, any federal permit decision would 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 alternative

1 under NEPA is defined by comparing the proposed Project or alternative to the NEPA
2 baseline (i.e., the increment).

3 The NEPA baseline, for purposes of this Draft EIS/EIR, is the same as the No Federal
4 Action Alternative. Under the No Federal Action Alternative, only minor terminal
5 improvements (utility infrastructure, and conversion of dry container storage to
6 refrigerated container storage) would occur, but no new cranes would be added, and the
7 terminal configuration would remain as it was configured in 2008 (291 acres, 12 A-frame
8 cranes, and a 4,000-ft wharf). However, forecasted increases in cargo throughput and
9 annual ship calls would still occur as container growth occurs.

10 **3.11.4.2 Thresholds of Significance**

11 The *L.A. CEQA Thresholds Guide* (City of Los Angeles, 2006) contains the following
12 significance thresholds related to construction noise. These thresholds were used for
13 evaluating potential impacts under CEQA and NEPA. Quantification of ambient noise
14 levels (existing and projected at the time of construction) is measured in CNEL.

15 A project or alternative would normally have a significant impact on noise levels from
16 construction during the *daytime* if:

17 **NOI-1** Construction activities lasting more than 1 day would exceed existing ambient
18 exterior noise levels by 10 dBA or more at a noise-sensitive use; or if
19 construction activities lasting more than 10 days in a 3-month period would
20 exceed existing ambient exterior noise levels by 5 dBA or more at a
21 noise-sensitive use.

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

24 **NOI-2** Construction activities would exceed the ambient noise level by 5 dBA at a
25 noise-sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday
26 through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time
27 on Sunday.

28 The *L.A. CEQA Thresholds Guide* (City of Los Angeles, 2006) contains the following
29 significance thresholds for operational noise impacts due to stationary sources, vehicular
30 traffic, or increased railroad operations.

31 **NOI-3** A project or alternative would normally have a significant impact on noise
32 levels from project operations if the project causes the ambient noise level
33 measured at the property line of affected uses to increase by 3 dBA in CNEL to
34 or within the 'normally unacceptable' or 'clearly unacceptable category,' or
35 any 5 dBA or greater noise increase.

36 Table 3.11-4 presents the land use noise compatibility guidelines.

37 Sensitive receivers in the Port area that could potentially be affected by operational noise
38 from the proposed Project or alternative include various residential uses. At these land
39 uses, a significant impact would occur if the proposed Project or alternative causes CNEL
40 noise levels to increase by (1) 5 dBA or greater where the existing CNEL is less than
41 70 dBA; or (2) 3 dBA or greater where the existing CNEL exceeds 70 dBA.

Table 3.11-4: 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

Source: City of Los Angeles, 1998

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

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

Normally Unacceptable: New construction or development 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.

1 3.11.4.3 Impact Determination

2 3.11.4.3.1 Proposed Project

3 Impact NOI-1: Construction activities lasting more than 10 days in a 4 3-month period would exceed existing ambient exterior noise levels 5 by 5 dBA or more at a noise-sensitive use.

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

13 Table 3.11-5 shows the noise levels for a variety of construction equipment at a reference
14 distance of 50 ft. These reference sound levels are representative of the noise levels that
15 would occur during the noisiest construction activities. Should automated backlands be
16 established, the level of construction activity to complete those improvements would be
17 less intense (i.e, would not involve pile driving or occur concurrently with other on-site
18 construction activities) as compared to the construction levels discussed in the impact
19 analysis for the proposed Project, and thus would not represent the noisiest construction
20 activity.

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

Table 3.11-5: Construction Equipment Noise Emission Levels

<i>Equipment Type</i>	<i>Typical Noise Level (dB(A)) 50 ft from Source</i>
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
Jack Hammer	88
Loader	85
Paver	89
Pile-driver (Impact)	107*
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: USDOT and FTA, May 2006

* POLA, November 2008

1 Construction activities are expected to last more than 10 days in any 3-month period for
 2 all proposed Project components. Following the thresholds of significance, an impact
 3 would be considered significant under CEQA and NEPA if noise from these activities
 4 would cause the existing ambient exterior noise levels to increase by 5 dBA or more at a
 5 sensitive receptor.

6 During peak construction, construction worker based vehicle trips are expected to
 7 represent a small fraction (1 to 10 percent) of the AM and PM peak hour traffic volumes
 8 in the Project area. This small fraction of vehicles compared to the overall traffic in the
 9 Project area would not result in a noticeable increase in noise levels (a doubling of traffic
 10 would be required for a minimally audible 3 dBA increase in noise to occur). Therefore,
 11 traffic generated from construction worker trips would be considered a less than
 12 significant impact.

To assess construction noise exposure at noise sensitive locations, a composite of the noise level data for construction equipment presented in Table 3.11-5 was used to develop resulting noise levels at identified noise-sensitive receptors, taking into consideration the effects of distance attenuation. For general construction equipment, a combined level of 91 dBA at 50 ft was used as the source noise level. For assessing pile driving, a noise level of 107 dBA at 50 ft was used based on the large size of piles typically used for wharf construction. Distances from construction locations to sensitive receptors were measured on a map of the area and those distances were input to the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) as the basis for calculating noise attenuation with distance (FHWA, 2008). This model provides for multiple noise sources, as well as shielding by natural or man-made obstacles that would reduce sound levels over distance. However, no shielding was assumed, even though there are obstacles of various types (buildings, other structures, tanks, etc.) between some source locations and some receptors.

Using the FHWA noise model, which calculates an Leq based on reference noise levels, all five identified noise sensitive areas in the Project vicinity were assessed for exposure to construction noise. These areas and the resultant Leq are summarized in Table 3.11-6 below.

Table 3.11-6: Summary of Construction Noise Impacts

Noise Sensitive (residential) Area	Assoc. Meas. Location	Existing daytime Leq (dBA)	Construction Noise at location		Total (Ambient + Gen. Constr.)	Total (Ambient + Impact) ¹	Construction Noise plus ambient increase over Existing	
			Gen. Const. 91 dBA*	Pile Driver 107 dBA*			Gen. Const.	Impact
Cerritos Channel	LT-1	73	40	54	73	73	0	0
Fish Harbor	LT-2	57	59	59	61	61	4	4
San Pedro	LT-3	65	46	55	65	65	0	0
Cabrillo Beach	LT-4	58	40	52	58	59	0	1
Reservation Point	LT-5	55	50	58	56	60	1	5

Notes: * the reference noise level of 91 dBA or 107 dBA at 50 ft from the source.

¹ Total Ambient + Impact is the ambient noise condition plus the pile driving (i.e. impact) noise at the given receptor location.

CEQA Impact Determination

As shown in Table 3.11-6, general construction noise would not increase the existing ambient noise levels at any identified noise receptor in the proposed Project area by 5 dBA or more; however, noise produced by pile driving during wharf construction would increase average ambient noise levels at Reservation Point by 5 dBA over existing levels. These impacts would be temporary, but significant under CEQA.

