3.9

NOISE

3.9.1 Introduction

This section addresses potential noise impacts that could result from the proposed Project. In summary, the construction activities at the proposed Pier A rail yard near the Berth 200-202 Marinas under the proposed Project would generate construction noise levels that would cause temporary and periodic noise levels substantially above existing ambient noise levels in nearby marinas where people live. Even with implementation of recommended mitigation measures, construction equipment noise levels would substantially exceed existing ambient noise levels, causing a significant impact under CEQA during daytime hours. Significant and unavoidable short-term noise impacts would also occur during daytime hours along "C" Street during construction of the Harry Bridges Buffer Area. Once completed, operation of improvements at Berths 136-147 implemented by the proposed Project, vehicular traffic on Harry Bridges Boulevard, and operations at the Pier A rail yard, would not cause a substantial increase in noise in the residential areas of San Pedro, Wilmington, and the live-aboards in the marinas near the rail yard. Prior to 2004, the proposed Harry Bridges Boulevard landscaped area was to be a 25-acre container storage/backlands area for the Berths 136-147 Container Terminal Redevelopment Plan. Based on community opposition and the growing recognition of the land use conflict of having a heavy industry use immediately adjacent to residential areas, the proposed Project was eventually modified to widen Harry Bridges Boulevard in substantially its existing location and develop the land to the north as an open space landscaped area. This project element benefits the community noise environment in the Wilmington neighborhood to the north of the proposed Project.

3.9.2 Environmental Setting

3.9.2.1 Noise Fundamentals

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound can be caused by its

pitch or its *loudness*. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (frequency) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is the amplitude of sound waves combined with the reception characteristics of the ear. Amplitude may be compared with the height of an ocean wave. Technical acoustical terms commonly used in this section are defined in Table 3.9-1.

Table 3.9-1. 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 PM to 10:00 PM and after addition of 10 decibels to sound levels in the night between 10:00 PM and 7:00 AM.
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 PM and 7:00 AM.
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.

3.9.2.1.1 Decibels and Frequency

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise. The *decibel (dB)* is a unit of measurement, which indicates the relative amplitude of a sound. Zero on the decibel scale is based on the lowest sound pressure that a healthy, unimpaired human ear can detect. Sound levels

in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a 10-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its level. Each 10-decibel increase in sound level is perceived as approximately a doubling of loudness over a wide range of amplitudes. Since decibels are logarithmic units, sound pressure levels are not added arithmetically. When two sounds of equal sound pressure level are added, the result is a sound pressure level that is 3 dB higher. For example, if the sound level were 70 dB when 100 cars pass by, then it would be 73 dB when 200 cars pass the observer. Doubling the amount of energy would result in a 3 dB increase to the sound level.

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.

There are several methods for characterizing sound. The most common is the *A-weighted sound level* or *dBA*. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Studies have shown that the A-weighted level is closely correlated with annoyance to traffic noise. Other frequency weighting networks, such as *C weighting or dBC*, have been devised to describe noise levels for specific types of noise (e.g., explosives). Table 3.9-2 shows typical A-weighted noise levels that occur in human environments.

Table 3.9-2. 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

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

3.9.2.1.3 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.

Noise and Health

A number of studies have linked increases in noise with health effects, including hearing impairment, sleep disturbance, cardiovascular effects, psychophysiological effects, and potential impacts to fetal development (Babisch 2005). Potential health effects appear to be caused by both short and long term exposure to very loud noises and long term exposure to lower levels of sound. Acute sounds of $L_{AF} > 120$dB can cause mechanical damage to hair cells of the cochlea (the auditory portion of the inner ear) and hearing impairment (Babisch 2005). As discussed in Section 3.9.2.1.1, $L_{AF} > 120$dB is equivalent to a rock concert or a plane flying overhead at 300 meters. The World Health Organization and the USEPA consider $L_{Aeq} = 70$dB(A) to be a safe daily average noise level for the ear. However, even this "ear-safe" level may cause disturbance to sleep and concentration and may be linked to chronic health impacts such as hypertension and heart disease (Babisch, 2006). A number of studies have looked at the potential health effects from the sound of chronic lower noise levels, such as traffic, especially as these noise levels affect children. In as study of school children in Germany, blood pressure was found to be 10mmHg higher in a group of students exposed to road traffic noise from high traffic transit routes (Babisch, 2006). A study by Kwanda (2004) showed that in pregnant women, exposure to airplane noise was found to be associated with decreased fetal body weight.

3.9.2.1.4 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 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 (300 feet), prediction results based on this scheme are sufficiently accurate. For acoustically "hard" sites (i.e., sites with a reflective surface, such as a parking lot or a smooth body of water, between the source and the 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 in an overall drop-off rate of 4.5 dBA per doubling of distance for a line source and 7.5 dBA per doubling of distance for a point source.

Atmospheric effects. Research by Caltrans and others has shown that atmospheric conditions can have a major effect on noise levels. Wind has been shown to be the single most important meteorological factor within approximately 150 meters (500 feet), whereas vertical air temperature gradients are more important over longer distances. Other factors, such as air temperature, humidity, and turbulence, also have major effects. Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lower noise levels. Increased sound levels can also occur because of temperature inversion conditions (i.e., increasing temperature with elevation).

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

3.9.2.2 Existing Noise Environment

The proposed Project is located in the Wilmington and San Pedro Districts of the City of Los Angeles north and west of the Port of Los Angeles. Noise levels in the area result from vehicular traffic on the local street network and the freeways, railroad train movements along the various railroad lines in the area, industrial noise sources, and activities at the Port of Los Angeles. The noise environment at any particular location depends upon proximity to the various noise sources. Noise sensitive receivers are also located along the rail corridors in the environs of the Port of Los Angeles. The impact of increased railroad train noise was calculated. Noise sensitive receivers in the proposed Project vicinity include single- and multi-family residences located along the north side of "C" Street between Neptune and Mar Vista avenues, residences southwest of Pacific Avenue on a hill overlooking Berth 100, and the top of Knoll Hill (Figure 3.9-1) where there is one residence and a temporary dog park, for which the Port has received a request to convert to temporary little league baseball fields. Persons living in marinas at Berths 200-202 are near the site proposed for the relocation of the Pier A rail yard.

Noise measurements are used to establish noise levels at sensitive receivers in the areas surrounding the proposed Project. In addition, noise surveys of existing industrial activities similar in nature to those proposed as part of the proposed Project are used to quantify project-generated noise. All measured noise levels reported in this section were obtained utilizing Larson-David Laboratories Model 700 and 812 integrating sound level meters equipped with precision microphones and wind screens and were field calibrated with an acoustical calibrator. Measurements were made by qualified personnel experienced in the selection of representative measurement sites, the accurate measurement of environmental sources, and proper field survey methods.

3.9.2.2.1 Wilmington

A noise monitoring survey was conducted in April 2002 to quantify existing ambient noise levels at representative locations along "C" Street (Figure 3.9-1). Noise levels in and around the "C" Street neighborhood result from vehicular traffic on the street network. Physical conditions in the area were the same in April 2002 as in December 2003. Vehicular traffic volumes on major roadways, including the I-110, Harry Bridges Boulevard, and "C" Street, increased slightly from 2002 to 2003 (Transportation/Circulation 3.10.2.2). The incremental increase in vehicular traffic between 2002 and 2003 would mean that noise levels in April 2002 would, if any, be slightly lower than at the baseline time period established at December 2003 providing a conservative baseline for determining a change in noise levels which could result from the proposed Project.

Noise levels were monitored during the daytime, evening, and nighttime in consecutive hourly intervals at three locations, LT-1, LT-3, and LT-4. A reference noise measurement was also conducted at Location LT-2 adjacent to Harry Bridges Boulevard. Locations LT-1, LT-3, and LT-4 were selected to characterize the noise environment at residences located along "C" Street that were nearest to the proposed Project area. Based on observations in the field, it was determined that the noise environment varies along "C" Street primarily based on the lessening effect of the

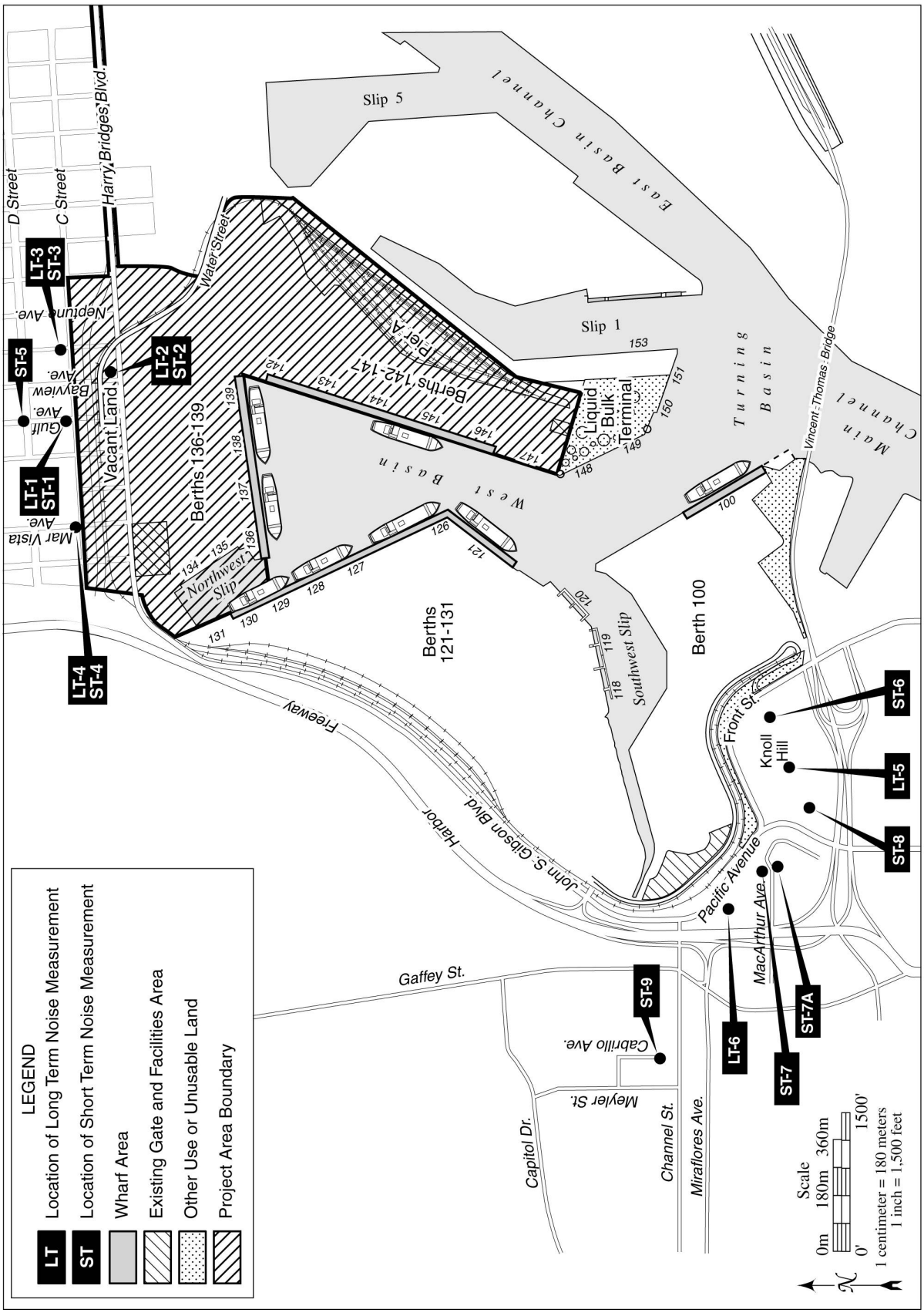


Figure 3.9-1. Noise Measurement Locations

noise from the I-110 freeway as one moves east along "C" Street. A measurement was made also adjacent to Harry Bridges Boulevard. The purpose for this measurement was to assist in the analysis of potential noise impacts from improvements to Harry Bridges Boulevard that are included in the proposed Project. This was, therefore, a source reference measurement as opposed to a measurement of existing ambient noise levels at a sensitive receiver. These measurements are also discussed in this section of the report. The results of the noise measurements are shown in Figures 3.9-2 through 3.9-5. The figures provide the range of noise levels measured during each hour depicted by the statistical descriptors L_{90}, L_{50}, L_{10} and L_{01}, as well as the maximum noise level and the energy average or equivalent sound level, $L_{eq[h]}$. The measured L_{dn}, the 24-hour day/night average noise level, is also shown on each figure. The existing L_{dn} along "C" Street in the central and eastern portion of the study area is 65 to 66 L_{dn}. At the western end of the study area near the I-110 freeway, the measured L_{dn} was 71 dBA. Noise from a nearby remaining commercial/light industrial land use also contributed to measured noise levels at this location. The existing noise level at the measurement location 57 feet from the centerline of Harry Bridges Boulevard was 77 dBA L_{dn} and the peak hour average noise level was 77 to 78 dBA $L_{eq(h)}$.

Short-term, 15-minute duration noise measurements were made at each long-term measurement location and at one additional location at the corner of Gulf Avenue and "D" Street one block north of the primary study area (see Table 3.9-3). Instantaneous noise levels from identifiable sources were observed during the attended measurements. At Site ST-1 below the long-term meter at LT-1, neighborhood noise from stereos and voices reached 55 dBA. Harry Bridges Boulevard traffic was audible, but the dominant source of noise was local traffic on "C" Street. Trucks on Harry Bridges Boulevard generated maximum noise levels up to 65 dBA. Local traffic on "C" Street generated typical maximum noise levels in the range of 72 to 77 dBA. At Site ST-2 along Harry Bridges Boulevard, heavy truck traffic was the dominant source of noise. The truck traffic generated typical maximum noise levels of 83 to 87 dBA as trucks passed by the measurement site. A train also passed by at a speed of approximately 5 mph. The train generated a steady noise level of 69 to 70 dBA. At Site ST-3, at the corner of the park located at the intersection of "C" Street and Bayview Avenue, Harry Bridges Boulevard traffic was audible with trucks generating maximum noise levels of 58 to 61 dBA. Local traffic on "C" Street generated maximum noise levels of 68 to 70 dBA. Children on skateboards in the parking lot across Bayview from the monitoring site generated noise levels of 60 to 61dBA.

At Site ST-4 below long-term meter LT-4, at the intersection of "C" Street and Hawaiian Avenue, heavier "C" Street traffic and freeway traffic on the I-110 dominated the measured noise levels. Vehicular traffic on "C" Street was typically in the range of 65 to 74 dBA. The freeway traffic was steady at about 62 dBA with maximum levels ranging from 63 to 65 dBA when louder trucks passed by on the freeway. Site ST-5 was selected near the intersection of Gulf Avenue and "D" Street to measure ambient noise levels further north in the Wilmington neighborhood. At this location, freeway traffic on I-110 was steady at about 55 dBA. Activities at the Port of Los Angeles were inaudible. Other sources of noise contributing to the measured noise levels included occasional local traffic, birds in the trees, and the sounds of children playing. Local cars on the roadways generated maximum noise levels of 60 to 66 dBA as they passed through the intersection

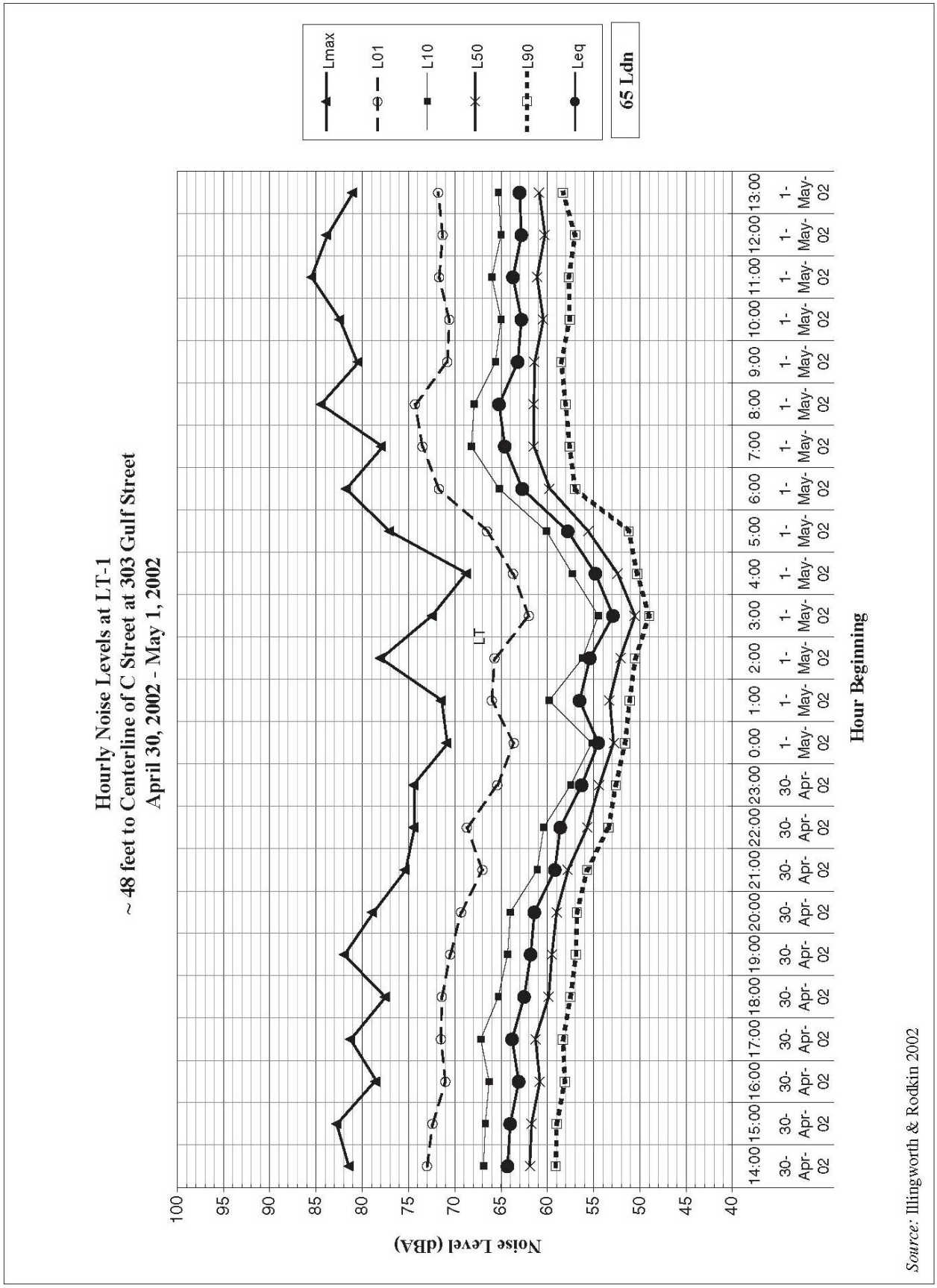
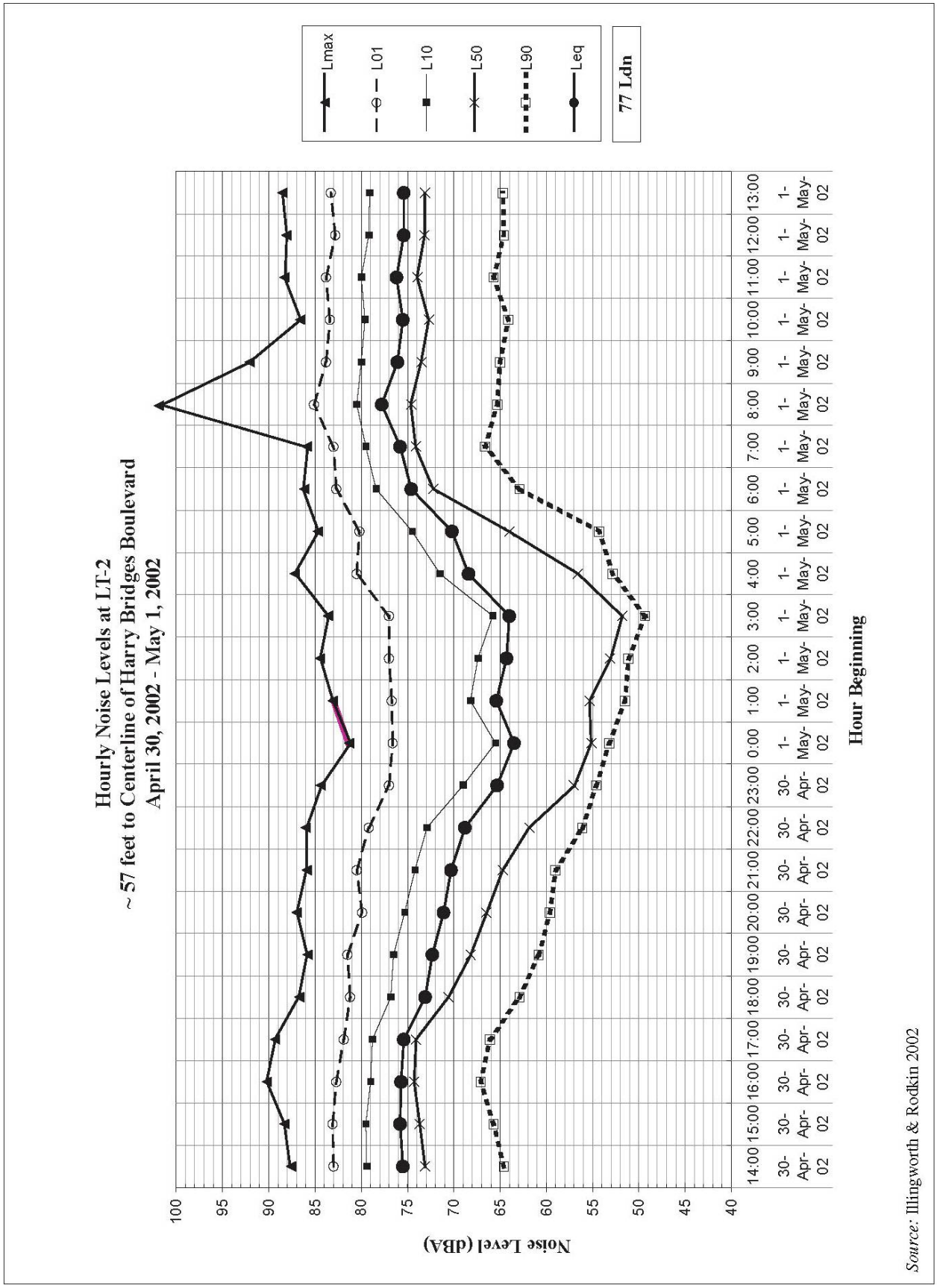
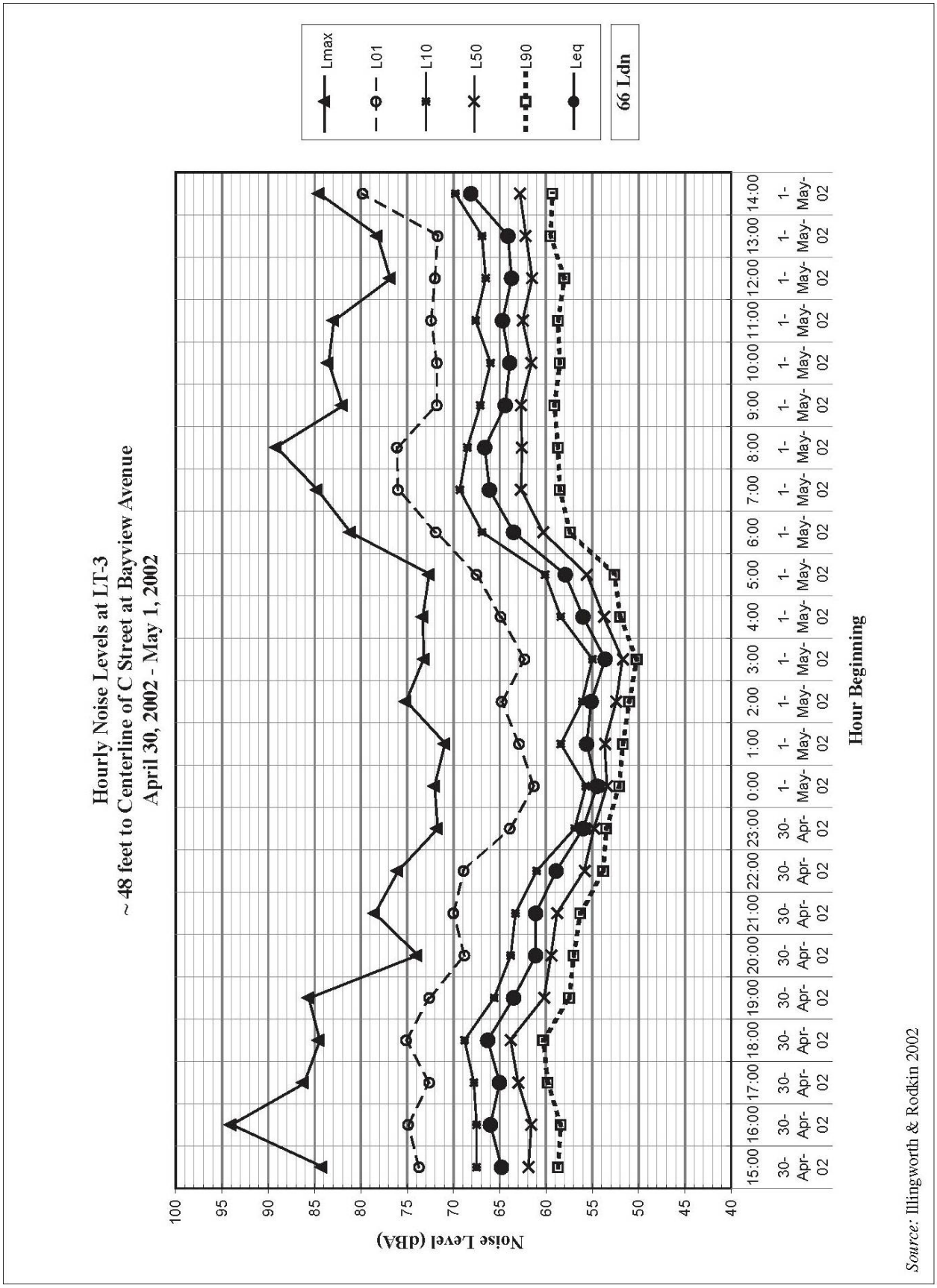


Figure 3.9-2. Hourly Noise Levels at LT-1



Source: Illingworth & Rodkin 2002

Figure 3.9-3. Hourly Noise Levels at LT-2



Source: Illingworth & Rodkin 2002

Figure 3.9-4. Hourly Noise Levels at LT-3

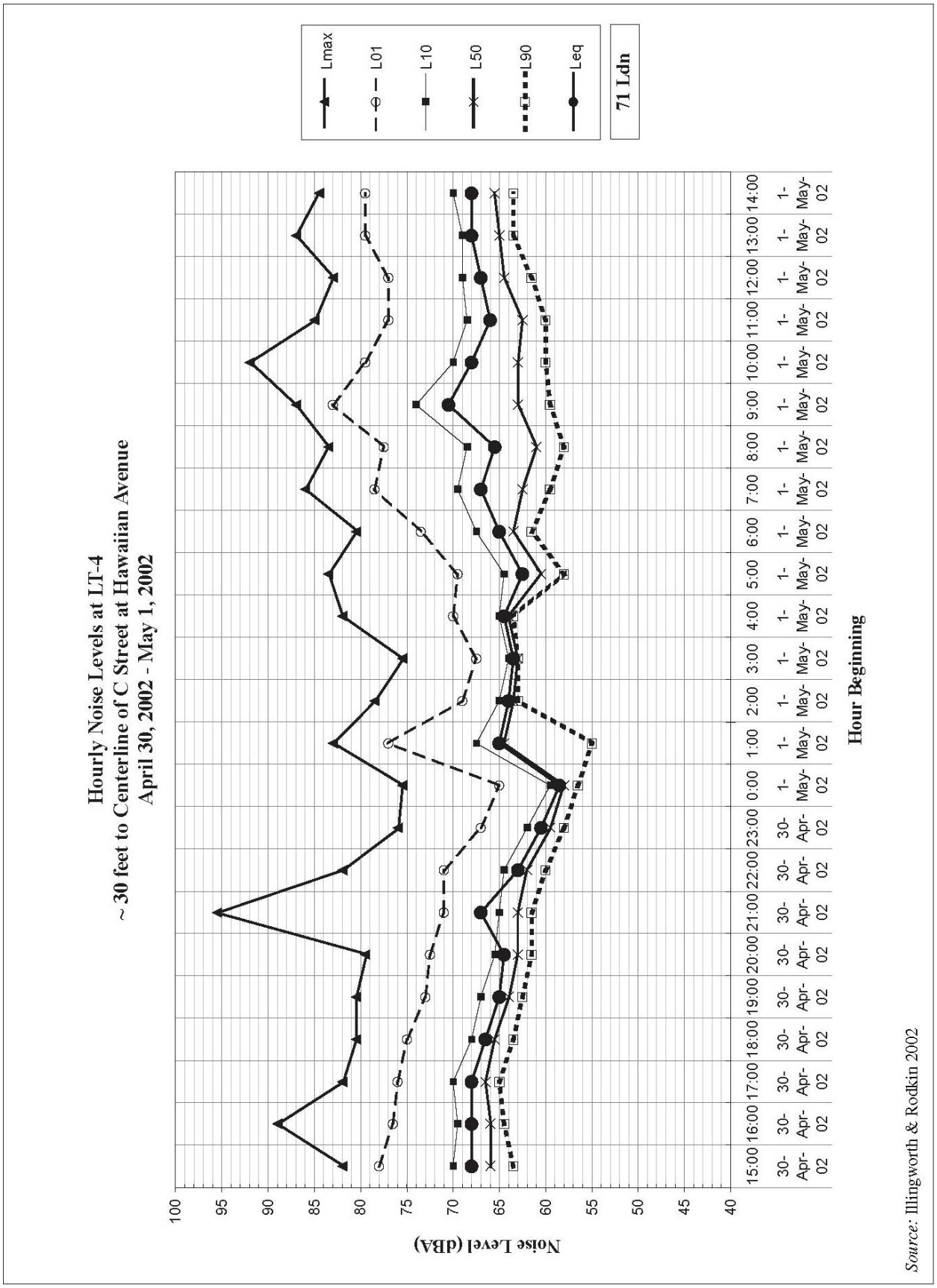


Figure 3.9-5. Hourly Noise Levels at LT-4

Table 3.9-3. Short-Term Noise Measurement Data (dBA)

Site	*Location*	*Date*	*Time*	L_{max}	L_{min}	$L_{(1)}$	$L_{(10)}$	$L_{(50)}$	$L_{(90)}$	L_{eq}
ST-1	Below LT-1 ~ 48 feet to Centerline of "C" Street at 303 Gulf Street	4/30/2002	15:50	77	54	72	65	58	56	62
ST-2	Below LT-2 ~ 57 feet to Centerline of Harry Bridges Boulevard	4/30/2002	15:30	87	58	83	79	73	65	75
ST-3	Below LT-3 ~ 48 feet to Centerline of "C" Street at Bayview Avenue	4/30/2002	16:10	70	55	69	63	58	56	60
ST-4	Below LT-4 ~ 30 feet to Centerline of "C" Street at Hawaiian Avenue	4/30/2002	16:30	74	60	72	67	63	62	65
ST-5	Northwest Corner of Gulf Avenue and "D" Street	4/30/2002	16:50	66	54	65	60	57	55	58
ST-6	East end Knoll Hill at end of Viewland	10/29/02	12:06	68	59	67	64	62	60	62
		10/29/02	15:45	74	61	67	66	64	62	64
		10/30/02	9:30	69	59	68	66	64	63	64
ST-7	Elberon, Summerland, MacArthur intersection, Top of slope	10/29/02	16:20	75	61	73	69	66	64	67
		10/30/02	9:55	73	62	71	69	66	64	67
ST-7A	Elberon, Summerland, MacArthur intersection, 100' back from top of slope	10/30/02	10:10	67	54	65	60	58	56	58
ST-8	Harbor Occupational Center near Metals Building	10/29/02	16:40	64	54	62	60	57	56	58
ST-9	End of Cabrillo Ave @ #1130	10/30/02	10:45	62	53	61	59	57	55	57

3.9.2.2.2 San Pedro

The noise monitoring survey was conducted in October 2002 to quantify existing ambient noise levels at representative sensitive receiver locations near the West Basin in San Pedro. Noise levels were monitored during the daytime, evening, and nighttime in consecutive hourly intervals at two locations, LT-5 and LT-6. The results of the measurements are shown in Figures 3.9-6 and 3.9-7. The figures provide the range of noise levels measured during each hour depicted by the statistical descriptors L_{90}, L_{50}, L_{10}, and L_{01}, as well as the maximum noise level and the energy average or equivalent sound level $L_{eq[h]}$. The measured L_{dn}, the 24-hour day/night average noise level, is also shown in each figure. The existing L_{dn} on top of Knoll Hill was 65 dBA L_{dn} at Site LT-5. Hourly noise levels were typically between 55 and 60 dBA $L_{eq[h]}$. Noise levels were steady over the entire 24-hour period, with the exception of occasional local noises