Mitigation Measures

MM NOI-1: Noise Reduction during Pile Driving. The contractor shall be required to use a pile driving system, such as a Bruce hammer (with silencing kit), an IHC Hydrohammer SC series (with sound insulation system), or equivalent silenced hammer, which is capable of limiting maximum noise levels at 50 ft from the pile driver to 104 dBA, or less, for wharf construction. With implementation of standard condition of approval **SC BIO-1**, the pile driving would initiate with a soft start, in which the hammer is operated at a reduced energy, followed by a

1 waiting period. The soft start technique would induce marine
2 mammals and birds to leave the immediate area before pile hammer
3 reaches full energy. Refer to Section 3.3, Biological Resources, for
4 information on soft start of pile driving activities.

5 **MM NOI-2: Erect Temporary Noise Attenuation Barriers Adjacent to Pile**
6 **Driving Equipment, Where Necessary and Feasible.** Erect
7 temporary noise attenuation barriers suitable for pile driving equipment
8 as needed. The barriers should be installed directly between the
9 equipment and the nearest noise sensitive use to the construction site.
10 The need for and feasibility of noise attenuation barriers should be
11 evaluated on a case-by-case basis considering the distance to noise
12 sensitive receptors, the available space at the construction location, and
13 taking account of safety and operational considerations.

14 *Residual Impacts*

15 Impacts would be less than significant.

16 **NEPA Impact Determination**

17 As shown in Table 3.11-6, general construction noise would not increase the existing
18 ambient noise levels at any identified receptor in the proposed Project area by 5 dBA or
19 more; however, noise produced by pile driving during wharf construction would increase
20 average ambient noise levels at Reservation Point by 5 dBA over existing levels. These
21 impacts would be temporary in nature, but considered significant under NEPA.

22 *Mitigation Measures*

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

24 *Residual Impacts*

25 Impacts would be less than significant.

26 **Impact NOI-2: Noise levels from construction activities would not**
27 **exceed the ambient noise level by 5 dBA at a noise-sensitive use**
28 **between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday,**
29 **before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on**
30 **Sunday.**

31 With the exception of dredging along Berth 306, the proposed Project would follow
32 construction hours in accordance with the City of Los Angeles Noise Ordinance.
33 Berth 306 is located over one mile from the nearest sensitive receptor (liveaboards at the
34 Al Larson Marina in Fish Harbor and Reservation Point), and accordingly, no
35 construction activities within 500 ft of a residential zone would occur between the hours
36 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
37 Saturday, or at any time on Sunday. Night construction during dredging of Berth 306
38 would result in average noise levels which exceed the ambient levels at the Fish Harbor
39 liveaboards or Reservation Point; however, the increases would be less than 2 dBA, and
40 thus would not exceed the significance criteria at these locations.

CEQA Impact Determination

There would be no construction-related noise impacts during prohibited nighttime hours. As a result, there would be no significant impact related to Impact NOI-2 under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

With the exception of dredging along Berth 306, the proposed Project would follow construction hours in accordance with the City of Los Angeles Noise Ordinance. Berth 306 is located over one mile from the nearest sensitive receptor (liveaboards at the Al Larson Marina in Fish Harbor and Reservation Point), and accordingly, no construction activities would occur within 500 ft of a residential zone 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. Night construction during dredging of Berth 306 would result in average noise levels which exceed the ambient levels at the Fish Harbor liveaboards or Reservation Point; however, the increases would be less than 2 dBA, and thus would not exceed the significance criteria at these locations. As a result, construction noise impacts under the proposed Project would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact NOI-3: Operations would not generate noise levels that exceed existing ambient noise levels at sensitive receivers by 3 dBA in CNEL to or within the ‘normally unacceptable’ or ‘clearly unacceptable category,’ or otherwise by 5 dBA or greater.

CEQA Impact Determination

On-site terminal and dock operational noise sources associated with the proposed Project would include the intermittent sounds of operations, such as gantry cranes offloading and loading containers, rail and truck movements, and ongoing Port-related maintenance activities at the expanded Power Shop facility. ST-5 measured noise during the unloading of cargo ships by gantry cranes along with truck movements on the existing Evergreen Terminal at a distance of 1,200 ft from the terminal activities, and is considered to be representative of operating noise for the proposed Project operations. With the exception of the proposed backland “meet and greet” facility at Berth 301 (which is not expected to constitute a significant source of noise), all proposed Project-related operational activities would be more than 1,200 ft from the closest noise sensitive receptors (i.e., LT-2: liveaboards at Fish Harbor) and are expected to produce noise levels less than those documented at measurement site ST-5, with noise levels from Project operation, occasionally reaching to low to mid-50 dBA

1 range at the closest receptors. This level of noise would increase noise levels at these
 2 adjacent noise sensitive uses by less than 3 dBA, and would not result in a significant impact
 3 at any adjacent noise sensitive uses (see Table 3.11-7). Should it occur, operational noise
 4 associated with automated operations on the backlands is anticipated to be similar or less than
 5 would occur under traditional operations and thus would not result in a significant impact
 6 under CEQA.

Table 3.11-7: Summary of Operational Noise Impacts

Noise Sensitive (residential) Area	Assoc. Meas. Location	Existing daytime Leq (dBA)	Average Operational Noise at Location		Average Ambient plus Operations	Noise plus ambient increase over existing
			Ship loading/unloading: 59 dBA ¹	Truck operations: 58 dBA ¹		
Cerritos Channel	LT-1	73	39 dBA	38 dBA	73 dBA	0 dBA
Fish Harbor	LT-2	57	55 dBA	55 dBA	59 dBA	2 dBA
San Pedro	LT-3	65	45 dBA	44 dBA	65 dBA	0 dBA
Cabrillo Beach	LT-4	58	40 dBA	39 dBA	58 dBA	0 dBA
Reservation Point	LT-5	55	51 dBA	50 dBA	56 dBA	1 dBA

Note: 1. Noise levels are referenced to 1200 ft from the center of the operational source and are based on measurements made at Location ST-5.

7 Proposed Project implementation would result in increased container shipments to and
 8 from the Port via area rail and roadway corridors, along with increased workforce
 9 automobile traffic on area roadways. The proposed Project would result in
 10 3,003,157 annual one-way truck trips and 2,953 annual rail trips (829 off dock and
 11 2,125 on-dock rail trips) by 2027. All on-dock rail trips leave the proposed Project site
 12 (on Terminal Island) over the Henry Ford Bridge (also known as the Badger Avenue
 13 Bridge). Based on this, and considering that the percentage proposed Project-generated
 14 on-dock rail traffic would lessen as the rail network spreads out from the Port, the Island
 15 Yacht Anchorage liveaboards in the Cerritos Channel have been identified as the noise
 16 sensitive use with the greatest potential to be impacted by increases in Project-generated
 17 rail noise. The increase in proposed Project only on-dock rail trips over the CEQA
 18 baseline for the Project would result in a 2 dBA increase in the CNEL at the Island Yacht
 19 Anchorage liveaboards in the Cerritos Channel from the baseline level of 77 dBA CNEL
 20 to a CNEL of 79 dBA by 2027. Therefore, rail trips generated by terminal operations
 21 under the proposed Project would not result in a significant noise impact under CEQA.