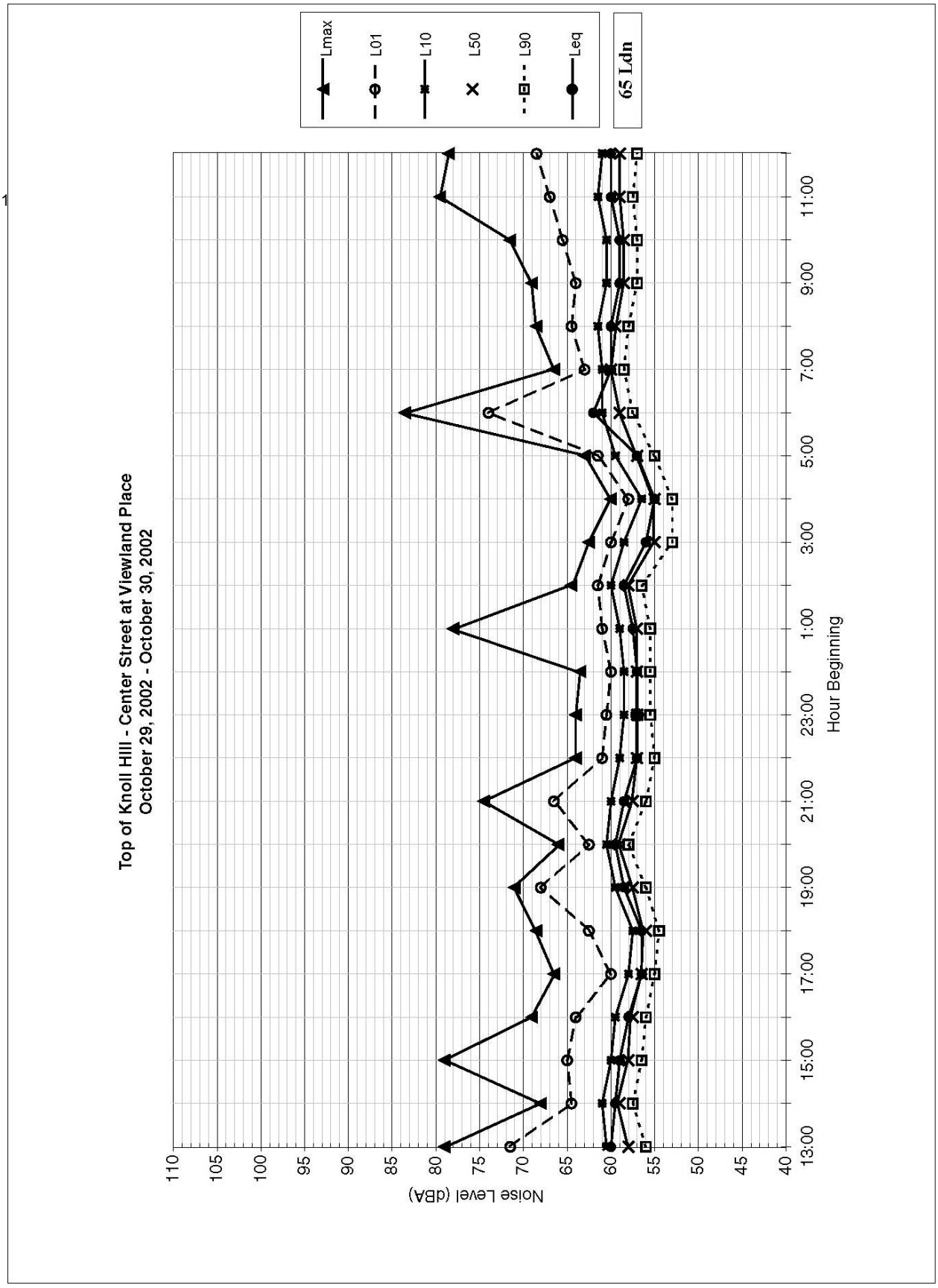


Figure 3.9-6. Hourly Noise Levels at LT-5

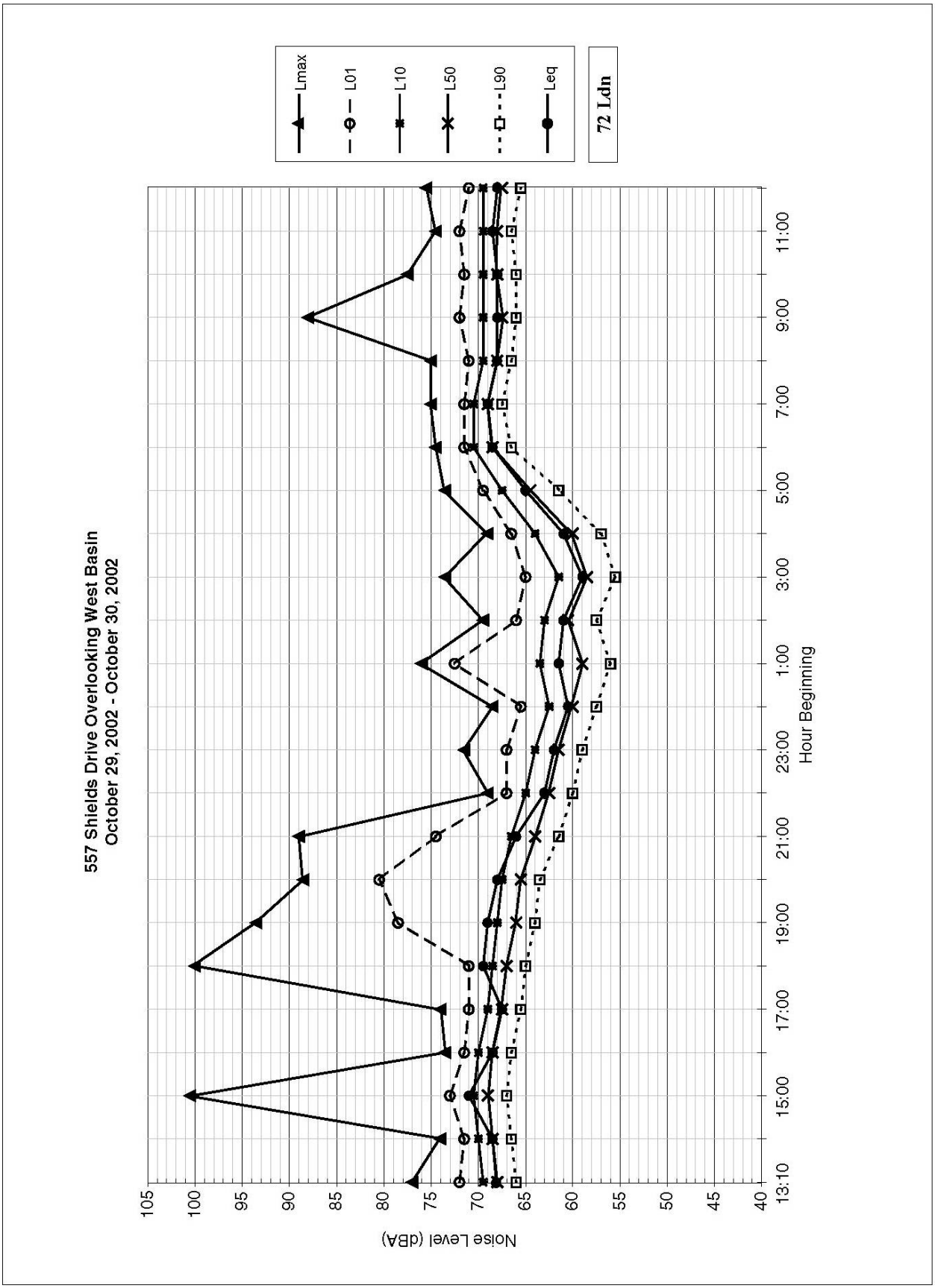


Figure 3.9-7. Hourly Noise Levels at LT-6

resulting from vehicular traffic or dogs in the dog park. Measurement location LT-6 was on Shields Drive on the top of the slope overlooking Pacific Avenue and most of the West Basin. Major sources of noise at this monitoring site included vehicular traffic on Pacific Avenue, vehicular traffic on the I-110 Freeway, and truck traffic circulating inside the Port property paralleling Pacific Avenue. Railroad trains on the railroad tracks within the Port also were audible, but did not contribute in a major way to measured noise levels. High maximum noise levels during several hours are believed to have resulted from local traffic near the microphone. At this measurement location on Shields Drive, the measured level was 72 dBA L_{dn}.

Short-term, 15-minute duration noise measurements were made at additional representative locations. Site ST-6 was at the east end of the top of Knoll Hill overlooking Berth 100 and the intersection of Front Street and a truck access to the West Basin. Truck traffic on these roadways was the dominant source of noise, generating typical maximum levels of 62 to 64 dBA. A helicopter flying overhead during the mid-day measurement generated a maximum noise level of 68 dBA and a truck horn during the late afternoon measurement generated a maximum noise level of 74 dBA. The higher noise levels during the late afternoon measurement resulted from heavier truck traffic. Construction activities at Berth 100 were virtually complete. The backland areas were nearly all paved and there were no activities at the wharf. Construction noise did not make a measurable or noticeable contribution to the October 2002 noise measurement survey. Data are presented in Table 3.9-3.

Site ST-7 was located near the intersection of Elberon, Summerland, and MacArthur in the residential area west of Knoll Hill. The noise environment at this location was very similar to the noise environment at location LT-6. The measurement site was selected at the top of the slope with an unobstructed view of traffic on Pacific Avenue, Front Street, and the Port as well as the Freeway and more distant sources of noise in the area. For comparative purposes, a supplementary measurement was made 100 feet from the top of the slope along Elberon across from 409 Elberon. At this location (ST-7A) noise from truck traffic directly below was shielded by the top of the slope. This resulted in approximately a 9-dBA reduction in the measured noise level and demonstrates the effectiveness of topographical shielding.

The Harbor Occupational Center, located on Pacific Avenue south of Knoll Hill, was identified in the original West Basin Transportation Improvement Program EIR (LAHD 1997a) as a noise sensitive receiver, because a previous project considered the removal of Knoll Hill, potentially exposing this site to increased noise from new and existing transportation sources. One short-term measurement was made at this location (ST-8). Vehicular traffic on Route 47 (Vincent Thomas Bridge) was again the dominant noise source. The noise environment was not very different than it was previously. This receiver location is not considered further in this evaluation because the proposed Project would not affect the noise environment at this site.

Another site that could potentially be affected by the proposed Project is located on upper Cabrillo Avenue west of the I-110 Freeway. This neighborhood is elevated above the freeway and has views of the freeway and the West Basin. Measurement location ST-9 was selected to characterize noise levels in this neighborhood. The site for this measurement was at the south end of the street near 1130 Cabrillo Avenue. Vehicular traffic on the I-110 Freeway dominated the noise environment during the

measurements. Port activities were indistinguishable from other traffic noise. The noise environment at this location was very steady, characteristic of distant freeway noise with noise levels typically ranging from about 54 to 60 dBA, with occasional slight excursions above and below this range.

3.9.2.2.3 Berth 200-202 Marinas

The noise monitoring survey was conducted in November 2005 to quantify existing ambient noise levels at representative sensitive receiver locations near the site proposed for the relocation of the Pier A rail yard. Physical conditions in the area, sources of ambient noise, and levels of activity are not believed to have changed substantially since December 2003. Ambient noise measurements conducted in November 2005 are believed to be conservative baseline conditions for the purposes of this assessment because as provided below, the noise levels are very low, free of major fluctuations, and dominated by near field noises nearby. There have also been no known significant new facility construction/operations in the area that would cause an increase in the noise measurements between these two time periods. In fact, in 2004, Auto Warehousing ceased their operations at Berth 200A and DAS saw a reduction in their auto handling at Berths 195-199 in that same year which, if audible at this marina site, would result in a noisier baseline. Noise levels were monitored during the daytime, evening, and nighttime in consecutive hourly intervals at one location, LT-7, as shown on Figure 3.9-8, in the Island Yacht 2 Marina located at Berth 200X. The results of the measurement are shown in Figure 3.9-9. The figure provides the range of noise levels measured during each hour depicted by the statistical descriptors, L_{90}, L_{50}, L_{10}, and L_{01}, as well as the maximum noise level and the energy average or equivalent sound level, $L_{eq[h]}$. The measured L_{dn}, the 24-hour day/night average noise level was 61 dBA. Average noise levels were typically between 50 to 60 dBA $L_{eq(h)}$ during the daytime and 50 to 55 dBA $L_{eq(h)}$ during the nighttime. Maximum instantaneous noise levels typically ranged from about 60 to 70 dBA during the daytime and the nighttime with occasional excursions between 70 and 80 dBA. Based on field observations, the L_{max} levels resulted from neighborhood vehicles passing close the measurement equipment.

Short-term noise measurements were made at additional representative locations in the marinas that could potentially be affected by noise from the relocation of the rail yard. Site ST-9 was in the Leeward Marina located near the intersection of Henry Ford and Anaheim Boulevard. Average noise levels during the measurement typically ranged from about 55 to 58 dBA $L_{eq(h)}$. This resulted from distant traffic on Henry Ford Avenue. Aircraft generated a maximum noise level of 59 dBA. The noise environment was generally free of major fluctuations. There is a railroad train crossing at Henry Road Avenue located about 450 feet from the Leeward Marina. While no trains were noted during the site visit, train horns at this distance would be clearly audible in this setting. Site ST-10 was located at the California Yacht Marina, Berth 202. Noise levels at this location were also very steady, with average levels ranging typically between 50 to 53 dBA. Sources of noise included distant traffic and wind in some palm trees at about 50 dBA, a helicopter at a level of 57 dBA, birds at maximum levels of about 53 dBA, and a noon whistle at an industrial facility generated 51 dBA.

3.9.3 Applicable Regulations

The *Los Angeles 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 questions a, c, and d for potential impacts resulting from construction activities and from potential impacts resulting from operation during each of the two stages of construction and operation proposed for this project. Questions b, 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.

3.9.3.1 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 pm and 7:00 am 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.*

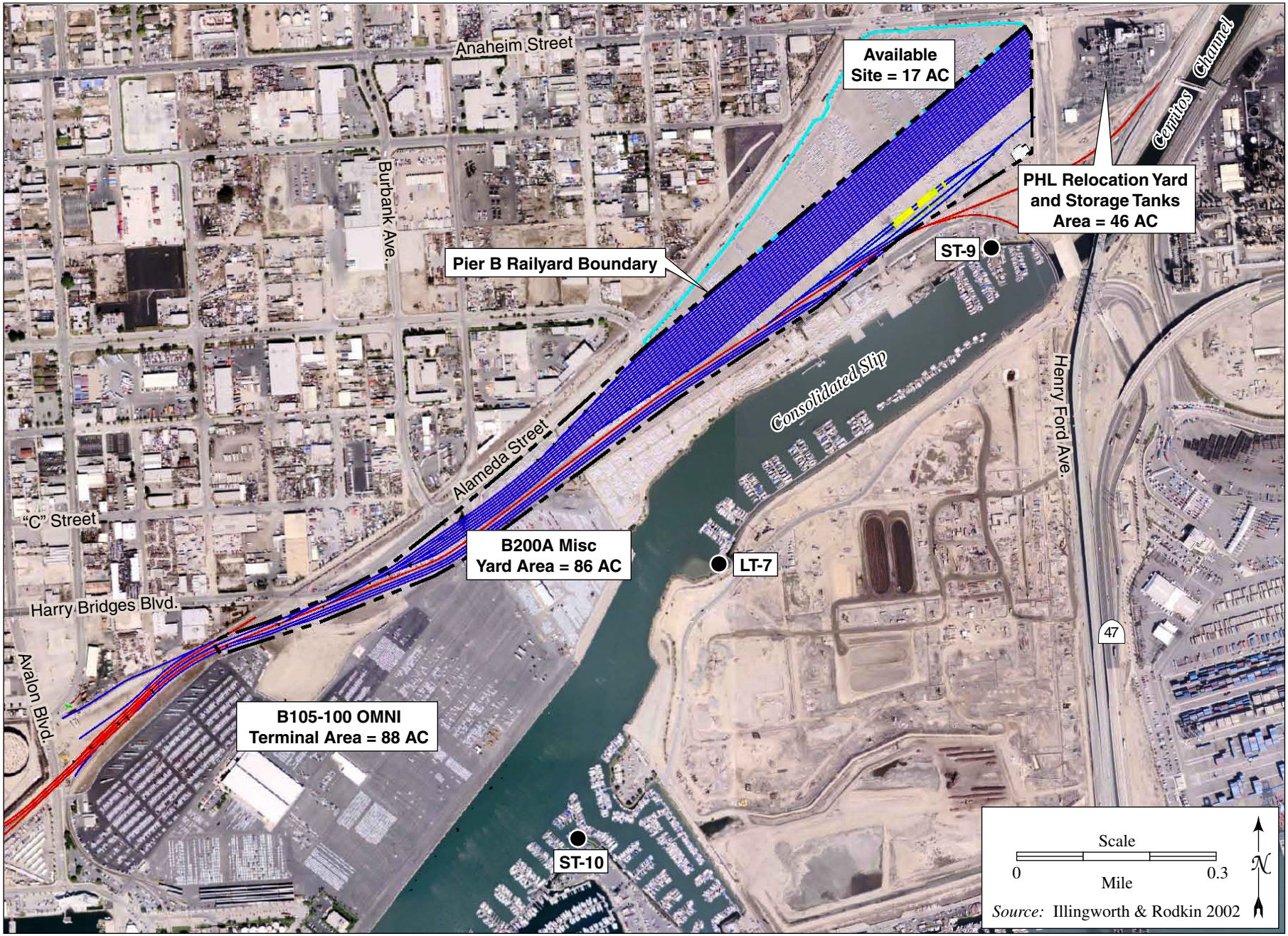
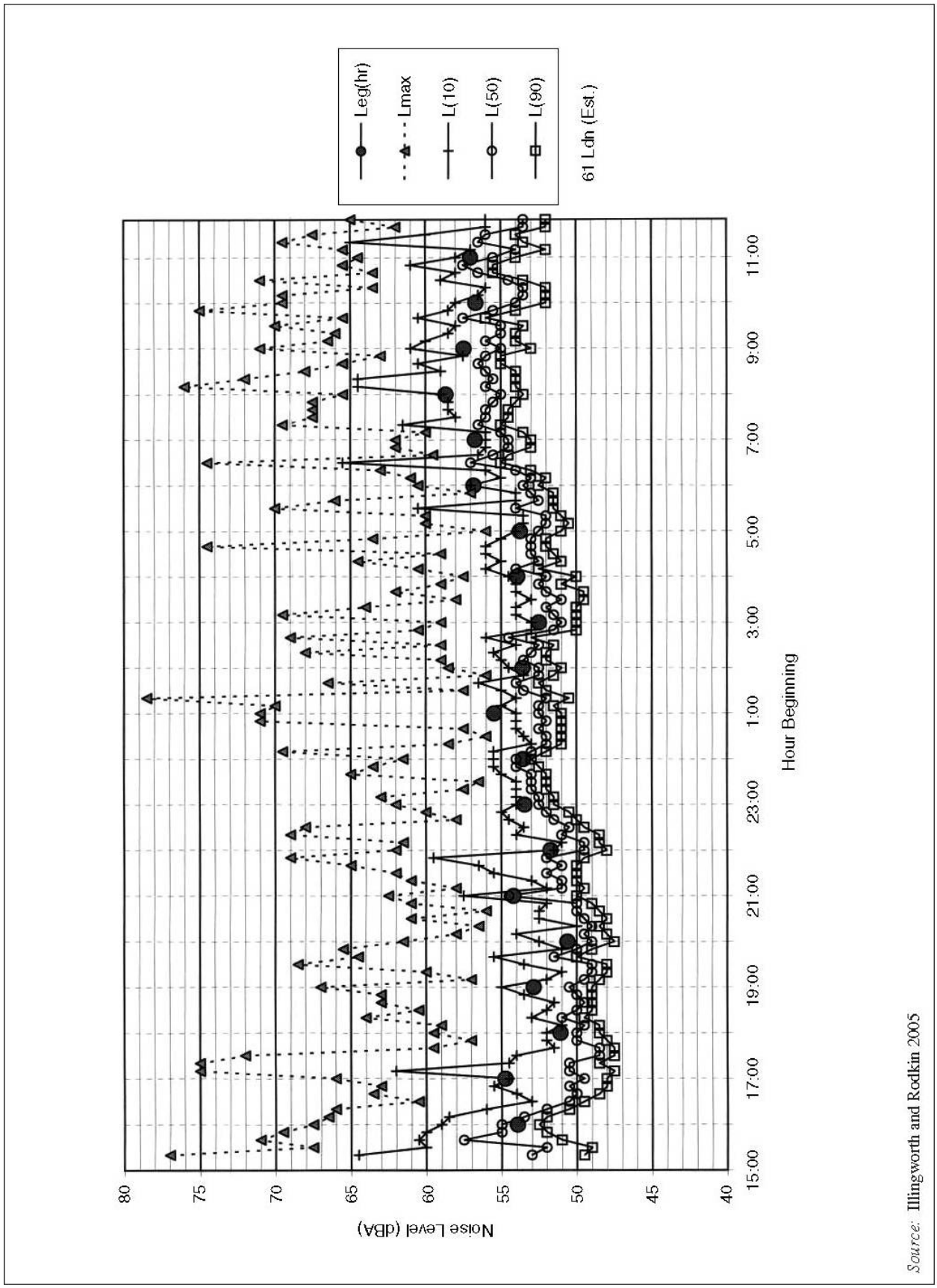


Figure 3.9-8. Noise Measurement Locations



Source: Illingworth and Rodkin 2005

Figure 3.9-9. Noise Levels at Measurement Location LT-7, Consolidated Slip Marina, November 7-8, 2005

The code section then provides certain provisions for exceptions and exemptions.

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

> *Between the hours of 7:00 am and 10:00 pm in any residential zone of the City or within 500 feet thereof, no person shall operate or cause to be operated any powered equipment or powered hand tool that produces a maximum noise level exceeding the following noise limits at a distance of 50 feet there from (a) 75 dBA for construction, industrial and agricultural machinery including crawler tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, depressors, and pneumatic or other powered equipment; (b) 75 dBA for powered equipment of 20 horsepower or less intended for infrequent use in residential areas including chain saws, log chippers, and powered hand tools; and (c) 65 dBA for powered equipment intended for repetitive use in residential areas including lawn mowers, backpack mowers, small lawn and garden tools, and riding tractors.*
>
> *The noise limits for particular equipment listed above in (a), (b) and (c) shall be deemed to be superseded and replaced by noise limits for such equipment from and after their establishment by final regulations adopted by the Federal Environmental Protection Agency and published in the Federal Register.*
>
> *Said noise limitations shall not apply where compliance therewith is technically infeasible. The burden of proving that compliance is technically infeasible shall be upon the person or persons charged with a violation of this section. Technical infeasibility shall mean that said noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers, and/or other noise reduction device and techniques during the operation of the equipment.*

3.9.4 Impacts and Mitigation Measures

3.9.4.1 Methodology

This section summarizes the methodology. Detailed supporting information for the tasks is presented in each section. The methodology to determine the significance of noise impacts resulting from construction and operation of the proposed Project included several tasks. Representative sensitive receiver locations were identified. The noise sensitive receivers were identified through field observations. The monitoring sites were selected to characterize noise exposures in the neighborhoods surrounding the proposed Project. Noise surveys were conducted to establish existing ambient noise levels at sensitive receiver locations in the study area. A noise measurement survey was conducted during construction at Berth 100 to determine typical noise levels resulting from "worst-case" construction at the Port. Noise levels resulting from construction activities were estimated for each major phase of

construction in each area using measured data from the noise survey and calculations of construction noise levels based on the numbers and types of pieces of equipment expected at the construction sites. A noise measurement survey was conducted at the existing rail yard on Pier A in November 2005 to determine typical noise levels resulting from railroad operations. Operational noise levels from stationary sources were based upon previous data collected at the Port.

The methodology for the assessment of noise impacts from the proposed improvements to Harry Bridges Boulevard included several tasks. In addition to the ambient noise survey described above, additional noise measurements were conducted in 2002 along Harry Bridges Boulevard to establish source noise levels and to calibrate TNM, the FHWA/Caltrans traffic noise model used to predict noise levels from the existing transportation corridor. The effects of widening the roadway and increased traffic were calculated using the TNM V2.5 computer model.

3.9.4.1.1 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 would normally constitute the baseline physical conditions by which the CEQA lead agency determines whether an impact is significant. For purposes of this Draft EIS/EIR, the CEQA Baseline for determining the significance of potential impacts under CEQA is December 2003. CEQA Baseline conditions are described in Table 2-2 of Section 2.4.

The CEQA baseline represents the setting at a fixed point in time and differs from the "No Project" Alternative (discussed in Section 2.5.1) in that the No Project Alternative addresses what is likely to happen at the site over time, starting from the existing conditions. The No Project Alternative allows for growth at the Project site that would occur even without improvements constructed a t the TraPac Terminal.

3.9.4.1.2 No Federal Action/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 No Federal Action scenario. The No Federal Action/NEPA Baseline condition for determining significance of impacts coincides with the "No Federal Action" condition, which is defined by examining the full range of construction and operational activities the applicant could implement and is likely to implement absent permits from the USACE. Therefore, the No Federal Action/NEPA Baseline would not include any dredging, filling of the Northwest Slip, wharf construction or upgrades, or crane replacement. The No Federal Action/NEPA Baseline would include construction and operation of all upland elements (existing lands) for backlands or other purposes. The upland elements are assumed to include:

- Adding 57 acres or existing land for backland area and an on-dock rail yard;
- Constructing a 500-space parking lot for union workers;

- Demolishing the existing administration building and constructing a new LEED certified administration building and other terminal buildings;
- Adding new lighting and replacing existing lighting, fencing, paving, and utilities on the backlands;
- Relocating the Pier A rail yard and constructing the new on-dock rail yard;
- Widening and realigning Harry Bridges Boulevard; and
- Developing the Harry Bridges Buffer Area.

Unlike the CEQA Baseline, which is defined by conditions at a point in time, the No Federal Action/NEPA Baseline is not bound by statute to a "flat" or "no growth" scenario; therefore, the USACE may project increases in operations over the life of a project to properly analyze the No Federal Action/NEPA Baseline condition. Normally, any ultimate permit decision would focus on direct impacts 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 is defined by comparing the proposed Project or alternative to the No Federal Action/NEPA Baseline (i.e., the increment). The No Federal Action/NEPA Baseline conditions are described in Table 2-2 of Section 2.4.

The No Federal Action/NEPA Baseline also differs from the "No Project" Alternative, where the Port would take no further action to construct and develop additional backlands (other than the 176 acres that currently exist). Under this alternative, no construction impacts would occur. However, forecasted increases in cargo throughput would still occur as greater operational efficiencies are made.

3.9.4.2 Thresholds of Significance

The *Los Angeles CEQA Thresholds Guide* (City of Los Angeles 2006) contains the following significance thresholds related to construction noise. Quantification of ambient noise levels (existing and projected at the time of construction) is measured in CNEL.

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

NOI-1 Construction activities lasting more than 1 day would exceed existing ambient exterior noise levels by 10 dBA or more at a noise sensitive use; or if 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.

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

NOI-2 Construction activities would exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 pm and 7:00 am Monday

through Friday, before 8:00 am or after 6:00 pm on Saturday, or at any time on Sunday.

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

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

Sensitive receivers in the Port area that are potentially affected by operational noise from the proposed Project include residential land uses (single- and multi-family housing, boats used as residences) and neighborhood parks. At these land uses, a significant impact would occur if the proposed Project causes CNEL noise levels to increase by (1) 5 dBA or greater where the existing CNEL is less than 70 dBA; or (2) 3 dBA or greater where the existing CNEL exceeds 70 dBA.

3.9.4.3 Impacts and Mitigation

The potential for noise from construction and operation of each project alternative to affect the noise environment at sensitive receiver locations in the surrounding Wilmington and San Pedro districts of the City of Los Angeles is assessed in this section.

3.9.4.3.1 Proposed Project

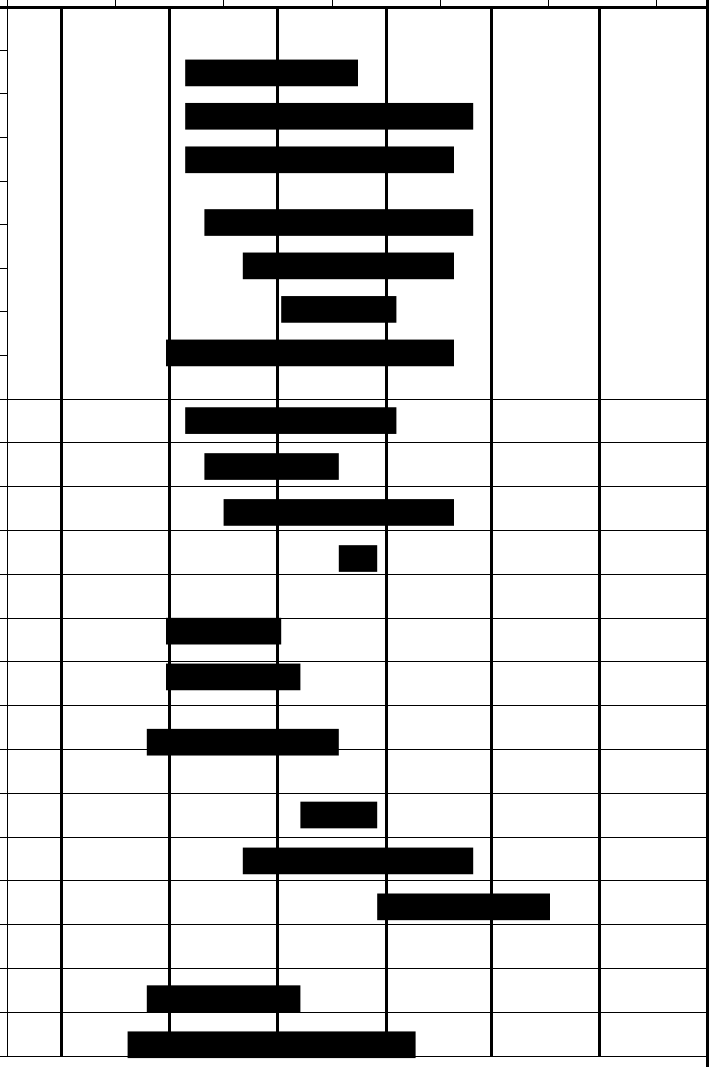
3.9.4.3.1.1 Construction Impacts

Table 3.9-5 shows the noise level ranges of typical construction equipment. During any construction project, the overall average noise levels vary with the level of construction activity and the types of equipment that are on site and operating at a particular time. Hourly average noise levels have been estimated based on the numbers and types of equipment that are expected to be on site to complete the various construction projects. These sources included landside equipment such as loaders, dozers, and trucks, and waterside equipment such as hoists, generators, and tugs. Tables 3.9-6, 3.9-7 and 3.9-8 show the computed hourly average noise levels at a reference distance of 100 feet for each of the major construction phases. These levels represent the noise levels that would occur during the noisiest phase of construction, for example, wharf construction with pile driving occurring. The following standard controls would be implemented during proposed Project construction and are assumed in the noise assessment:

1. **Construction Hours.** Limit construction to the hours of 7:00 am to 9:00 pm on weekdays, between 8:00 am and 6:00 pm on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays as prescribed in the City of Los Angeles Noise Ordinance.

Table 3.9-5. Construction Equipment Noise Level Range

	A-Weighted Noise Level (dB) at 50 Feet
	60 70 80 90 100 110
Earth Moving:	
Compactors (Rollers)	
Front Loaders	
Backhoes	
Bulldozers	
Scrapers, Graders	
Pavers	
Trucks	
Materials Handling:	
Concrete Mixers	
Concrete Pumps	
Cranes (Movable)	
Cranes (Derrick)	
Stationary:	
Pumps	
Generators	
Compressors	
Impact Equipment:	
Pneumatic Wrenches	
Jackhammers & Rock Drill	
Pile Drivers (Peak)	
Others:	
Vibrators	
Saws	



Source: Harris (1979)

2. **Construction Days.** Do not conduct noise-generating construction activities on weekends or holidays unless critical to a particular activity (e.g., concrete work).

3. **Construction Equipment.** Properly muffle and maintain all construction equipment powered by internal combustion engines.

4. **Idling Prohibitions.** Prohibit unnecessary idling of internal combustion engines near noise sensitive areas.

5. **Equipment Location.** Locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far as practical from existing noise sensitive land uses.

Table 3.9-6. Construction Source Noise Levels at Berths 136-147 during Phase I (Completed by 2015)

Location	*Construction Activity*	$L_{eq\text{-}hour}$ *(dBA) at 100 Feet*
Berths 136-147	Backland Development (Harry Bridges Boulevard)	88
	Backland Development (Pier A yard)	88
	Building Demo (Pier A yard)	89
Berths 145-147	Wharf Demo	92
	Wharf Construction with Pile Driving	95
	Rip Rap Placement Dredging	84
	ICTF	88
		89

Table 3.9-7. Construction Source Noise Levels at Harry Bridges Boulevard Improvements and Buffer Area during Phase I (Completed by 2015)

Construction Activity	$L_{eq\text{-}hour}$ *(dBA) at 100 Feet*
Harry Bridges Boulevard Improvements -Foundation	82
Harry Bridges Boulevard Improvements -Paving	82
Harry Bridges Boulevard Buffer Area	88

Table 3.9-8. Construction Source Noise Levels during Phase II (2015-2025)

Location	*Construction Activity*	$L_{eq\text{-}hour}$ *(dBA) at 100 Feet*
Berths 136-147	Northwest Slip Fill	
	Rip Rap Placement	84
	Dredging	88
	Wharf Construction with Pile Driving	95

6. **Quiet Equipment Selection.** Select quiet construction equipment whenever possible. Comply where feasible with noise limits established in the City of Los Angeles Noise Ordinance.

7. **Notification.** Notify residents adjacent to the proposed Project site of the construction schedule in writing.

An opportunity arose to obtain noise level data during a major construction project at Berth 100 in July 2002. The noise survey included noise measurements close to specific pieces of equipment and community noise measurements on Knoll Hill and in the west of Knoll Hill neighborhood (Knoll Hill only has one residence.). A

summary of the numerous pieces of construction equipment operating during the noise survey and the measured noise levels are presented in Table 3.9-9. These data represent maximum construction noise levels expected at the Port during any phase of construction because they included pile driving during wharf construction. The wharf construction with pile driving generated an L_{eq} equivalent to about 90 dBA at 100 feet from the center of the pile driving activity. This level is 5 dBA lower than the equivalent level shown in Table 3.9-6, demonstrating that those are conservative estimates accounting for all construction activities during wharf construction when accumulated and set to a reference distance of 100 feet.

Table 3.9-9. Berth 100 Wharf Construction Noise Levels Measured July 15, 2002

Noise Source and Measurement Location	*L_{max} (dBA)*	*L_{eq} (dBA)*
1. Caterpillar 973 Track Dozer at 200 feet	76	69
2. Diesel Hammer driving landside concrete piles at 160 feet	96	86
3. Komatsu PC200 Loader ripping dirt and rock at 50 feet	85	74
4. Manitowoc 888 Crane lifting materials at 50 feet	87	78
5. General construction including cranes, air compressors, trucks, loaders, hammering (no pile driving)	74	69
6. General construction including 5 cranes, 3 large loaders, 8-10 small loaders, water truck, numerous concrete trucks, pile driving measured on top of Knoll Hill (Site ST-6). Note: Dominant noise source was container trucks at Front Street entrance to Port; container truck horn	77-84	64
7. Same construction activity ongoing but inaudible at Site ST-7 in west of Knoll Neighborhood at Summerhill, Elberon, MacArthur intersection; traffic noise dominates	79	66

Impact NOI-1: Construction activities during Phase I and Phase II would temporarily and periodically generate noise, and noise levels during Phase I would substantially exceed existing ambient daytime noise levels at sensitive receivers near the new Pier A rail yard and along "C" Street during construction of the Buffer Area.