22 A review and comparison of automobile and truck traffic data for area roadways under
 23 existing 2008 conditions (CEQA baseline) and CEQA Baseline conditions plus proposed
 24 Project conditions for years 2015, 2020, 2025 and 2027 indicates that the proposed
 25 Project-related increases in automobile or truck traffic on area roadways (in each of these
 26 years) over the existing 2008 conditions would result in noise levels at adjacent noise
 27 sensitive uses of less than 3 dBA, and would not result in a significant impact at any
 28 adjacent noise sensitive uses under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Roadway noise from an increase in automobile and truck traffic under future proposed Project conditions would be the same as described under the CEQA Impact Determination. However, the NEPA baseline noise levels generally would be higher than the CEQA baseline noise levels as shown in Table 3.11-7 because the NEPA baseline allows for terminal operational growth and completion of improvements not requiring a USACE permit. Therefore, the traffic levels resulting from Project-related terminal activities would increase noise levels at the adjacent noise sensitive uses by less than 3 dBA (relative to the NEPA baseline), and would not result in a significant impact at any adjacent noise sensitive uses under NEPA.

Proposed Project implementation would result in increased container shipments 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 proposed 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 proposed 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 use with the greatest potential to be impacted by increases in proposed Project-generated rail noise. The increase in proposed Project only on-dock rail traffic train trips over the NEPA baseline would result in a 1 dBA increase in the CNEL at the Island Yacht Anchorage liveaboards in the Cerritos Channel, from a level of 78 dBA CNEL under the 2027 NEPA baseline to a level of 79 dBA CNEL for proposed Project conditions in 2027. Therefore, rail trips generated by terminal operations under the proposed Project would not result in a significant noise impact under NEPA.

A review and comparison of automobile and truck traffic data for area roadways with the proposed Project and NEPA baseline conditions indicates that proposed Project-related increases in automobile or truck traffic on area roadways would increase noise levels at adjacent noise sensitive uses by 2 dBA or less, and would therefore, not result in a significant impact at any adjacent noise sensitive uses under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.11.4.3.1.1 Alternatives

3.11.4.3.1.2 Alternative 1 – No Project

Under Alternative 1, no further Port action or federal action would occur. The Port would not construct and develop additional backlands, wharves, or terminal improvements. No new cranes would be added, no gate or backland improvements would occur, and no infrastructure for AMP at Berth 306 or automation in the backland area adjacent to Berth 306 would be provided. This alternative would not include any dredging, new wharf construction, or new cranes. The No Project Alternative would not include development of any additional backlands because the existing terminal is berth-constrained and additional backlands would not improve its efficiency.

1 Under the No Project Alternative, the existing APL Terminal would continue to operate
2 as an approximately 291-acre container terminal. Based on the throughput projections,
3 terminal operations are expected to grow over time as throughput demands increase.
4 Under Alternative 1, the existing APL Terminal would handle approximately 2.15
5 million TEUs by 2027, which would result in 286 annual ship calls at Berths 302-305. In
6 addition, this alternative would result in up to 7,273 peak daily one-way truck trips
7 (1,922,497 annual), and up to 2,336 annual one-way rail trip movements. Under
8 Alternative 1, cargo ships that currently berth and load/unload at the Berths 302-305
9 terminal would continue to do so.

10 The No Project Alternative would not preclude future improvements to the proposed site.
11 However, any future changes in use or new improvements with the potential to
12 significantly impact the environment would need to be analyzed in a separate
13 environmental document.

14 **Impact NOI-1: Construction activities lasting more than 10 days in a**
15 **3-month period would not exceed existing ambient exterior noise**
16 **levels by 5 dBA or more at a noise-sensitive use.**

17 There would be no construction activities for this alternative.

18 **CEQA Impact Determination**

19 Alternative 1 would not involve any construction activities and, therefore, there would be
20 no potential for impacts under CEQA.

21 *Mitigation Measures*

22 No mitigation is required.

23 *Residual Impacts*

24 There would be no impacts.

25 **NEPA Impact Determination**

26 The impacts of the No Project Alternative are not required to be analyzed under NEPA.
27 NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this
28 document).

29 *Mitigation Measures*

30 Mitigation measures are not applicable.

31 *Residual Impacts*

32 An impact determination is not applicable.

33

1 **Impact NOI-2: Noise levels from construction activities would not**
2 **exceed the ambient noise level by 5 dBA at a noise-sensitive use**
3 **between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday,**
4 **before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on**
5 **Sunday.**

6 **CEQA Impact Determination**

7 Alternative 1 would not involve any construction activities and, therefore, no nighttime
8 construction-related impacts would occur. There would be no potential for impacts under
9 CEQA.

10 *Mitigation Measures*

11 No mitigation is required.

12 *Residual Impacts*

13 There would be no impacts.

14 **NEPA Impact Determination**

15 The impacts of the No Project Alternative are not required to be analyzed under NEPA.
16 NEPA requires the analysis of a No Federal Action Alternative (Alternative 2 in this
17 document).

18 *Mitigation Measures*

19 Mitigation measures are not applicable.

20 *Residual Impacts*

21 An impact determination is not applicable.

22 **Impact NOI-3: Operations would not generate noise levels that**
23 **exceed existing ambient noise levels at sensitive receivers by 3 dBA**
24 **in CNEL to or within the ‘normally unacceptable’ or ‘clearly**
25 **unacceptable category,’ or otherwise by 5 dBA or greater.**

26 For Alternative 1, the site would continue to operate as container terminal. On-site
27 terminal and dock operational noise sources associated with this alternative would
28 include the intermittent sounds of operations, such as gantry cranes offloading and
29 loading containers, rail and truck movements, and other ongoing Port activities. All such
30 Alternative 1-related activities would be more than 1,200 ft from the closest noise
31 sensitive receptors (i.e. liveaboards at Fish Harbor) and are expected to produce noise
32 levels less than those documented at measurement site ST-5, with noise levels from
33 terminal operations occasionally reaching to low to mid-50 dBA range. As with the
34 proposed Project, noise levels at adjacent noise sensitive uses under Alternative 1 would
35 increase by less than 3 dBA, and would not result in a significant impact at any adjacent
36 noise sensitive uses (see Table 3.11-7).

37

CEQA Impact Determination

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 relative to the CEQA baseline conditions. However these increases would be less than under proposed Project conditions, and would 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 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 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 2 in this document).

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

3.11.4.3.1.3 Alternative 2 – No Federal Action

The No Federal Action Alternative would be the same as the NEPA baseline and would include only the activities and impacts likely to occur absent further USACE federal approval but could include improvements that require a local action. Under Alternative 2, no federal action would occur; however, minor terminal improvements in the upland area of the existing APL Terminal would be implemented. These minor upland improvements would include conversion of a portion of the dry container storage area to an additional 200 reefers, associated electrical lines, and installation of utility infrastructure at locations in the existing backland areas. Beyond these minor upland improvements, the Port would not construct and develop additional backlands or wharves. No gate or additional backland improvements would occur, and no in-water features such as dredging or a new berth, wharf extension, or over-water features such as new cranes would occur under the No Federal Action Alternative.

Under the No Federal Action Alternative, the existing APL Terminal would continue to operate as an approximately 291-acre container terminal, and up to approximately 2.15 million TEUs could be handled at the terminal by 2027. Based on the throughput projections, the No Federal Action Alternative would result in 286 annual ship calls at Berths 302-305. In addition, this alternative would result in up to 7,273 peak daily truck trips (1,922,497 annual), and up to 2,336 annual one-way rail trip movements. Cargo ships that currently berth and load/unload at the Berths 302-305 terminal would continue to do so.