Construction activities would typically last more than 10 days in any 3-month period for all of the construction activities listed in Tables 3.9-6, 3.9-7, and 3.9-8. Following the thresholds for significance, an impact would be considered significant if noise from these construction activities would exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use.

The existing Harry Bridges Boulevard is located approximately 500 feet from the "C" Street neighbors. Sensitive receivers potentially affected by Harry Bridges Boulevard construction noise are located along the north side of "C" Street. The baseline ambient noise levels at these receivers described in Section 3.9.2.2.1 were found to typically range from 63 to 67 dBA $L_{eq(h)}$ during the daytime when construction activities would occur and the CNEL ranges from 71 dBA CNEL near Hawaiian Avenue down to 65-66 dBA further east. The construction noise is calculated to be up to 65 dBA $L_{eq(h)}$ at these residences. Assuming continuous construction at a level of 65 dBA $L_{eq(h)}$ noise level for the daytime period, the construction-generated CNEL noise level would be up to 63 dBA

CNEL at the closest residence. Noise from the construction activities would not exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use. Construction activities associated with the improvements to the roadway would not substantially increase noise levels in the Wilmington neighborhood. Construction activities would not generate noise levels substantially higher than noise levels typically generated by the truck traffic and rail traffic utilizing the existing transportation corridor, and local traffic along "C" Street. Residences in San Pedro located west of Knoll Hill are 6,000 feet or more from the nearest possible construction area along Harry Bridges Boulevard. The existing ambient noise levels at these receivers, described in Section 3.9.2.2.2 are similar to existing ambient noise levels in the "C" Street neighborhood of the Wilmington District. Noise levels attenuate with increasing distance. Because ambient noise levels are equivalent to those discussed in the previous paragraph and because construction noise levels would be lower than at the nearest most affected receivers in Wilmington, noise from construction activities would not exceed existing ambient noise levels in San Pedro. This is a less-than-significant impact.

The proposed Project would include construction of a buffer area between Harry Bridges Boulevard and "C" Street. Construction equipment required for this project element would include but not be limited to dozers, loaders, backhoes, trucks, graders, compactors and trenchers. Construction activities would be occurring as close as within approximately 50-75 feet of residences along "C" Street. Typically, construction activities would be occurring within distances of between 50 and 200 feet of these residences. Maximum noise levels would intermittently reach 80-90 dBA and average noise levels would reach 88 dBA L_{eq}, the levels shown in the tables above at the reference distances. On a worst case day, when construction in the buffer area is immediately adjacent to a residence, the CNEL could be up to 86 dBA CNEL. It should be noted that pile driving, which is included for information purposes, is the noisiest individual source of construction noise and would not occur as part of buffer construction. Construction noise levels would exceed ambient noise levels discussed in the preceding paragraph by 5 dBA or more. This would occur intermittently and would depend upon the staging of the work as the buffer construction proceeds. Construction activities in the buffer area will be located at an even greater distance from the residences in San Pedro than the Harry Bridges Boulevard construction activities, so as discussed in the previous paragraph, these construction activities would not exceed ambient noise levels in other sensitive neighborhoods and would cause a less-than-significant impact there.

The next nearest construction area to the Wilmington neighborhoods would be located in the Northwest Slip. Northwest Slip construction activities are proposed to take place during Phase II between the years 2015 and 2025. Riprap placement and dredging would occur at a distance of approximately 1,500 feet from the closest Wilmington neighborhoods along "C" Street. Maximum hourly average noise level would intermittently reach 54-59 dBA $L_{eq(h)}$. The calculated construction-generated CNEL from these construction activities would be 52-57 dBA CNEL. Noise from the construction activities occurring at the closest point to the neighbors in the Northwest Slip would not exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use. Pile driving would occur during wharf construction in the Northwest Slip. Wharf construction with pile driving is the noisiest construction activity that would occur. Pile driving would occur at a distance of approximately 2,100 feet from the nearest noise sensitive residence along "C" Street. Hourly average noise levels from pile driving and

wharf construction, based on calculated noise levels and actual measured noise levels during wharf construction including pile driving, are estimated to range from 90-95 dBA $L_{eq(h)}$ at a distance of 100 feet. Hourly average noise levels are calculated to range from 58-62 dBA $L_{eq(h)}$ at the nearest residences, located along "C' Street in the Wilmington District. Assuming continuous pile driving during the daytime hours, as previously discussed for other construction activities, the CNEL is calculated to range from 56-60 dBA CNEL. Noise from wharf construction would not exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use. This is a less-than-significant impact. Other construction activities that would be necessary to implement the proposed Project include backland development at Berths 136-147, wharf demolition and wharf construction at Berths 145-147, rip rap placement and dredging at Berths 145-147, and construction of the intermodal container transfer facility. A review of the data in Table 3.9-6 shows that source construction noise levels are similar to and fall within the range of construction noise levels assessed in the previous paragraphs. These construction activities would all occur at locations at distances equivalent to or greater than the distances between the construction activities discussed in the previous paragraphs. Predicted construction noise levels would, therefore, be less than the construction noise levels assessed and found to be less than significant for worst case construction activities discussed in previous paragraphs. Construction activities for the balance of all work necessary to implement the proposed Project would, therefore, cause a less-than-significant impact at noise sensitive receiver locations.

The Pier A rail yard would be moved to a new location northeast of the TraPac Terminal near the Berth 200-202 Marinas. The new rail yard would be constructed within 5 months after a 1-month mobilization period. It would take 3 months for utilities (drainage system, electricity, water, gas, sewer, and lighting) to be provided to the site. It would take 5 months to prepare the site and lay tracks. Sources of construction noise that are unique to railroad yard construction include a rail saw, spike driver, tie cutter, tie handler, and tie inserter. Otherwise, general construction equipment would be the same. Typical A-weighted noise levels resulting from this additional equipment typically ranges from about 77 to 90 dBA, measured at a distance of 50 feet (USDOT 1995). The (total) source noise level would be 89 dBA $L_{eq(h)}$ at 100 feet from the construction activity. Sensitive receivers near the rail yard include live-aboards located in marinas across the channel from the new rail yard site. Residents in the Wilmington and San Pedro neighborhoods are located more than 3,000 feet from this construction area and would not be affected by construction noise because the noise would be inaudible at this distance. Construction activities would be located within approximately 500 to 800 feet of the nearest noise sensitive marina areas. Hourly average noise levels could reach 70dBA $L_{eq(h)}$ during busy construction periods. The CNEL could reach 68 dBA CNEL. Existing baseline noise levels in the marinas range from about 50 to 60 dBA $L_{eq(h)}$ during the daytime and the baseline CNEL is 61 dBA CNEL. During construction at the new Pier A rail yard, construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more. This is a significant impact.

Potential Health Impacts

As discussed in the section above, construction associated with the marine terminal improvements, the Pier A rail yard relocation, the Harry Bridges Blvd. modifications

and Harry Bridges Buffer Area all generate noise level at residences below the L_{AF} > 120dB acute noise levels discussed in Section 2.9.3.1.3. However, such levels may contribute to health effects caused by lower noise levels over longer time frames.

CEQA Impact Determination

Construction noise levels for the Harry Bridges Boulevard widening and at Berths 136-147 would not cause a substantial increase in noise levels at sensitive receivers. This would be a less than significant impact. The construction activities at the Harry Bridges Buffer Area would cause temporary and periodic noise levels substantially above existing ambient noise levels in the Wilmington neighborhood north of "C" Street, resulting in a significant impact. The construction activities at the proposed Pier A rail yard near the Berth 200-202 Marinas would generate construction noise levels that would cause temporary and periodic noise levels substantially above existing ambient noise levels in nearby marinas where people live, resulting in a significant impact. These significant impacts would be short-term.

Mitigation Measures

NOI-1: The following mitigation measures would reduce impact of noise from construction activities:

a) **Construction Hours.** Limit construction to the hours of 7:00 AM to 9:00 PM on weekdays, between 8:00 AM and 6:00 PM on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays as prescribed in the City of Los Angeles Noise Ordinance.

b) **Construction Days.** Do not conduct noise-generating construction activities on weekends or holidays unless critical to a particular activity (e.g., concrete work).

c) **Temporary Noise Barriers.** When construction is occurring within 500 feet of a residence or park, temporary noise barriers (solid fences or curtains) shall be located between noise-generating construction activities and sensitive receptors.

d) **Construction Equipment.** Properly muffle and maintain all construction equipment powered by internal combustion engines.

e) **Idling Prohibitions.** Prohibit unnecessary idling of internal combustion engines near noise sensitive areas.

f) **Equipment Location.** Locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far as practical from existing noise sensitive land uses.

g) **Quiet Equipment Selection.** Select quiet construction equipment whenever possible. Comply where feasible with noise limits established in the City of Los Angeles Noise Ordinance.

h) **Notification.** Notify residents adjacent to the proposed Project site of the construction schedule in writing.

Residual Impacts

Considering the distances between the construction noise sources and receivers, the standard controls, and temporary noise barriers may not be sufficient to reduce the projected increase in the ambient noise level to the point where it would no longer cause a substantial increase. With implementation of these measures, construction equipment noise levels generated at the buffer area and rail yard sites could substantially exceed existing ambient noise levels. Thus, impacts to "C" Street residents resulting from buffer construction, as well as impacts to marina residents from construction of the Pier A rail yard, will remain significant even after mitigation.

NEPA Impact Determination

As discussed above, in-water construction work (e.g., pile driving) would occur at a distance of more than 1,500 feet from sensitive receivers so levels would be reduced to below ambient levels. There would be no adverse short-term effects under NEPA from in-water work. The new Pier A rail yard and the Harry Bridges Buffer Area are considered part of the No Federal Action/NEPA Baseline conditions and, therefore, noise related to construction of these components is not relevant to the NEPA impact determination.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts.

Impact NOI-2: Construction activities would not exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.

No construction activities are planned to occur between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.

CEQA Impact Determination

There would be no construction-related noise impacts during prohibited hours as described above; consequently, no impacts under CEQA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts.

NEPA Impact Determination

There would be no in-water construction-related noise impacts during prohibited hours as described above; consequently, no impacts under NEPA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts.

3.9.4.3.1.2 Operational Impacts

Impact NOI-3: Operations would generate noise, but noise levels would not substantially exceed existing ambient noise levels at sensitive receivers.

On-Site Operations

Operation activities that would generate noise would include truck and rail movements in the newly developed backland areas and container terminal operations at the new wharves. Truck movements and truck container loading were monitored April 30, 2002 along the backland areas of Berths 136-139 during the noise monitoring survey in the Wilmington District. Noise levels generated in these areas are more than 10 dBA lower than, and not distinguishable from, noise levels generated by truck traffic circulating on the Port's perimeter roadways. The new wharf would be located more than 2,000 feet from the Wilmington residential neighbors located north of "C" Street and farther from residences west of I-110 and Knoll Hill. Noise from truck operations at the terminals would cause no increase in noise at sensitive receivers. This is a less-than-significant impact. Noise levels resulting from container terminal operations were monitored at the Port of Los Angeles in June 1990 (I&R 1990). These data represent noise levels of typical operations at a container terminal from typical/standard equipment including but not limited to: container ships, assist tugs, electric container cranes, yard hostlers, toppicks, side picks, and heavy duty vehicles. These pieces of equipment are the same equipment pieces operating at the Berth 136-147 container terminal. Two ships were being unloaded simultaneously at the Evergreen Lines Terminal. Four large gantry cranes were operating simultaneously. Several straddle loaders were observed to be loading and unloading trucks. Many trucks were circulating at the terminal. Noise levels were monitored at a point directly across the main channel from the container terminal at a distance of about 1,100 feet from the container terminal. The cranes generated maximum noise levels of 56 to 57 dBA. The sounds of containers clanking reached a maximum noise level of 63 dBA. Truck horns were the most identifiable noise sources, with maximum levels reaching 70 dBA. The average noise level generated by the operations was 59 dBA L_{eq}. Accounting for the difference in distance where these measurements were conducted, and the distance of 2,000 feet over ground between the Wilmington residential neighbors and the proposed terminal activities, the average noise level from this level of activity is calculated to be about 50-53dBA L_{eq}. Noise generated

by container terminal loading operations would be below existing ambient noise levels day or night at these nearest residential neighbors. Intermittent noises would be indistinguishable from road traffic on the Port's perimeter roadways, local street traffic noise, and existing sources of intermittent noise within the Port. Assuming 24-hour per day continuous operations, the Port-related activities would cause, by themselves, a CNEL in the range of 57-60 dBA CNEL. As discussed in previous paragraphs and in Section 3.9.2.2.1, baseline noise levels range from 65 dBA CNEL to 71 dBA CNEL at the most affected sensitive receiver locations. Port-related activities already occur at Berths 136-147. Projected noise levels under maximum activities that would include ship loading, would generate noise levels below existing ambient noise levels resulting primarily from vehicular on the roadway networks. Such activities would cause no significant increase in CNEL levels at these locations.

The proposed Project includes a 30-acre buffer area between Harry Bridges Boulevard and "C" Street from Figueroa Street to Laguna Avenue, on vacant, Port-owned property (see Figure 2-3). The creation of this buffer area would ensure that no development that would potentially increase noise levels in the buffer area would occur, protecting the noise environment of the most affected residents.

The operation of the new Pier A rail yard near the Berth 200-202 Marinas would generate noise. A noise monitoring survey was conducted at the existing Pier A rail yard in November 2005 to quantify noise levels from railroad operations. The noise survey included noise measurements made during a one-hour period when the rail yard was actively working between 10:00 AM and 11:00 AM on November 8, 2005. The noise measurements were conducted at the Port of Los Angeles Materials and Environmental Testing Lab located across Pier A Street from the active area in the Pier A rail yard. The measurements were made at a distance of about 200 feet from where the engines were operating. The activity consisted of a train engine coupling to, and uncoupling from, groups of railroad cars, shuttling the cars back and forth on different tracks, and recoupling the cars to other strings of railroad cars. Noise sources included the engine, the train horn, the crunching sounds associated with the slack action of the strings of cars starting and stopping, and the sounds of the impacts of cars being coupled together. During the hour of attended noise measurements, maximum noise levels resulting from these activities typically ranged from about 65 dBA to 75 dBA at a distance of about 200 to 300 feet from the source. The highest noise level measured was 97 dBA, resulting from a train horn. Occasionally, the sound of cars crunching together when coupling ranged from 78 to 80 dBA. The average noise level for the hour of busy activity was 68 dBA $L_{eq(h)}$.

The Harbor Belt Line Railroad was contacted to determine typical daily operations (personal communication, Fox 2005). The busiest level of activity occurs between 6:00 AM and 3:00 PM when incoming trains are sorted. Between 3:00 PM and 6:00 PM is the lowest activity period. Between 6:00 PM and 6:00 AM, the activity level is substantially less than during the busier daytime period when crews deliver cars to other areas of the port.

The proposed rail yard would operate as it presently does at the existing rail yard. The primary activity would occur near the western end of the new rail yard. This would place the activity area furthest from sensitive receivers, approximately 800 feet from the nearest residence in a yacht marina. Maximum noise levels at this

distance would be reduced at least 12 dBA below the maximum noise levels described above due to increased distance. Maximum and average noise levels would typically fall between the range of 53 to 63 dBA and could occasionally reach 68 dBA. The average noise level for the hour of busy activity is calculated to be about 56 dBA $L_{eq(h)}$. To calculate the CNEL, one must assume a level of activity and associated noise level during each of the three time periods discussed above (6:00 AM to 3:00 PM, 3:00 PM to 6:00 PM, and 6:00 PM to 6:00 AM). Based on measurements and observations previously described for the Harbor Belt Line Railroad, it is assumed that during the busiest activity period, the hourly average noise level would be 56 dBA L_{eq}. A noise level of 50 dBA L_{eq} would occur for the 3:00 PM to 6:00 PM period and the 6:00 PM to 6:00 AM period. After adjusting the hourly average noise levels by adding 5 dBA to the evening period (7:00 PM to 10:00 PM) and 10 dBA to the average noise levels during the nighttime (10:00 PM to 7:00 AM), based on the definition of CNEL, the calculated noise level is 58 dBA CNEL. The baseline ambient noise level in the marinas, based on measurements as discussed in Section 3.9.2.2.3, is 61 dBA CNEL. When the noise level from operations at the relocated Pier A rail yard is added to the ambient noise level, the noise level is calculated to increase to, at most, 63 dBA CNEL. This would be a 2 dBA increase in the CNEL. This is a less-than-significant impact.

Railway Corridor Noise

The implementation of the proposed Project would result in an increase in the number of rail movements into and out of the Port of Los Angeles along the Alameda Transportation Corridor. Proposed Project throughput comparisons presented in Table 2-1 of the project description include the number of annual rail trips generated from Berths 136-147 under the CEQA Baseline (2003) Condition, the No Federal Action/NEPA Baseline conditions and the proposed Project in the years 2015 and 2038. To determine the maximum possible increase in noise along the rail corridors resulting from the proposed Project, a comparison was made between the CEQA 2003 Baseline of 731 annual rail trips and the year 2038 with the proposed Project of 1,434 annual rail trips. This is an increase of about two rail trips per day. There would be about four more events per day when a train horn is sounded at the Henry Ford Avenue grade crossing north of the consolidated slip causing audible noise at the Leeward Marine. There are currently approximately 68 peak rail trips per day in and out of the San Pedro Bay Ports excluding light engine switching operations (Parsons 2006). The incremental increase in noise levels along the railroad corridors serving the Port of Los Angeles is calculated to be 0.2 dBA CNEL. This is a less-than-significant impact.

Train horns are a part of the acoustical environment in the environs of the Port of Los Angeles. There is an existing at-grade crossing at Henry Ford Avenue north of the Consolidated Slip and this was discussed in the noise setting section. This project will not change the level of noise from a train horn, it will result in an increase in the number of times the horns are sounded because there would be about four more intermodal train movements per day through this crossing. The significance threshold is based on increased noise above the baseline level in terms of the CNEL noise metric, and this is a function of the level, duration, and time of day the noise occurs; as well as the existing noise level. There are currently about 8 train

movements per day through this crossing distributed throughout the day and night. The project would add 4 movements distributed throughout the day and night. The increase in the train generated CNEL is calculated to be 1.8 dBA CNEL. An increase of at least 3 dBA in the CNEL is considered to be a substantial increase causing a significant impact. Also, because vehicular traffic on Henry Ford Avenue and other railroad trains traveling adjacent to Henry Ford Avenue are more significant sources of noise at the Leeward Marina, the increase in the overall CNEL would be less than 1.8 dBA CNEL. So, while there will be an increase in the number of audible train horns, this is a less than significant environmental impact.

Harry Bridges Boulevard Widening

Harry Bridges Boulevard is proposed to be widened, but will remain four lanes. Over the past several years, various roadway alignments have been considered for Harry Bridges Boulevard. The proposed Project includes a 30-acre buffer area between Harry Bridges Boulevard and "C" Street from Figueroa Street to Laguna Avenue, on vacant, port-owned property (see Figure 2-3). The creation of this buffer area would ensure that no development that would potentially increase noise levels within the buffer area would occur, including the realignment of the Harry Bridges Boulevard transportation corridor closer to the residences located along "C" Street. By designating this as a buffer area, port-related activities that would potentially increase noise level in the area would not be developed.

The incremental increase in noise at the most affected sensitive receivers along "C" Street was determined by modeling the traffic noise generated by Harry Bridges Boulevard using TNM Version 2.5. Example model runs are included in the Noise Appendix. Existing and future traffic data included in the Transportation/Circulation Appendix was used in the traffic noise modeling. In the baseline model, the existing four-lane section of Harry Bridges Boulevard was assumed. In the future models, a wider cross section was assumed, with widening occurring to the north bringing some of the traffic closer to the "C" Street neighbors. First, a direct comparison was made between the existing four lane section and the future widened section assuming the same traffic volume. The redistribution of traffic adjacent to the existing travel lanes would cause an increase of 0.8 dBA at reference modeling locations adjacent to the roadway where noise from Harry Bridges Boulevard dominates the noise environment and by 0.3 dBA or less at the "C" street residences. Proposed Project-generated traffic for the years 2015 and 2038 was then added to the baseline traffic to determine the incremental increase in noise generated by Harry Bridges Boulevard traffic. The calculated increase in noise levels along Harry Bridges Boulevard was 1 dBA $L_{eq(h)}$. It is assumed that the hourly distribution of noise levels throughout the day and night would remain the same as it is today. The calculated increase in CNEL noise levels is, therefore, also calculated to be 1 dBA CNEL for both the years 2015 and 2038. At the Wilmington neighbors along "C" Street, the noise environment is affected by vehicular traffic on the I-110 freeway, local traffic on "C" Street, and, to a lesser extent, vehicular traffic along Harry Bridges Boulevard and activities at the Port. Because the noise from Harry Bridges Boulevard is a minor contributor to noise levels at the most affected receivers, the increase in the overall CNEL at these receivers would range from 0 dBA CNEL to 1 dBA CNEL. There would be no change in the character of the noise environment because the roadway traffic would not be moved noticeably closer

to the community. Based on the noise monitoring and modeling completed for the proposed Project there is no evidence to indicate that any noise abatement would be required for the proposed Project. Furthermore, because of the distances involved between the residences and the existing Harry Bridges Boulevard alignment, and parameters which affect performance of noise barriers, it is likely that a noise barrier would be of only minimal benefit in reducing noise from Harry Bridges Boulevard. Landscaped mounds are being considered within the Harry Bridges Boulevard Landscaped Area. The design for these landscaped mounds is not yet complete, and so no excess attenuation for the landscaped mounds has been included in the noise model. Landscaped mounds, depending upon their final design, could provide a further reduction in Harry Bridges Boulevard noise in the Wilmington neighborhood to the north.

The Transportation/Circulation Appendix includes turning movement volumes for 17 intersections located along roadways in the study area. Turning movement volumes for all 17 study intersections were reviewed to determine if any other roadway segments could experience a measurable increase in traffic noise as a result of project-generated traffic. It was determined by inspection that traffic added by the proposed Project would be insignificant and would cause a 0 dBA increase to the CNEL on all other roadway segments studied except along Harry Bridges Boulevard adjacent to the proposed Project study area.

Potential Health Impacts

In terms of operation, operational noise levels would not cause the CNEL to be increased by 3dBA CNEL, nor exceed 5dBA over the current CNEL at sensitive locations. For example, truck and rail movements associated with container terminal operations would generate noise average noise levels at about 50-53dBA L_{eg} at the closest Wilmington residential neighborhoods. As discussed in Section above, baseline noise levels range from 65dBA CNEL to71 dBA CNEL at the most affected sensitive receiver locations. Operational noise levels at residences are below the L_{AF} > 120dB acute noise levels discussed in Section 2.9.2.1.3 and will not contribute to hearing impairment. However, both existing noise levels and operational noise levels may contribute to chronic health impacts associated with lower noise levels. The proposed Project however, would not contribute to these potential health impacts above baseline levels.

CEQA Impact Determination

Because operational noise levels would not cause the CNEL to be increased by 3 dBA CNEL or more to the "normally unacceptable" or "clearly unacceptable" category, nor exceed 5 dBA over the current CNEL at sensitive locations, operational noise impacts will be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts will be less than significant, so there will be no residual impacts.

NEPA Impact Determination

Because operational noise levels would not increase substantially above the current CNEL or the No Federal Action/NEPA Baseline at sensitive receptor locations, there would be less than significant impacts would under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts will be less than significant; there will be no residual impacts

3.9.4.3.2 Alternatives

3.9.4.3.2.1 Alternative 1 - No Project Alternative

The No Project Alternative (Alternative 1) evaluates what would reasonably be expected to occur on the site in the absence of issuance of a federal permit or a discretionary land use decision by the Port of Los Angeles. This alternative would not allow implementation of the proposed Project or other physical improvements at Berths 136-147 beyond what already exists there. Because this alternative does not include the new rail yard, there would be more truck trips generated from this site in the future than under the proposed Project.

3.9.4.3.2.1.1 Construction Impacts

Impact NOI-1: Construction activities at Berths 136-147 that could be implemented under the No Project Alternative would not generate noise levels that would exceed existing ambient noise levels at sensitive receivers.

This alternative would not allow implementation of the proposed Project or other physical improvements at Berths 136-147 beyond what already exists there. There would, therefore, not be construction activities that could potentially cause an increase in noise levels at nearby sensitive receiver locations.

CEQA Impact Determination

Due to the fact that the No Project Alternative does not include any construction there would be no impacts under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts under CEQA.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction).Therefore, potential impacts are not applicable under NEPA since there would be no federal action under this alternative.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation measures are necessary under NEPA.

Residual Impacts

With no mitigation required, there would be no residual impacts under NEPA.

Impact NOI-2: Construction activities would not exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.

No construction activities are planned to occur between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.

CEQA Impact Determination

There would be no construction-related noise impacts during prohibited hours as described above; consequently, no impacts under CEQA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or new wharf construction). Therefore, potential impacts are not applicable under NEPA since there would be no federal action under this alternative.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation measures are necessary under NEPA.

Residual Impacts

With no mitigation required, there would be no residual impacts under NEPA.

3.9.4.3.2.1.2 Operational Impacts

Impact NOI-3: Operations would generate noise, but noise levels would not substantially exceed existing ambient noise levels at sensitive receivers.

On-Site Operations

Operations at Berths 136-147 would be implemented through existing facilities. There would be an increase in TEUs in the year 2003 to the years 2025 through 2038 for this alternative. There would also be an increase in the duration of time that container operations are occurring at Berths 136-147 to accommodate the increase in TEUs. Port operations at Berths 136-147, while intermittently audible, do not make a measurable contribution to daily average noise levels in the surrounding residential neighborhoods. The noise environment in these neighborhoods would continue to result primarily from vehicular traffic on the roadway network. This is a less-than-significant impact.

Harry Bridges Boulevard Operations

There would be an increase in traffic on Harry Bridges Boulevard. Under the No Project Alternative, Harry Bridges Boulevard would not be widened. Traffic data included in the Transportation/Circulation Appendix was used to calculate the incremental increase in noise that could result from increased traffic under the No Project Alternative. Because the roadway would not be widened, and the hour-by-hour distribution of traffic noise along Harry Bridges Boulevard would be anticipated to be the same as it is under the baseline, and the percentage distribution of vehicle types is assumed to be the same as under the baseline, the increase was calculated solely based on the increase in traffic volume. Incremental increases attributable to Harry Bridges Boulevard traffic were 1 dBA L_{eq} and 1 dBA CNEL. The cumulative increases calculated in the years 2015 and 2038 are 2–3 dBA L_{eq} and 23 dBA CNEL including the contribution from the incremental increases in traffic generated at Berths 136-147 and cumulative development included within the transportation analysis. The total increase above the baseline ambient noise levels at the nearest

Wilmington district residences would be 0-1 dBA CNEL. An increase in noise of 0-1 dBA CNEL is not a substantial increase according to the Los Angeles CEQA thresholds. Therefore, impacts would be less than significant.

The Transportation/Circulation Appendix includes turning movement volumes for 17 intersections located along roadways in the study area. Turning movement volumes for all 17 study intersections were reviewed to determine if any other roadway segments could experience a measurable increase in traffic noise as a result of traffic generated by this alternative. It was determined by inspection that traffic added by this alternative would be insignificant and would cause a dBA increase to the CNEL on all other roadway segments studied except along Harry Bridges Boulevard adjacent to the proposed Project study area.

Railway Corridor Noise

There would be no increases in train movements under the No Project Alternative attributable to the Berth 136-147 terminal because the rail yard would not be constructed; there would be no container train access to the facility. Therefore, noise from rail activity under the No Project Alternative would be less than for the proposed Project.

CEQA Impact Determination

Because operational noise levels would not result in the CNEL being increased by 3 dBA CNEL or more nor increased to within the "normally unacceptable" or "clearly unacceptable" category, nor exceed 5 dBA over the current CNEL at sensitive locations, less than significant noise impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, residual impacts would be less than significant.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water proposed Project area (i.e., no dredging, filling of the Northwest Slip or wharf construction). Therefore, potential impacts are not applicable under NEPA since there would be no federal action under this alternative.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation measures are necessary under NEPA.

Residual Impacts

With no mitigation required, there would be no residual impacts under NEPA.

3.9.4.3.2.2 Alternative 2 – Reduced Project: Proposed Project Without the 10-Acre Fill

The Reduced Project Alternative (Alternative 2) is the same as the proposed Project except the 10-acre Northwest Slip would not be filled for additional backland storage area with a 400-foot wharf built adjacent to it. The throughput for the years 2025 through 2038 would be the same as for the proposed Project. Construction-related noise impacts would be similar to the proposed Project (**Impact NOI-1** and **NOI-2**) during Phase 1. There would be no significant construction activities between 2015 and 2038. The general description of construction-related noise presented in the proposed Project is applicable to this alternative for Phase 1. Construction source noise levels during Phase II presented in Table 3.9-8 are not applicable to this alternative.

3.9.4.3.2.2.1 Construction Impacts

Impact NOI-1: Construction activities would temporarily and periodically generate noise, and noise levels would substantially exceed existing ambient daytime noise levels at sensitive receivers near the new Pier A rail yard and along "C" Street during construction of the Buffer Area.

Construction activities would typically last more than 10 days in any 3-month period for all of the construction activities listed in Tables 3.9-6 and 3.9-7. Following the thresholds for significance, an impact would be considered significant if noise from these construction activities would exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use.

The existing Harry Bridges Boulevard is located approximately 500 feet from the "C" Street neighbors. Sensitive receivers potentially affected by Harry Bridges Boulevard construction noise are located along the north side of "C" Street. The baseline ambient noise levels at these receivers described in Section 3.9.2.2.1 were found to typically range from 63 to 67 dBA $L_{eq(h)}$ during the daytime when construction activities would occur and the CNEL ranges from 71 dBA CNEL near Hawaiian Avenue down to 65-66 dBA further east. The construction noise is calculated to be up to 65 dBA $L_{eq(h)}$ at these residences. Assuming continuous construction at a level of 65 dBA $L_{eq(h)}$ noise level for the daytime period, the construction-generated CNEL noise level would be up to 63 dBA CNEL at the closest residence. Noise from the construction activities would not exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use. Construction activities associated with the improvements to the roadway would not substantially increase noise levels in the Wilmington neighborhood. Construction activities would not generate noise levels substantially higher than noise levels typically generated by the truck traffic and rail traffic utilizing the existing transportation corridor, and local traffic along "C" Street. Residences in San Pedro located west of Knoll Hill are 6,000 feet or more from the nearest possible construction area along Harry Bridges Boulevard. The existing ambient noise levels at these receivers, described in Section 3.9.2.2.2 are similar to existing ambient noise levels in the "C" Street neighborhood

of the Wilmington District. Noise levels attenuate with increasing distance. Because ambient noise levels are equivalent to those discussed in the previous paragraph and because construction noise levels would be lower than at the nearest most affected receivers in Wilmington, noise from construction activities would not exceed existing ambient noise levels in San Pedro. This is a less-than-significant impact.

Alternative 2 would include construction of a buffer area between Harry Bridges Boulevard and "C" Street. Construction equipment required for this project element would include but not be limited to dozers, loaders, backhoes, trucks, graders, compactors and trenchers. Construction activities would be occurring as close as within approximately 50-75 feet of residences along "C" Street. Typically, construction activities would be occurring within distances of between 50 and 200 feet of these residences. Maximum noise levels would intermittently reach 80-90 dBA and average noise levels would reach 88 dBA L_{eq}, the levels shown in the tables above at the reference distances. On a worst case day, when construction in the buffer area is immediately adjacent to a residence, the CNEL could be up to 86 dBA CNEL. It should be noted that pile driving, which is included for information purposes, is the noisiest individual source of construction noise and would not occur as part of buffer construction. Construction noise levels would exceed ambient noise levels discussed in the preceding paragraph by 5 dBA or more. This would occur intermittently and would depend upon the staging of the work as the buffer construction proceeds. This is a significant impact. Construction activities in the buffer area will be located at an even greater distance from the residences in San Pedro than the Harry Bridges Boulevard construction activities, so as discussed in the previous paragraph, these construction activities would not exceed ambient noise levels in other sensitive neighborhoods and would cause a less-than-significant impact there.

The next nearest construction area to the Wilmington neighborhood would be located at a distance of more than 2,000 feet from the Wilmington neighborhood. Other construction activities that would be necessary to implement the Reduced Project Alternative include backland development at Berths 136-147, wharf demolition and wharf construction at Berths 145-147, rip rap placement and dredging at Berths 145-147, and construction of the intermodal container transfer facility. With the exception of wharf construction with pile driving, the data in Table 3.9-6 shows that source construction noise levels are similar to and fall within the range of construction noise levels assessed in the previous paragraphs. Pile driving and wharf construction would occur at a distance of approximately 5,000 feet from the nearest sensitive receivers. Hourly average noise levels from pile driving and wharf construction, based on calculated noise levels and actual measured noise levels during wharf construction including pile driving, are estimated to range from 90-95 dBA $L_{eq(h)}$ at a distance of 100 feet. Hourly average noise levels are calculated to range from 48-52 dBA $L_{eq(h)}$ at the nearest residences located along "C" Street in the Wilmington District and in the San Pedro area near Knoll Hill. Assuming continuous pile driving during the daytime hours, as previously discussed for other construction activities, the CNEL is calculated to range from 46-50 dBA CNEL. Noise from wharf construction with pile driving would not exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use. These construction activities would all occur at locations at distances equivalent to or greater than the distances between the construction activities discussed in the previous paragraphs. Predicted construction noise levels would, therefore, be less than the construction noise levels

assessed and found to be less than significant for worst case construction activities discussed in previous paragraphs. This is a less-than-significant impact.