1 **Impact NOI-1: Construction activities lasting more than 10 days in a**
2 **3-month period would not exceed existing ambient exterior noise**
3 **levels by 5 dBA or more at a noise-sensitive use.**

4 Alternative 2 would involve terminal improvements in the upland area, but would not
5 construct and develop additional backlands or wharves. With this alternative the general
6 construction noise levels shown in Table 3.11-6 may occur, however no pile driving
7 noise would occur.

8 **CEQA Impact Determination**

9 General construction noise would not increase the existing ambient noise levels at any
10 identified noise receptor in the Project area by 5 dBA or more, and therefore, no
11 significant impacts due to construction would occur under CEQA.

12 *Mitigation Measures*

13 No mitigation is required.

14 *Residual Impacts*

15 Impacts would be less than significant.

16 **NEPA Impact Determination**

17 The No Federal Action Alternative would have the same conditions as the NEPA
18 baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there is no incremental
19 difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative
20 2 would result in no impact under NEPA.

21 *Mitigation Measures*

22 No mitigation is required.

23 *Residual Impacts*

24 There would be no impacts.

25 **Impact NOI-2: Noise levels from construction activities would not**
26 **exceed the ambient noise level by 5 dBA at a noise-sensitive use**
27 **between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday,**
28 **before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on**
29 **Sunday.**

30 Construction activities for this alternative would not be conducted during nighttime
31 hours.

32 **CEQA Impact Determination**

33 No nighttime construction-related impacts would occur; therefore, there would be no
34 impacts under CEQA.

35

1 *Mitigation Measures*

2 No mitigation is required.

3 *Residual Impacts*

4 There would be no impacts.

5 **NEPA Impact Determination**

6 The No Federal Action Alternative would have the same conditions as the NEPA
7 baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no
8 incremental difference between Alternative 2 and the NEPA baseline. As a consequence,
9 Alternative 2 would result in no impact under NEPA.

10 *Mitigation Measures*

11 No mitigation is required.

12 *Residual Impacts*

13 There would be no impacts.

14 **Impact NOI-3: Operations would not generate noise levels that**
15 **exceed existing ambient noise levels at sensitive receivers by 3 dBA**
16 **in CNEL to or within the ‘normally unacceptable’ or ‘clearly**
17 **unacceptable category,’ or otherwise by 5 dBA or greater.**

18 **CEQA Impact Determination**

19 For Alternative 2, the site would continue to operate as container terminal. On-site
20 terminal and dock operational noise sources associated with this alternative would
21 include the intermittent sounds of operations, such as gantry cranes offloading and
22 loading containers, rail and truck movements, and other ongoing Port activities. All such
23 Alternative 2-related activities would be more than 1,200 ft from the closest noise
24 sensitive receptors (i.e., liveaboards at Fish Harbor) and are expected to produce noise
25 levels less than those documented at measurement site ST-5, with noise levels from
26 terminal operations occasionally reaching to low to mid-50 dBA range. As with the
27 proposed Project, noise levels at adjacent noise sensitive uses under Alternative 2 would
28 increase by less than 3 dBA, and would not result in a significant impact at any adjacent
29 noise sensitive uses (see Table 3.11-7) under CEQA.

30 Under Alternative 2, increases on container shipments to and from the Port via area rail
31 and roadway corridors, and workforce automobile traffic on area roadways would occur
32 relative to the CEQA baseline conditions. However these increases would be less than
33 under proposed Project conditions, and result in CNEL increases of less than 3 dBA at
34 sensitive receivers in the Port area. Therefore, no significant noise impact at adjacent
35 noise sensitive uses due to terminal operations under Alternative 2 would occur under
36 CEQA.

37

1 *Mitigation Measures*

2 No mitigation is required.

3 *Residual Impacts*

4 Impacts would be less than significant.

5 **NEPA Impact Determination**

6 The No Federal Action Alternative would have the same conditions as the NEPA
7 baseline, as explained in Section 2.6.2 in Chapter 2; therefore, there would be no
8 incremental difference between Alternative 2 and the NEPA baseline. As a consequence,
9 Alternative 2 would result in no impact under NEPA.

10 *Mitigation Measures*

11 No mitigation is required.

12 *Residual Impacts*

13 There would be no impacts.

14 **3.11.4.3.1.4 Alternative 3 – Reduced Project: Four New Cranes**

15 Under Alternative 3, four new cranes would be added to the existing wharf along Berths
16 302-305 and only minor improvements to the existing APL Terminal would be made
17 utility infrastructure and conversion of dry container storage to reefers). No other upland
18 terminal improvements would be constructed. The existing terminal is berth-constrained,
19 and adding the additional four cranes would improve the terminal's efficiency.

20 The total acreage of backlands under Alternative 3 would remain at approximately 291
21 acres, which would be less than the proposed Project. This alternative would not include
22 the extension of the existing wharf, construction of a new berth, dredging, or the
23 relocation and improvement of various gates and entrance lanes.

24 Based on the throughput projections, TEU throughput under Alternative 3 would be less
25 than the proposed Project, with an expected throughput of approximately 2.58 million
26 TEUs by 2027. This would translate into 338 annual ship calls at Berths 302-305. In
27 addition, this alternative would result in up to 8,725 peak daily truck trips (2,306,460
28 annual), and up to 2,544 annual one-way rail trip movements. Configuration of all other
29 landside terminal components would be identical to the existing terminal.

30 **Impact NOI-1: Construction activities lasting more than 10 days in a**
31 **3-month period would not exceed existing ambient exterior noise**
32 **levels by 5 dBA or more at a noise-sensitive use.**

33 Alternative 3 would add four cranes to the existing wharf along Berths 302-305, and only
34 minor improvements to the existing APL Terminal would be made. With this alternative,
35 the general construction noise levels shown in Table 3.11-6 may occur; however, no pile
36 driving noise would occur.

1 **CEQA Impact Determination**

2 General construction noise would not increase the existing ambient noise levels at any
3 identified noise receptor in the Project area by 5 dBA or more, and therefore, no
4 significant impacts due to construction would occur under this alternative under CEQA.

5 *Mitigation Measures*

6 No mitigation is required.

7 *Residual Impacts*

8 Impacts would be less than significant.

9 **NEPA Impact Determination**

10 General construction noise levels shown in Table 3.11-6 may occur; however, no pile
11 driving noise would occur. General construction noise would not increase the existing
12 ambient noise levels at any identified noise receptor in the Project area by 5 dBA or
13 more, and therefore, no significant impacts due to construction would occur under NEPA.

14 *Mitigation Measures*

15 No mitigation is required.

16 *Residual Impacts*

17 Impacts would be less than significant.

18 **Impact NOI-2: Noise levels from construction activities would not**
19 **exceed the ambient noise level by 5 dBA at a noise-sensitive use**
20 **between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday,**
21 **before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on**
22 **Sunday.**

23 Construction activities for this alternative would not be conducted during nighttime
24 hours.

25 **CEQA Impact Determination**

26 No nighttime construction-related impacts would occur; therefore, there is no potential
27 for impacts under CEQA.

28 *Mitigation Measures*

29 No mitigation is required.

30 *Residual Impacts*

31 There would be no impacts.

32

NEPA Impact Determination

Construction activities for this alternative would not be conducted during nighttime hours; therefore, no nighttime construction-related impacts would occur under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

There would be no impacts.