The Pier A rail yard would be moved to a new location northeast of the TraPac Terminal near the Berth 200-202 Marinas. The new rail yard would be constructed within 5 months after a 1-month mobilization period. It would take 3 months for utilities (drainage system, electricity, water, gas, sewer, and lighting) to be provided to the site. It would take 5 months to prepare the site and lay tracks. Sources of construction noise that are unique to railroad yard construction include a rail saw, spike driver, tie cutter, tie handler, and tie inserter. Otherwise, general construction equipment would be the same. Typical A-weighted noise levels resulting from this additional equipment typically ranges from about 77 to 90 dBA, measured at a distance of 50 feet (USDOT 1995). The (total) source noise level would be 89 dBA $L_{eq(h)}$ at 100 feet from the construction activity. Sensitive receivers near the rail yard include live-aboards located in marinas across the channel from the new rail yard site. Residents in the Wilmington and San Pedro neighborhoods are located more than 3,000 feet from this construction area and would not be affected by construction noise because the noise would be inaudible at this distance. Construction activities would be located within approximately 500 to 800 feet of the nearest noise sensitive marina areas. Hourly average noise levels could reach 70-dBA L_{eq} during busy construction periods. Existing ambient noise levels in the marinas range from about 50 to 60 dBA. During construction at the new Pier A rail yard, construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more. This is a significant impact.

CEQA Impact Determination

Construction noise levels for the Harry Bridges Boulevard widening and at Berths 136-147 would not cause a substantial increase in noise levels at sensitive receivers. This would be a less than significant impact. The construction activities at the Harry Bridges Buffer Area would cause temporary and periodic noise levels substantially above existing ambient noise levels in the Wilmington neighborhood north of "C" Street. The construction activities at the proposed Pier A rail yard near the Berth 200-202 Marinas would generate construction noise levels that would cause temporary and periodic noise levels substantially above existing ambient noise levels in nearby marinas where people live. Therefore, significant short-term impacts would occur under CEQA.

Mitigation Measures

NOI-1: The following mitigation measures would reduce impact of noise from construction activities:

a) **Construction Hours.** Limit construction to the hours of 7:00 AM to 9:00 PM on weekdays, between 8:00 AM and 6:00 PM on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays as prescribed in the City of Los Angeles Noise Ordinance.

b) **Construction Days.** Do not conduct noise-generating construction activities on weekends or holidays unless critical to a particular activity (e.g., concrete work).

c) **Temporary Noise Barriers.** When construction is occurring within 500 feet of a residence or park, temporary noise barriers (solid fences or curtains) shall be located between noise-generating construction activities and sensitive receptors.

d) **Construction Equipment.** Properly muffle and maintain all construction equipment powered by internal combustion engines.

e) **Idling Prohibitions.** Prohibit unnecessary idling of internal combustion engines near noise sensitive areas.

f) **Equipment Location.** Locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far as practical from existing noise sensitive land uses.

g) **Quiet Equipment Selection.** Select quiet construction equipment whenever possible. Comply where feasible with noise limits established in the City of Los Angeles Noise Ordinance.

h) **Notification.** Notify residents adjacent to the proposed Project site of the construction schedule in writing.

Residual Impacts

Considering the distances between the construction noise sources and receivers, the standard controls and temporary noise barriers may not be sufficient to reduce the projected increase in the ambient noise level to the point where it would no longer cause a substantial increase. With implementation of these measures, construction equipment noise levels generated at the buffer area and rail yard sites could substantially exceed existing ambient noise levels. This impact remains significant after mitigation.

NEPA Impact Determination

As discussed above, in-water construction work (e.g., pile driving) would occur at a distance of more than 2,000 feet from sensitive receivers so levels would be reduced to below ambient levels. There would be no adverse short-term effects under NEPA from in-water work. The new Pier A rail yard and the Harry Bridges Buffer Area are considered part of the No Federal Action/NEPA Baseline conditions and, therefore, noise related to construction of these components is not relevant to the NEPA impact determination.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

With no mitigation required, the residual impacts would be the same as described above.

Impact NOI-2: Construction activities would not exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00

PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.

No construction activities are planned to occur between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.

CEQA Impact Determination

There would be no construction-related noise impacts during prohibited hours as described above; consequently, no impacts under CEQA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts.

NEPA Impact Determination

There would be no in-water construction-related noise impacts during prohibited hours as described above; consequently, no impacts under NEPA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts.

3.9.4.3.2.2. Operational Impacts

Impact NOI-3: Operations would generate noise, but noise levels would not substantially exceed existing ambient noise levels at sensitive receivers.

On-Site Operations

Operation activities that would generate noise would include truck and rail movements in the newly developed backland areas and container terminal operations at the new wharves. Truck movements and truck container loading were monitored April 30, 2002 along the backland areas of Berths 136-139 during the noise monitoring survey in the Wilmington District. Noise levels generated in these areas are more than 10 dBA lower than, and not distinguishable from, noise levels generated by truck traffic circulating on the Port's perimeter roadways. The new wharf would be located more than 2,,000 feet from the Wilmington residential

neighbors located north of "C" Street and farther from residences west of I-110 and Knoll Hill. Noise from truck operations at the terminals would cause no increase in noise at sensitive receivers. This is a less-than-significant impact.

Noise levels resulting from container terminal operations were monitored at the Port of Los Angeles in June 1990 (I&R 1990). These data represent noise levels of typical operations at a container terminal from typical/standard equipment including but not limited to: container ships, assist tugs, electric container cranes, yard hostlers, toppicks, side picks, heavy duty vehicles. These pieces of equipment are the same equipment pieces operating at the Berth 136-147 container terminal Two ships were being unloaded simultaneously at the Evergreen Lines Terminal. Four large gantry cranes were operating simultaneously. Several straddle loaders were observed to be loading and unloading trucks. Many trucks were circulating at the terminal. Noise levels were monitored at a point directly across the main channel from the container terminal at a distance of about 1,100 feet from the container terminal. The cranes generated maximum noise levels of 56 to 57 dBA. The sounds of containers clanking reached a maximum noise level of 63 dBA. Truck horns were the most identifiable noise sources, with maximum levels reaching 70 dBA. The average noise level generated by the operations was 59 dBA L_{eq}. Accounting for the difference in distance where these measurements were conducted, and the distance of 2,000 feet over ground between the Wilmington residential neighbors and the proposed terminal activities, the average noise level from this level of activity is calculated to be about 50-53dBA L_{eq}. Noise generated by container terminal loading operations would be below existing ambient noise levels day or night at these nearest residential neighbors. Intermittent noises would be indistinguishable from road traffic on the Port's perimeter roadways, local street traffic noise, and existing sources of intermittent noise within the Port. Assuming 24-hour per day continuous operations, the Port-related activities would cause, by themselves, a CNEL in the range of 57-60 dBA CNEL. As discussed in previous paragraphs and in Section 3.9.2.2.1, baseline noise levels range from 65 dBA CNEL to 71 dBA CNEL at the most affected sensitive receiver locations. Port-related activities already occur at Berths 136-147. Projected noise levels under maximum activities that would include ship loading, would generate noise levels below existing ambient noise levels resulting primarily from vehicular on the roadway networks. Such activities would cause no significant increase in CNEL levels at these locations.

The proposed Project includes a 30-acre buffer area between Harry Bridges Boulevard and "C" Street from Figueroa Street to Laguna Avenue, on vacant, Port-owned property (see Figure 2-3). The creation of this buffer area would ensure that no development that would potentially increase noise levels in the buffer area would occur, protecting the noise environment of the most affected residents.

The operation of the new Pier A rail yard near the Berth 200-202 Marinas would generate noise. A noise monitoring survey was conducted at the existing Pier A rail yard in November 2005 to quantify noise levels from railroad operations. The noise survey included noise measurements made during a one-hour period when the rail yard was actively working between 10:00 AM and 11:00 AM on November 8, 2005. The noise measurements were conducted at the Port of Los Angeles Materials and Environmental Testing Lab located across Pier A Street from the active area in the Pier A rail yard. The measurements were made at a distance of about 200 feet from

where the engines were operating. The activity consisted of a train engine coupling to, and uncoupling from, groups of railroad cars, shuttling the cars back and forth on different tracks, and re-coupling the cars to other strings of railroad cars. Noise sources included the engine, the train horn, the crunching sounds associated with the slack action of the strings of cars starting and stopping, and the sounds of the impacts of cars being coupled together. During the hour of attended noise measurements, maximum noise levels resulting from these activities typically ranged from about 65 dBA to 75 dBA at a distance of about 200 to 300 feet from the source. The highest noise level measured was 97 dBA, resulting from a train horn. Occasionally, the sound of cars crunching together when coupling ranged from 78 to 80 dBA. The average noise level for the hour of busy activity was 68 dBA $L_{eq(h)}$.

The Harbor Belt Line Railroad was contacted to determine typical daily operations (personal communication, Fox 2005). The busiest level of activity occurs between 6:00 AM and 3:00 PM when incoming trains are sorted. Between 3:00 PM and 6:00 PM is the lowest activity period. Between 6:00 PM and 6:00 AM, the activity level is substantially less than during the busier daytime period when crews deliver cars to other areas of the port.

The proposed rail yard would operate as it presently does at the existing rail yard. The primary activity would occur near the western end of the new rail yard. This would place the activity area furthest from sensitive receivers, approximately 800 feet from the nearest residence in a yacht marina. Maximum noise levels at this distance would be reduced at least 12 dBA below the maximum noise levels described above due to increased distance. Maximum and average noise levels would typically fall between the range of 53 to 63 dBA and could occasionally reach 68 dBA. The average noise level for the hour of busy activity is calculated to be about 56 dBA $L_{eq(h)}$. To calculate the CNEL, one must assume a level of activity and associated noise level during each of the three time periods discussed above (6:00 AM to 3:00 PM, 3:00 PM to 6:00 PM, and 6:00 PM to 6:00 AM). Based on measurements and observations previously described for the Harbor Belt Line Railroad, it is assumed that during the busiest activity period, the hourly average noise level would be 56 dBA L_{eq}. A noise level of 50 dBA L_{eq} would occur for the 3:00 PM to 6:00 PM period and the 6:00 PM to 6:00 AM period. After adjusting the hourly average noise levels by adding 5 dBA to the evening period (7:00 PM to 10:00 PM) and 10 dBA to the average noise levels during the nighttime (10:00 PM to 7:00 AM), based on the definition of CNEL, the calculated noise level is 58 dBA CNEL. The baseline ambient noise level in the marinas, based on measurements as discussed in Section 3.9.2.2.3, is 61 dBA CNEL. When the noise level from operations at the relocated Pier A rail yard is added to the ambient noise level, the noise level is calculated to increase to, at most, 63 dBA CNEL. This would be a 2 dBA increase in the CNEL. This is a less-than-significant impact.

Railway Corridor Noise

The implementation of the project would result in an increase in the number of rail movements into and out of the Port of Los Angeles along the Alameda Transportation Corridor. Project throughput comparisons presented in Table 2-4 of the project description include the number of annual rail trips generated from Berths

136-147 under the CEQA Baseline (2003) Condition, the No Federal Action/NEPA Baseline conditions and the proposed Project in the years 2015 and 2038. To determine the maximum possible increase in noise along the rail corridors resulting from the Reduced Project (Alternative 2), a comparison was made between the CEQA 2003 Baseline of 731 annual rail trips and the year 2038 with Alternative 2 of 1,434 annual rail trips. This is an increase of about two rail trips per day. There would be about four more events per day when a train horn is sounded at the Henry Ford Avenue grade crossing north of the consolidated slip causing audible noise at the Leeward Marine. There are currently approximately 68 peak rail trips per day in and out of the San Pedro Bay Ports excluding light engine switching operations (Parsons 2006). The incremental increase in noise levels along the railroad corridors serving the Port of Los Angeles is calculated to be 0.2 dBA CNEL. This is a less-than-significant impact.

Train horns are a part of the acoustical environment in the environs of the Port of Los Angeles. There is an existing at-grade crossing at Henry Ford Avenue north of the Consolidated Slip and this was discussed in the noise setting section. This project will not change the level of noise from a train horn, it will result in an increase in the number of times the horns are sounded because there would be about four more intermodal train movements per day through this crossing. The significance threshold is based on increased noise above the baseline level in terms of the CNEL noise metric, and this is a function of the level, duration, and time of day the noise occurs; as well as the existing noise level. There are currently about 8 train movements per day through this crossing distributed throughout the day and night. The project would add 4 movements distributed throughout the day and night. The increase in the train generated CNEL is calculated to be 1.8 dBA CNEL. An increase of at least 3 dBA in the CNEL is considered to be a substantial increase causing a significant impact. Also, because vehicular traffic on Henry Ford Avenue and other railroad trains traveling adjacent to Henry Ford Avenue are more significant sources of noise at the Leeward Marina, the increase in the overall CNEL would be less than 1.8 dBA CNEL. So, while there will be an increase in the number of audible train horns, this is a less than significant environmental impact

Harry Bridges Boulevard Widening

Harry Bridges Boulevard is proposed to be widened and remain four lanes. Over the past several years, various roadway alignments have been considered for Harry Bridges Boulevard. The proposed Project includes a 30-acre buffer area between Harry Bridges Boulevard and "C" Street from Figueroa Street to Laguna Avenue, on vacant, port-owned property (see Figure 2-3). The creation of this buffer area would ensure that no development that would potentially increase noise levels within the buffer area would occur, including the realignment of the Harry Bridges Boulevard transportation corridor closer to the residences located along "C" Street. By designating this as a buffer area, port-related activities that would potentially increase noise level in the area would not be developed.

The incremental increase in noise at the most affected sensitive receivers along "C" Street was determined by modeling the traffic noise generated by Harry Bridges Boulevard using TNM Version 2.5. Example model runs are included in the Noise

Appendix. Existing and future traffic data included in the Transportation/Circulation Appendix was used in the traffic noise modeling. In the baseline model, the existing four-lane section of Harry Bridges Boulevard was assumed. In the future models, a wider cross section was assumed, with widening occurring to the north bringing some of the traffic closer to the "C" Street neighbors. First, a direct comparison was made between the existing four lane section and the future widened section assuming the same traffic volume. The redistribution of traffic adjacent to the existing travel lanes would cause an increase of 0.8 dBA at reference modeling locations adjacent to the roadway where noise from Harry Bridges Boulevard dominates the noise environment and by 0.3 dBA or less at the "C" street residences. Traffic that would be added by Alternative 2 for the years 2015 and 2038 was then added to the baseline traffic to determine the incremental increase in noise generated by Harry Bridges Boulevard traffic. The calculated increase in noise levels along Harry Bridges Boulevard was 1 dBA $L_{eq(h)}$. It is assumed that the hourly distribution of noise levels throughout the day and night would remain the same as it is today. The calculated increase in CNEL noise levels is, therefore, also calculated to be 1 dBA CNEL for both the years 2015 and 2038. At the Wilmington neighbors along "C" Street, the noise environment is affected by vehicular traffic on the I-110 freeway, local traffic on "C" Street, and, to a lesser extent, vehicular traffic along Harry Bridges Boulevard and activities at the Port. Because the noise from Harry Bridges Boulevard is a minor contributor to noise levels at the most affected receivers, the increase in the overall CNEL at these receivers would range from 0 dBA CNEL to 1 dBA CNEL. There would be no change in the character of the noise environment because the roadway traffic would not be moved noticeably closer to the community. Based on the noise monitoring and modeling completed for the proposed Project, there is no evidence to indicate that any noise abatement would be required for the proposed Project. Furthermore, because of the distances involved between the residences and the existing Harry Bridges Boulevard alignment, and parameters which affect performance of noise barriers, it is likely that a noise barrier would be of only minimal benefit in reducing noise from Harry Bridges Boulevard. Landscaped mounds are being considered within the Harry Bridges Boulevard Landscaped Area. The design for these landscaped mounds is not yet complete, and so no excess attenuation for the landscaped mounds has been included in the noise model. Landscaped mounds, depending upon their final design, could provide a further reduction in Harry Bridges Boulevard noise in the Wilmington neighborhood to the north.

The Transportation/Circulation Appendix includes turning movement volumes for 17 intersections located along roadways in the study area. Turning movement volumes for all 17 study intersections were reviewed to determine if any other roadway segments could experience a measurable increase in traffic noise as a result of traffic generated by this alternative. It was determined by inspection that traffic added by this alternative would be insignificant and would cause a dBA increase to the CNEL on all other roadway segments studied except along Harry Bridges Boulevard adjacent to the project study area.

CEQA Impact Determination

Because operational noise levels would not result in the CNEL to be increased by 3 dBA CNEL or more to or within the "normally unacceptable" or "clearly unacceptable"

category nor exceed 5 dBA over the current CNEL at sensitive locations, less than significant noise impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be less than significant residual impacts.

NEPA Impact Determination

Because operational noise levels would not substantially increase above the current CNEL at sensitive receptor locations, there would be less-than-significant impacts under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be less than significant residual impacts.

3.9.4.3.2.3 Alternative 3 – Reduced Wharf

The Reduced Wharf Alternative (Alternative 3) is similar to the proposed Project except the 10-acre Northwest Slip would not be filled for additional backland storage area, the 400-foot wharf would not be built adjacent to it, and the new 705-foot wharf along Berths 145-147 would not be constructed. Construction-related noise impacts along Harry Bridges Boulevard and the Wilmington neighborhood would be similar to Alternative 2 (Reduced Project) because there would be less in-water construction activities. The throughput for the year 2025 through 2038 would be less than for the proposed Project.

3.9.4.3.2.3.1 Construction Impacts

Impact NOI-1: Construction activities would temporarily and periodically generate noise, and noise levels would substantially exceed existing ambient daytime noise levels at sensitive receivers near the new Pier A rail yard and along "C" Street during construction of the Buffer Area.