Impact NOI-3: Operations would not generate noise levels that exceed existing ambient noise levels at sensitive receivers by 3 dBA in CNEL to or within the 'normally unacceptable' or 'clearly unacceptable category,' or otherwise by 5 dBA or greater.

CEQA Impact Determination

With the addition of four new cranes and increased throughput handling at the terminal, operational noise levels would increase. All such activities would be more than 1,200 ft from the closest noise sensitive receptors (i.e. liveboards at Fish Harbor) and are expected to produce noise levels less than those documented at measurement site ST-5, with noise levels from Alternative 3 operations occasionally reaching low to mid-50 dBA range. As with the proposed Project, the level of noise under Alternative 3 would increase noise levels at the adjacent noise sensitive uses by less than 3 dBA, and would not result in a significant impact at any adjacent noise sensitive uses (see Table 3.11-7) under CEQA.

Although Alternative 3 would result in an increase in automobile, truck, and rail traffic on area rail and roadway corridors, these increases would be less than under proposed Project conditions. As a consequence, Alternative 3 operations would not result in CNEL increases of 3 dBA or more at sensitive receivers in the Port area. Therefore, no significant noise impact would occur at adjacent noise sensitive uses due to terminal operations under Alternative 3 under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Roadway noise from an increase in automobile and truck traffic under Alternative 3 future conditions would be the same as described under the CEQA Impact Determination. However, the NEPA baseline noise levels generally would be higher than the CEQA baseline noise levels shown in Table 3.11-7 because the NEPA baseline allows for terminal operational growth due to completion of improvement not requiring a USACE permit. Therefore, the traffic levels resulting from Alternative 3 terminal activities would increase noise levels at the noise sensitive uses by less than 3 dBA (relative to the NEPA

1 baseline), and would not result in a significant impact at any adjacent noise sensitive uses
2 under NEPA.

3 Although Alternative 3 would result in increased automobile, truck, and rail traffic on
4 area rail and roadway corridors, these increases would be less than under proposed
5 Project conditions. All on-dock rail trips leave the proposed site (on Terminal Island)
6 over the Henry Ford Bridge (also known as the Badger Avenue Bridge). Based on this,
7 and considering that the percentage of Alternative 3-generated on-dock rail traffic would
8 lessen as the rail network spreads out from the Port, the Island Yacht Anchorage
9 liveaboards in the Cerritos Channel have been identified as the noise sensitive use with
10 the greatest potential to be impacted by increases in rail noise generated by Alternative 3-
11 generated rail noise. The increase in on-dock rail traffic train trips for Alternative 3 over
12 the NEPA baseline would result in a 1 dBA increase in the CNEL at the Island Yacht
13 Anchorage liveaboards in the Cerritos Channel, from a level of 78 dBA CNEL under the
14 2027 NEPA baseline to a level of 79 dBA CNEL for Alternative 3 conditions in 2027.
15 Therefore, rail trips generated by terminal operations under Alternative 3 would not result
16 in a significant noise impact.

17 A review and comparison of automobile and truck traffic data for area roadways with the
18 Alternative 3 and NEPA baseline conditions indicates that Alternative 3-related increases
19 in automobile or truck traffic on area roadways would increase noise levels at adjacent
20 noise sensitive uses by 2 dBA or less, and would therefore, not result in a significant
21 impact at any adjacent noise sensitive uses under NEPA.

22 *Mitigation Measures*

23 No mitigation is required.

24 *Residual Impacts*

25 Impacts would be less than significant.

26 **3.11.4.3.1.5 Alternative 4 – Reduced Project: No New Wharf**

27 Under Alternative 4, six cranes would be added to the existing terminal wharf at Berths
28 302-305, and the 41-acre fill area adjacent to the APL Terminal would be developed as
29 container yard backlands. EMS would relinquish the 30 acres of backlands under space
30 assignment. EMS would not add the nine acres of land behind Berth 301 or the two acres
31 at the main gate to its permit. Because no new wharf would be constructed at Berth 306,
32 the 41-acre backland would be operated using traditional methods and would not be
33 expected to transition to use of automated equipment. As the existing wharf would not be
34 extended to create Berth 306, no dredging would occur.

35 Under Alternative 4, the total terminal acreage would be 302 acres, which is less than the
36 proposed Project. Based on the throughput projections, TEU throughput would be less
37 than the proposed Project, with an expected throughput of approximately 2.78 million
38 TEUs by 2027. This would translate into 338 annual ship calls at Berths 302-305. In
39 addition, Alternative 4 would result in up to 9,401 peak daily truck trips (2,485,050
40 annual), and up to 2,563 annual one-way rail trip movements. Configuration of all other
41 landside terminal components (i.e., Main Gate improvements) would be identical to the
42 proposed Project.

1 **Impact NOI-1: Construction activities lasting more than 10 days in a**
2 **3-month period would not exceed existing ambient exterior noise**
3 **levels by 5 dBA or more at a noise-sensitive use.**

4 Alternative 4 would add six cranes to the existing wharf along Berths 302-305, and no
5 new wharf would be constructed at Berth 306. With this alternative the general
6 construction noise levels shown in Table 3.11-6 may occur; however, no pile driving
7 noise would occur.

8 **CEQA Impact Determination**

9 General construction noise would not increase the existing ambient noise levels at any
10 identified noise receptor in the Project area by 5 dBA or more, and therefore, no
11 significant impacts due to construction would occur under CEQA.

12 *Mitigation Measures*

13 No mitigation is required.

14 *Residual Impacts*

15 Impacts would be less than significant.

16 **NEPA Impact Determination**

17 General construction noise under Alternative 4 would not increase the existing ambient
18 noise levels at any identified noise receptor in the area by 5 dBA or more, and therefore,
19 no significant impacts due to construction would occur under NEPA.

20 *Mitigation Measures*

21 No mitigation is required.

22 *Residual Impacts*

23 Impacts would be less than significant.

24 **Impact NOI-2: Noise levels from construction activities would not**
25 **exceed the ambient noise level by 5 dBA at a noise-sensitive use**
26 **between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday,**
27 **before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on**
28 **Sunday.**

29 Construction activities for this alternative would not be conducted during nighttime
30 hours.

31 **CEQA Impact Determination**

32 There would be no potential for impacts due to nighttime construction to occur under
33 CEQA.

1 *Mitigation Measures*

2 No mitigation is required.

3 *Residual Impacts*

4 There would be no impacts.

5 **NEPA Impact Determination**

6 There would be no potential for impacts due to nighttime construction to occur under
7 NEPA.

8 *Mitigation Measures*

9 No mitigation is required.

10 *Residual Impacts*

11 There would be no impacts.

12 **Impact NOI-3: Operations would not generate noise levels that**
13 **exceed existing ambient noise levels at sensitive receivers by 3 dBA**
14 **in CNEL to or within the ‘normally unacceptable’ or ‘clearly**
15 **unacceptable category,’ or otherwise by 5 dBA or greater.**

16 **CEQA Impact Determination**

17 With the addition of six new cranes and increased cargo throughput-handling at the
18 terminal, operational noise levels would increase. All such activities would be more than
19 1,200 ft from the closest noise sensitive receptors (i.e. liveaboards at Fish Harbor) and are
20 expected to produce noise levels less than those documented at measurement site ST-5,
21 with noise levels from Alternative 4 operations occasionally reaching to low to mid-50
22 dBA range. As with the proposed Project, the level of noise under Alternative 4 would
23 increase noise levels at the adjacent noise sensitive uses by less than 3 dBA, and
24 therefore, would not result in a significant impact at any adjacent noise sensitive uses (see
25 Table 3.11-7) under CEQA.

26 Implementation of Alternative 4 would result in increased container shipments to and
27 from the Port via area rail and roadway corridors, along with increased workforce
28 automobile traffic on area roadways. However, the on-dock rail operations would be less
29 than the proposed Project, and therefore, rail trips generated by terminal operations under
30 Alternative 4 would not result in a significant noise impact at the Island Yacht Anchorage
31 liveaboards in the Cerritos Channel. Although Alternative 4 would result in increased
32 automobile, truck, and rail traffic on area rail and roadway corridors, these increases
33 would be less than under proposed Project conditions. As a consequence, Alternative 4
34 operations would not result in CNEL increases of 3 dBA at sensitive receivers in the Port
35 area. Therefore, no significant noise impact would occur at adjacent noise sensitive uses
36 due to terminal operations under Alternative 4 under CEQA.

37

1 *Mitigation Measures*

2 No mitigation is required.

3 *Residual Impacts*

4 Impacts would be less than significant.

5 **NEPA Impact Determination**

6 Roadway noise from an increase in automobile and truck traffic under Alternative 4
7 future conditions would be the same as described under the CEQA Impact Determination.
8 However, the NEPA baseline noise levels generally would be higher than the CEQA
9 baseline noise levels shown in Table 3.11-7 because the NEPA baseline allows for
10 terminal operational growth due to completion of improvements not requiring a USACE
11 permit. Therefore, the traffic levels resulting from Alternative 4 related terminal
12 activities would increase noise levels at the noise sensitive uses by less than 3 dBA
13 (relative to the NEPA baseline), and would not result in a significant impact at any
14 adjacent noise sensitive uses under NEPA.

15 Although Alternative 4 would result in increased automobile, truck, and rail traffic on
16 area rail and roadway corridors, these increases would be less than under proposed
17 Project conditions. All on-dock rail trips leave the proposed site (on Terminal Island)
18 over the Henry Ford Bridge (also known as the Badger Avenue Bridge). Based on this,
19 and considering that the percentage of Alternative 4-generated on-dock rail traffic would
20 lessen as the rail network spreads out from the Port, the Island Yacht Anchorage
21 liveaboards in the Cerritos Channel have been identified as the noise sensitive use with
22 the greatest potential to be impacted by increases in Alternative 4-generated rail noise.
23 The increase in on-dock rail traffic train trips for Alternative 4 over the NEPA baseline
24 would result in a 1 dBA increase in the CNEL at the Island Yacht Anchorage liveaboards
25 in the Cerritos Channel, from a level of 78 dBA CNEL under the 2027 NEPA baseline to
26 a level of 79 dBA CNEL for Alternative 4 conditions in 2027. Therefore, rail trips
27 generated by terminal operations under Alternative 4 would not result in a significant
28 noise impact under NEPA.

29 A review and comparison of automobile and truck traffic data for area roadways with
30 Alternative 4 and NEPA baseline conditions indicates that Alternative 4-related increases
31 in automobile or truck traffic on area roadways would increase noise levels at adjacent
32 noise sensitive uses by 2 dBA or less, and would therefore, not result in a significant
33 impact at any adjacent noise sensitive uses under NEPA.

34 Under this alternative, there would be increases in automobile, truck, and rail traffic on
35 area rail and roadway corridors; however, these increases would be less than under
36 proposed Project conditions, and result in CNEL increases of less than 3 dBA at sensitive
37 receivers in the Port area. Therefore, Alternative 4 operations would result in no
38 significant noise impact at adjacent noise sensitive uses under NEPA.

39 *Mitigation Measures*

40 No mitigation is required.

41 *Residual Impacts*

42 Impacts would be less than significant.

3.11.4.3.1.6 Alternative 5 – Reduced Project: No Space Assignment

Alternative 5 would improve the existing terminal, construct a new wharf (1,250 ft) creating Berth 306, add 12 new cranes to Berths 302-306, add 56 acres for backlands, wharfs, and gates improvements, construct electrification infrastructure in the backlands behind Berths 305-306, and relinquish the 30 acres currently on space assignment. This alternative would be the same as the proposed Project, except that EMS would relinquish the 30 acres of backlands under space assignment. As with the proposed Project, the 41-acre backlands and Berth 306 under Alternative 5 could utilize traditional container operations, electric automated operations, or a combination of the two over time. Dredging of the Pier 300 Channel along the new wharf at Berth 306 (approximately 20,000 cy) would occur, with the dredged material beneficially reused, and/or disposed of at an approved disposal site (such as the CDF at Berths 243-245 and/or Cabrillo shallow water habitat) or, if needed, disposed of at an ocean disposal site (i.e., LA-2).

Under Alternative 5, the total gross terminal acreage would be 317 acres, which is less than the proposed Project. TEU throughput would be the same as the proposed Project, with an expected throughput of approximately 3.2 million TEUs by 2027. This would translate into 390 annual ship calls at Berths 302-306. In addition, this alternative would result in up to 11,361 peak daily truck trips (3,003,157 annual) including drayage, and up to 2,953 annual one-way rail trip movements. Configuration of all other landside terminal components would be identical to the existing terminal.

Impact NOI-1: Construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use.

Construction noise generated by this alternative would be similar to that generated by the proposed Project, and thus, the noise levels for general construction and pile driving as shown in Table 3.11-6 is applicable to this alternative.

CEQA Impact Determination

General construction noise under this alternative, including construction of infrastructure for backlands automation should that occur, would not increase the existing ambient noise levels at any identified noise receptor in the Project area by 5 dBA or more, but noise produced by pile driving during wharf construction would increase average ambient noise levels at Reservation Point by 5 dBA over existing levels. These impacts would be temporary in nature, but significant under CEQA.

Mitigation Measures

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

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

General construction noise under this alternative, including construction of infrastructure for backlands automation should that occur, would not increase the existing ambient noise levels at any identified noise receptor in the Project area by 5 dBA or more, but noise produced by pile driving during wharf construction would increase average ambient

1 noise levels at Reservation Point by 5 dBA over existing levels. These impacts would be
2 temporary in nature, but significant under NEPA.

3 *Mitigation Measures*

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

5 *Residual Impacts*

6 Impacts would be less than significant.

7 **Impact NOI-2: Noise levels from construction activities would not**
8 **exceed the ambient noise level by 5 dBA at a noise-sensitive use**
9 **between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday,**
10 **before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on**
11 **Sunday.**

12 With the exception of dredging along Berth 306, construction activities for this
13 alternative would not be conducted during nighttime hours. Night construction during
14 dredging of Berth 306 would result in average noise levels which exceed the ambient
15 levels at the Fish Harbor liveboards or Reservation Point; however, the increases would
16 be less than 2 dBA, and thus would not exceed the significance criteria at these locations.

17 **CEQA Impact Determination**

18 Based on the above, construction noise impacts under Alternative 5 would be less than
19 significant under CEQA.

20 *Mitigation Measures*

21 No mitigation is required.

22 *Residual Impacts*

23 Impacts would be less than significant.

24 **NEPA Impact Determination**

25 As discussed above, night construction during dredging of Berth 306 would result in
26 average noise levels which exceed the ambient levels at the Fish Harbor liveboards or
27 Reservation Point; however, the increases would be less than 2 dBA, and thus would not
28 exceed the significance criteria at these locations. As a result, construction noise impacts
29 under the Alternative 5 would be less than significant under NEPA.

30 *Mitigation Measures*

31 No mitigation is required.

32 *Residual Impacts*

33 Impacts would be less than significant.

1 **Impact NOI-3: Operations would not generate noise levels that**
2 **exceed existing ambient noise levels at sensitive receivers by 3 dBA**
3 **in CNEL to or within the ‘normally unacceptable’ or ‘clearly**
4 **unacceptable category,’ or otherwise by 5 dBA or greater.**

5 **CEQA Impact Determination**

6 Operational noise impacts at noise sensitive uses in the Port area under CEQA for
7 Alternative 5 would be the same as those for the proposed Project.

8 *Mitigation Measures*

9 No mitigation is required.

10 *Residual Impacts*

11 Impacts would be less than significant.

12 **NEPA Impact Determination**

13 Operational noise impacts at noise sensitive uses in the Port area under NEPA for
14 Alternative 5 would be the same as those for the proposed Project.

15 *Mitigation Measures*

16 No mitigation is required.

17 *Residual Impacts*

18 Impacts would be less than significant.

19 **3.11.4.3.1.7 Alternative 6 – Proposed Project with Expanded On-Dock Railyard**

20 Alternative 6 would be the same as the proposed Project; however, the existing on-dock
21 railyard on the terminal would be redeveloped and expanded. Under this alternative,
22 approximately 10 acres of backlands would be removed from container storage for the
23 railyard expansion. Alternative 6 would improve the existing terminal, develop the
24 existing 41-acre fill area as backlands, add 1,250 ft of new wharf creating Berth 306, and
25 dredge the Pier 300 Channel along Berth 306. Under this alternative, 12 new cranes
26 would be added to the wharves along Berths 302-306, for a total of 24 cranes. As with
27 the proposed Project, the 41-acre backlands and Berth 306 under Alternative 6 could
28 utilize traditional container operations, electric automated operations, or a combination of
29 the two over time. Dredging of the Pier 300 Channel along Berth 306 would occur
30 (removal of approximately 20,000 cy of material), with the dredged material beneficially
31 reused and/or disposed of at an approved disposal site (such as the CDF at Berths 243-
32 245 and/or Cabrillo shallow water habitat) or, if needed, disposed of at an ocean disposal
33 site (i.e., LA-2). Total terminal acreage (347) would be the same as the proposed Project.

34 Based on the throughput projections, TEU throughput would be the same as the proposed
35 Project, with an expected throughput of approximately 3.2 million TEUs by 2027. This
36 would translate into 390 annual ship calls at Berths 302-306. In addition, Alternative 6
37 would result in up to 10,830 peak daily truck trips (2,862,760 annual), and up to
38 2,953 annual rail trip movements. Configuration of all other landside terminal
39 components would be identical to the existing terminal.

1 **Impact NOI-1: Construction activities lasting more than 10 days in a**
2 **3-month period would exceed existing ambient exterior noise levels**
3 **by 5 dBA or more at a noise-sensitive use.**

4 Construction noise generated by this alternative would be similar to that generated by the
5 proposed Project, and thus, the noise levels for general construction and pile driving as
6 shown in Table 3.11-6 is applicable to this alternative.

7 **CEQA Impact determination**

8 General construction noise under this alternative, including construction of infrastructure
9 for automation should that occur, would not increase the existing ambient noise levels at
10 any identified noise receptor in the Project area by 5 dBA or more, but noise produced by
11 pile driving during wharf construction would increase average ambient noise levels at
12 Reservation Point by 5 dBA over existing levels. These impacts would be temporary in
13 nature, but significant under CEQA.

14 *Mitigation Measures*

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

16 *Residual Impacts*

17 Impacts would be less than significant.

18 **NEPA Impact Determination**

19 General construction noise under this alternative, including construction of infrastructure
20 for automation should that occur, would not increase the existing ambient noise levels at
21 any identified noise receptor in the Project area by 5 dBA or more, but noise produced by
22 pile driving during wharf construction would increase average ambient noise levels at
23 Reservation Point by 5 dBA over existing levels. These impacts would be temporary in
24 nature, but significant under NEPA.

25 *Mitigation Measures*

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

27 *Residual Impacts*

28 Impacts would be less than significant.

29 **Impact NOI-2: Noise levels from construction activities would not**
30 **exceed the ambient noise level by 5 dBA at a noise-sensitive use**
31 **between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday,**
32 **before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on**
33 **Sunday.**

34 Construction activities for this alternative would not be conducted during nighttime
35 hours.

CEQA Impact Determination

With the exception of dredging along Berth 306, construction activities for this alternative would not be conducted during nighttime hours. Night construction during dredging of Berth 306 would result in average noise levels which exceed the ambient levels at the Fish Harbor liveaboards or Reservation Point; however, the increases would be less than 2 dBA, and thus would not exceed the significance criteria at these locations. As a result, construction noise impacts under Alternative 6 would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

As discussed above, night construction during dredging of Berth 306 would result in average noise levels which exceed the ambient levels at the Fish Harbor liveaboards or Reservation Point; however, the increases would be less than 2 dBA, and thus would not exceed the significance criteria at these locations. As a result, construction noise impacts under Alternative 6 would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact NOI-3: Operations would not generate noise levels that exceed existing ambient noise levels at sensitive receivers by 3 dBA in CNEL to or within the 'normally unacceptable' or 'clearly unacceptable category,' or otherwise by 5 dBA or greater.

CEQA Impact Determination

Operational noise impacts at noise sensitive uses in the Port area would be the same as those for the proposed Project. As a result, operational noise impacts under Alternative 6 would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

1 **NEPA Impact Determination**

2 Operational noise impacts at noise sensitive uses in the Port area would be the same as
3 those for the proposed Project. As a result, operational noise impacts under Alternative 6
4 would be less than significant under NEPA.

5 *Mitigation Measures*

6 No mitigation is required.

7 *Residual Impacts*

8 Impacts would be less than significant.

9 **3.11.4.4 Summary of Impact Determinations**

10 Table 3.11-8 summarizes the CEQA and NEPA impact determinations of the proposed
11 Project and its alternatives related to Noise, as described in the detailed discussion above.
12 This table is meant to allow easy comparison among the potential impacts of the
13 proposed Project and its alternatives with respect to this resource. Identified potential
14 impacts may be based on federal, state, and City of Los Angeles significance criteria,
15 Port criteria, and the scientific judgment of the report preparers.

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

Table 3.11-8: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Proposed Project	NOI-1: Construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use.	CEQA: Significant	MM NOI-1: Noise Reduction during Pile Driving and MM NOI-2: Erect Temporary Noise Attenuation Barriers Adjacent to Pile Driving Equipment, Where Necessary and Feasible	CEQA: Less than significant
		NEPA: Significant		NEPA: Less than significant
	NOI-2: Noise levels from construction activities would not exceed the ambient noise level by 5 dBA at a noise-sensitive use 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: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	NOI-3: Operations would not generate noise levels that exceed existing ambient noise levels at sensitive receivers by 3 dBA in CNEL to or within the ‘normally unacceptable’ or ‘clearly unacceptable category,’ or otherwise by 5 dBA or greater.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
Alternative 1- No Project	NOI-1: Construction activities lasting more than 10 days in a 3-month period would not exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use.	CEQA: No impact	Mitigation not required	CEQA: No impact
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	NOI-2: Noise levels from construction activities would not exceed the ambient noise level by 5 dBA at a noise-sensitive use 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	Mitigation not required	CEQA: No impact
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable
	NOI-3: Operations would not generate noise levels that exceed existing ambient noise levels at sensitive receivers by 3 dBA in CNEL to or within the ‘normally unacceptable’ or ‘clearly unacceptable category,’ or otherwise by 5 dBA or greater.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Not applicable	Mitigation not applicable	NEPA: Not applicable

Table 3.11-8: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Alternative 2 – No Federal Action	NOI-1: Construction activities lasting more than 10 days in a 3-month period would not exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: No impact		NEPA: No impact
	NOI-2: Noise levels from construction activities would not exceed the ambient noise level by 5 dBA at a noise-sensitive use 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	Mitigation not required	CEQA: No impact
		NEPA: No impact		NEPA: No impact
	NOI-3: Operations would not generate noise levels that exceed existing ambient noise levels at sensitive receivers by 3 dBA in CNEL to or within the ‘normally unacceptable’ or ‘clearly unacceptable category,’ or otherwise by 5 dBA or greater.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: No impact		NEPA: No impact
Alternative 3 – Reduced Project: Four New Cranes	NOI-1: Construction activities lasting more than 10 days in a 3-month period would not exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	NOI-2: Noise levels from construction activities would not exceed the ambient noise level by 5 dBA at a noise-sensitive use 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	Mitigation not required	CEQA: No impact
		NEPA: No impact		NEPA: No impact
	NOI-3: Operations would not generate noise levels that exceed existing ambient noise levels at sensitive receivers by 3 dBA in CNEL to or within the ‘normally unacceptable’ or ‘clearly unacceptable category,’ or otherwise by 5 dBA or greater.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant

Table 3.11-8: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Alternative 4 – Reduced Project: No New Wharf	NOI-1: Construction activities lasting more than 10 days in a 3-month period would not exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	NOI-2: Noise levels from construction activities would not exceed the ambient noise level by 5 dBA at a noise-sensitive use 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	Mitigation not required	CEQA: No impact
		NEPA: No impact		NEPA: No impact
	NOI-3: Operations would not generate noise levels that exceed existing ambient noise levels at sensitive receivers by 3 dBA in CNEL to or within the ‘normally unacceptable’ or ‘clearly unacceptable category,’ or otherwise by 5 dBA or greater.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
Alternative 5 – Reduced Project: No Space Assignment	NOI-1: Construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use.	CEQA: Significant	MM NOI-1 MM NOI-2	CEQA: Less than significant
		NEPA: Significant		NEPA: Less than significant
	NOI-2: Noise levels from construction activities would not exceed the ambient noise level by 5 dBA at a noise-sensitive use 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: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	NOI-3: Operations would not generate noise levels that exceed existing ambient noise levels at sensitive receivers by 3 dBA in CNEL to or within the ‘normally unacceptable’ or ‘clearly unacceptable category,’ or otherwise by 5 dBA or greater.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant

Table 3.11-8: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Alternative 6 – Proposed Project with Expanded On-Dock Railyard	NOI-1: Construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use.	CEQA: Significant	MM NOI-1 MM NOI-2	CEQA: Less than significant
		NEPA: Significant		NEPA: Less than significant
	NOI-2: Noise levels from construction activities would not exceed the ambient noise level by 5 dBA at a noise-sensitive use 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: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant
	NOI-3: Operations would not generate noise levels that exceed existing ambient noise levels at sensitive receivers by 3 dBA in CNEL to or within the ‘normally unacceptable’ or ‘clearly unacceptable category,’ or otherwise by 5 dBA or greater.	CEQA: Less than significant	Mitigation not required	CEQA: Less than significant
		NEPA: Less than significant		NEPA: Less than significant

1

1 **3.11.4.5 Mitigation Monitoring**

2 The below mitigation monitoring program is applicable to the proposed Project and
 3 Alternatives 5 and 6 under CEQA and NEPA.

Impact NOI-1: Construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a noise-sensitive use.	
Mitigation Measure	MM NOI-1: Noise Reduction during Pile Driving. The contractor shall be required to use a pile driving system, such as a Bruce hammer (with silencing kit), an IHC Hydrohammer SC series (with sound insulation system), or equivalent silenced hammer, which is capable of limiting maximum noise levels at 50 ft from the pile driver to 104 dBA, or less, for wharf construction. With implementation of standard condition of approval SC BIO-1 , the pile driving would initiate with a soft start, in which the hammer is operated at a reduced energy, followed by a waiting period. The soft start technique would induce marine mammals and birds to leave the immediate area before pile hammer reaches full energy. Refer to Section 3.3, Biological Resources, for information on soft start of pile driving activities.
Timing	During the bid process (i.e., as part of contract/construction specifications) and construction of the proposed Project.
Methodology	The construction contractor shall ensure that the proposed pile driving equipment and measures are used during construction. The LAHD shall evaluate the contractor proposals with regard to reducing pile driving noise. The LAHD would subsequently perform periodic inspections to ensure that the approved equipment and methods are being used.
Responsible Parties	Construction contractor; LAHD
Residual Impacts	Less than significant
Mitigation Measure	MM NOI-2: Erect Temporary Noise Attenuation Barriers Adjacent to Pile Driving Equipment, Where Necessary and Feasible. Erect temporary noise attenuation barriers suitable for pile driving equipment as needed. The barriers should be installed directly between the equipment and the nearest noise sensitive use to the construction site. The need for and feasibility of noise attenuation barriers should be evaluated on a case-by-case basis considering the distance to noise sensitive receptors, the available space at the construction location, and taking account of safety and operational considerations.
Timing	During the bid process (i.e., as part of contract/construction specifications) and construction of the proposed Project.
Methodology	The contractor should install noise attenuation barriers, where feasible according to the above criteria in consultation with the LAHD and shall be monitored for compliance by the LAHD.
Responsible Parties	Construction contractor; LAHD
Residual Impacts	Less than significant

4

1 **3.11.5 Significant Unavoidable Impacts**

2 Mitigation measures are expected to reduce residual construction noise impacts due to
3 pile driving activities to a less than significant level. Construction noise would be short-
4 term and would not exceed significance thresholds with mitigation, and after completion,
5 there would be no long-term significant residual noise impact.