Construction activities would typically last more than 10 days in any 3-month period for all of the construction activities listed in Tables 3.9-6 and 3.9-7. Following the thresholds for significance, an impact would be considered significant if noise from these construction activities would exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use.

The existing Harry Bridges Boulevard is located approximately 500 feet from the "C" Street neighbors. Sensitive receivers potentially affected by Harry Bridges Boulevard construction noise are located along the north side of "C" Street. The baseline ambient noise levels at these receivers described in Section 3.9.2.2.1 were found to typically range from 63 to 67 dBA $L_{eq(h)}$ during the daytime when construction activities would occur and the CNEL ranges from 71 dBA CNEL near Hawaiian Avenue down to 65-66 dBA further east. The construction noise is calculated to be up to 65 dBA $L_{eq(h)}$ at these residences. Assuming continuous construction at a level of 65 dBA $L_{eq(h)}$ noise level for the daytime period, the construction-generated CNEL noise level would be up to 63 dBA CNEL at the closest residence. Noise from the construction activities would not exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use. Construction activities associated with the improvements to the roadway would not substantially increase noise levels in the Wilmington neighborhood. Construction activities would not generate noise levels substantially higher than noise levels typically generated by the truck traffic and rail traffic utilizing the existing transportation corridor, and local traffic along "C" Street. Residences in San Pedro located west of Knoll Hill are 6,000 feet or more from the nearest possible construction area along Harry Bridges Boulevard. The existing ambient noise levels at these receivers, described in Section 3.9.2.2.2 are similar to existing ambient noise levels in the "C" Street neighborhood of the Wilmington District. Noise levels attenuate with increasing distance. Because ambient noise levels are equivalent to those discussed in the previous paragraph and because construction noise levels would be lower than at the nearest most affected receivers in Wilmington, noise from construction activities would not exceed existing ambient noise levels in San Pedro. This is a less-than-significant impact.

The Reduced Wharf Alternative (Alternative 3) would include construction of a buffer area between Harry Bridges Boulevard and "C" Street. Construction equipment required for this project element would include but not be limited to dozers, loaders, backhoes, trucks, graders, compactors and trenchers. Construction activities would be occurring as close as within approximately 50-75 feet of residences along "C" Street. Typically, construction activities would be occurring within distances of between 50 and 200 feet of these residences. Maximum noise levels would intermittently reach 80-90 dBA and average noise levels would reach 88 dBA L_{eq}, the levels shown in the tables above at the reference distances. On a worst case day, when construction in the buffer area is immediately adjacent to a residence, the CNEL could be up to 86 dBA CNEL. It should be noted that pile driving, which is included for information purposes, is the noisiest individual source of construction noise and would not occur as part of buffer construction. Construction noise levels would exceed ambient noise levels discussed in the preceding paragraph by 5 dBA or more. This would occur intermittently and would depend upon the staging of the work as the buffer construction proceeds. This is a significant impact. Construction activities in the buffer area will be located at an even greater distance from the residences in San Pedro than the Harry Bridges Boulevard construction activities, so as discussed in the previous paragraph, these construction activities would not exceed ambient noise levels in other sensitive neighborhoods and would cause a less-than-significant impact there.

The next nearest construction area to the Wilmington neighborhood would be located at a distance of more than 2,000 feet from the Wilmington neighborhood. Other

construction activities that would be necessary to implement the Reduced Wharf Alternative include backland development at Berths 136-147, wharf reconstruction at Berths 145-147, rip rap placement and dredging at Berths 145-147, and construction of the intermodal container transfer facility. The data in Table 3.9-6 shows that source construction noise levels are similar to and fall within the range of construction noise levels assessed in the previous paragraphs. These construction activities would all occur at locations at distances equivalent to or greater than the distances between the construction activities discussed in the previous paragraphs. Predicted construction noise levels would, therefore, be less than the construction noise levels assessed and found to be less than significant for worst case construction activities discussed in previous paragraphs. This is a less-than-significant impact.

The Pier A rail yard would be moved to a new location northeast of the TraPac Terminal near the Berth 200-202 Marinas. The new rail yard would be constructed within 5 months after a 1-month mobilization period. It would take 3 months for utilities (drainage system, electricity, water, gas, sewer, and lighting) to be provided to the site. It would take 5 months to prepare the site and lay tracks. Sources of construction noise that are unique to railroad yard construction include a rail saw, spike driver, tie cutter, tie handler, and tie inserter. Otherwise, general construction equipment would be the same. Typical A-weighted noise levels resulting from this additional equipment typically ranges from about 77 to 90 dBA, measured at a distance of 50 feet (USDOT 1995). The (total) source noise level would be 89 dBA $L_{eq(h)}$ at 100 feet from the construction activity. Sensitive receivers near the rail yard include live-aboards located in marinas across the channel from the new rail yard site. Residents in the Wilmington and San Pedro neighborhoods are located more than 3,000 feet from this construction area and would not be affected by construction noise because the noise would be inaudible at this distance. Construction activities would be located within approximately 500 to 800 feet of the nearest noise sensitive marina areas. Hourly average noise levels could reach 70-dBA L_{eq} during busy construction periods. Existing ambient noise levels in the marinas range from about 50 to 60 dBA. During construction at the new Pier A rail yard, construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more. This is a significant impact.

CEQA Impact Determination

Construction noise levels for the Harry Bridges Boulevard widening and at Berths 136-147 would not cause a substantial increase in noise levels at sensitive receivers. This would be a less than significant impact. The construction activities at the Harry Bridges Buffer Area would cause temporary and periodic noise levels substantially above existing ambient noise levels in the Wilmington neighborhood north of "C" Street. The construction activities at the proposed Pier A rail yard near the Berth 200-202 Marinas would generate construction noise levels that would cause temporary and periodic noise levels substantially above existing ambient noise levels in nearby marinas where people live. Therefore, significant short-term impacts would occur under CEQA.

Mitigation Measures

NOI-1: The following mitigation measures would reduce impact of noise from construction activities:

a) **Construction Hours.** Limit construction to the hours of 7:00 AM to 9:00 PM on weekdays, between 8:00 AM and 6:00 PM on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays as prescribed in the City of Los Angeles Noise Ordinance.

b) **Construction Days.** Do not conduct noise-generating construction activities on weekends or holidays unless critical to a particular activity (e.g., concrete work).

c) **Temporary Noise Barriers.** When construction is occurring within 500 feet of a residence or park, temporary noise barriers (solid fences or curtains) shall be located between noise-generating construction activities and sensitive receptors.

d) **Construction Equipment.** Properly muffle and maintain all construction equipment powered by internal combustion engines.

e) **Idling Prohibitions.** Prohibit unnecessary idling of internal combustion engines near noise sensitive areas.

f) **Equipment Location.** Locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far as practical from existing noise sensitive land uses.

g) **Quiet Equipment Selection.** Select quiet construction equipment whenever possible. Comply where feasible with noise limits established in the City of Los Angeles Noise Ordinance.

h) **Notification.** Notify residents adjacent to the proposed Project site of the construction schedule in writing.

Residual Impacts

Considering the distances between the construction noise sources and receivers, the standard controls and temporary noise barriers may not be sufficient to reduce the projected increase in the ambient noise level to the point where it would no longer cause a substantial increase. With implementation of these measures, construction equipment noise levels generated at the buffer area and rail yard sites could substantially exceed existing ambient noise levels. This impact remains significant after mitigation.

NEPA Impact Determination

As discussed above, in-water construction work (e.g., pile driving) would occur at a distance of more than 1,500 feet from sensitive receivers so levels would be reduced to below ambient levels. There would be no adverse short-term effects under NEPA from in-water work. The new Pier A rail yard and the Harry Bridges Buffer Area are considered part of the No Federal Action/NEPA Baseline conditions and, therefore, noise related to construction of these components is not relevant to the NEPA impact determination.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts

Impact NOI-2: Construction activities would not exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.

No construction activities are planned to occur between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.

CEQA Impact Determination

There would be no construction-related noise impacts during prohibited hours as described above; consequently, no impacts under CEQA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts.

NEPA Impact Determination

There would be no in-water construction-related noise impacts during prohibited hours as described above; consequently, no impacts under NEPA would occur.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts.

3.9.4.3.2.3.2 Operational Impacts

Impact NOI-3: Operations would generate noise, but noise levels would not substantially exceed existing ambient noise levels at sensitive receivers.

On-Site Operations

Operation activities that would generate noise would include truck and rail movements in the newly developed backland areas and container terminal operations. Truck movements and truck container loading were monitored April 30, 2002 along the backland areas of Berths 136-139 during the noise monitoring survey in the Wilmington District. Noise levels generated in these areas are more than 10 dBA lower than, and not distinguishable from, noise levels generated by truck traffic circulating on the Port's perimeter roadways. Terminals would be located more than 2,000 feet from the Wilmington residential neighbors located north of "C" Street and farther from residences west of I-110 and Knoll Hill. Noise from truck operations at the terminals would cause no increase in noise at sensitive receivers. This is a less-than-significant impact.

Noise levels resulting from container terminal operations were monitored at the Port of Los Angeles in June 1990 (I&R 1990). These data represent noise levels of typical operations at a container terminal from typical/standard equipment including but not limited to: container ships, assist tugs, electric container cranes, yard hostlers, toppicks, side picks, and heavy duty vehicles. These pieces of equipment are the same equipment pieces operating at the Berth 136-147 container terminal. Two ships were being unloaded simultaneously at the Evergreen Lines Terminal. Four large gantry cranes were operating simultaneously. Several straddle loaders were observed to be loading and unloading trucks. Many trucks were circulating at the terminal. Noise levels were monitored at a point directly across the main channel from the container terminal at a distance of about 1,100 feet from the container terminal. The cranes generated maximum noise levels of 56 to 57 dBA. The sounds of containers clanking reached a maximum noise level of 63 dBA. Truck horns were the most identifiable noise sources, with maximum levels reaching 70 dBA. The average noise level generated by the operations was 59 dBA L_{eq}. Accounting for the difference in distance where these measurements were conducted, and the distance of 2,000 feet over ground between the Wilmington residential neighbors and the proposed terminal activities, the average noise level from this level of activity is calculated to be about 50-53dBA L_{eq}. Noise generated by container terminal loading operations would be below existing ambient noise levels day or night at these nearest residential neighbors. Intermittent noises would be indistinguishable from road traffic on the Port's perimeter roadways, local street traffic noise, and existing sources of intermittent noise within the Port. Assuming 24-hour per day continuous operations, Port-related activities would cause, by themselves, a CNEL in the range of 57-60 dBA CNEL. As discussed in previous paragraphs and in Section 3.9.2.2.1, baseline noise levels range from 65 dBA CNEL to 71 dBA CNEL at the most affected sensitive receiver locations. Port-related activities already occur at Berths 136-147. Projected noise levels under maximum activities that would include ship loading, would generate noise levels below existing ambient noise levels resulting primarily from vehicular on the roadway networks. Such activities would cause no significant increase in CNEL levels at these locations.

The Reduced Wharf Alternative includes a 30-acre buffer area between Harry Bridges Boulevard and "C" Street from Figueroa Street to Laguna Avenue, on vacant, Port-owned property (see Figure 2-3). The creation of this buffer area would

ensure that no development that would potentially increase noise levels in the buffer area would occur, protecting the noise environment of the most affected residents.

The operation of the new Pier A rail yard near the Berth 200-202 Marinas would generate noise. A noise monitoring survey was conducted at the existing Pier A rail yard in November 2005 to quantify noise levels from railroad operations. The noise survey included noise measurements made during a one-hour period when the rail yard was actively working between 10:00 AM and 11:00 AM on November 8, 2005. The noise measurements were conducted at the Port of Los Angeles Materials and Environmental Testing Lab located across Pier A Street from the active area in the Pier A rail yard. The measurements were made at a distance of about 200 feet from where the engines were operating. The activity consisted of a train engine coupling to and uncoupling from groups of railroad cars, shuttling the cars back and forth on different tracks, and recoupling the cars to other strings of railroad cars. Noise sources included the engine, the train horn, the crunching sounds associated with the slack action of the strings of cars starting and stopping, and the sounds of the impacts of cars being coupled together. During the hour of attended noise measurements, maximum noise levels resulting from these activities typically ranged from about 65 dBA to 75 dBA at a distance of about 200 to 300 feet from the source. The highest noise level measured was 97 dBA, resulting from a train horn. Occasionally, the sound of cars crunching together when coupling ranged from 78 to 80 dBA. The average noise level for the hour of busy activity was 68 dBA $L_{eq(h)}$.

The Harbor Belt Line Railroad was contacted to determine typical daily operations (personal communication, Fox 2005). The busiest level of activity occurs between 6:00 AM and 3:00 PM when incoming trains are sorted. Between 3:00 PM and 6:00 PM is the lowest activity period. Between 6:00 PM and 6:00 AM, the activity level is substantially less than during the busier daytime period when crews deliver cars to other areas of the port.

The proposed rail yard would operate as it presently does at the existing rail yard. The primary activity would occur near the western end of the new rail yard. This would place the activity area furthest from sensitive receivers, approximately 800 feet from the nearest residence in a yacht marina. Maximum noise levels at this distance would be reduced at least 12 dBA below the maximum noise levels described above due to increased distance. Maximum and average noise levels would typically fall between the range of 53 to 63 dBA and could occasionally reach 68 dBA. The average noise level for the hour of busy activity is calculated to be about 56 dBA $L_{eq(h)}$. To calculate the CNEL, one must assume a level of activity and associated noise level during each of the three time periods discussed above (6:00 AM to 3:00 PM, 3:00 PM to 6:00 PM, and 6:00 PM to 6:00 AM). Based on measurements and observations previously described for the Harbor Belt Line Railroad, it is assumed that during the busiest activity period, the hourly average noise level would be 56 dBA L_{eq}. A noise level of 50 dBA L_{eq} would occur for the 3:00 PM to 6:00 PM period and the 6:00 PM to 6:00 AM period. After adjusting the hourly average noise levels by adding 5 dBA to the evening period (7:00 PM to 10:00 PM) and 10 dBA to the average noise levels during the nighttime (10:00 PM to 7:00 AM), based on the definition of CNEL, the calculated noise level is 58 dBA CNEL. The baseline ambient noise level in the marinas, based on measurements as discussed in Section 3.9.2.2.3, is 61 dBA CNEL. When the noise level from operations at the

Norelocated Pier A rail yard is added to the ambient noise level, the noise level is calculated to increase to, at most, 63 dBA CNEL. This would be a 2 dBA increase in the CNEL. This is a less-than-significant impact.

Railway Corridor Noise

The implementation of the Reduced Wharf Alternative would result in an increase in the number of rail movements into and out of the Port of Los Angeles along the Alameda Transportation Corridor Project throughput comparisons presented in Table 2-4 of the project description include the number of annual rail trips generated from Berths 136-147 under the CEQA Baseline (2003) Condition, the No Federal Action/ NEPA Baseline conditions and the proposed Project in the years 2015 and 2038. To determine the maximum possible increase in noise along the rail corridors resulting from the Reduced Wharf (Alternative 3), a comparison was made between the CEQA 2003 Baseline of 731 annual rail trips and the year 2038 with Alternative 3 of 1,391 annual rail trips. This is an increase of about two rail trips per day. There would be about four more events per day when a train horn is sounded at the Henry Ford Avenue grade crossing north of the consolidated slip causing audible noise at the Leeward Marine. There are currently approximately 68 peak rail trips per day in and out of the San Pedro Bay Ports excluding light engine switching operations (Parsons 2006). The incremental increase in noise levels along the railroad corridors serving the Port of Los Angeles is calculated to be 0.2 dBA CNEL. This is a less-than-significant impact.

Train horns are a part of the acoustical environment in the environs of the Port of Los Angeles. There is an existing at-grade crossing at Henry Ford Avenue north of the Consolidated Slip and this was discussed in the noise setting section. This project will not change the level of noise from a train horn, it will result in an increase in the number of times the horns are sounded because there would be about four more intermodal train movements per day through this crossing. The significance threshold is based on increased noise above the baseline level in terms of the CNEL noise metric, and this is a function of the level, duration, and time of day the noise occurs; as well as the existing noise level. There are currently about 8 train movements per day through this crossing distributed throughout the day and night. The project would add 4 movements distributed throughout the day and night. The increase in the train generated CNEL is calculated to be 1.8 dBA CNEL. An increase of at least 3 dBA in the CNEL is considered to be a substantial increase causing a significant impact. Also, because vehicular traffic on Henry Ford Avenue and other railroad trains traveling adjacent to Henry Ford Avenue are more significant sources of noise at the Leeward Marina, the increase in the overall CNEL would be less than 1.8 dBA CNEL. So, while there will be an increase in the number of audible train horns, this is a less than significant environmental impact

Harry Bridges Boulevard Widening

Harry Bridges Boulevard is proposed to be widened but would remain four lanes. Over the past several years, various roadway alignments have been considered for Harry Bridges Boulevard. The proposed Project includes a 30-acre buffer area between Harry Bridges Boulevard and “C” Street from Figueroa Street to Laguna Avenue, on vacant,

port-owned property (see Figure 2-3). The creation of this buffer area would ensure that no development that would potentially increase noise levels within the buffer area would occur, including the realignment of the Harry Bridges Boulevard transportation corridor closer to the residences located along "C" Street. By designating this as a buffer area, Port-related activities that would potentially increase noise level in the area would not be developed.

The incremental increase in noise at the most affected sensitive receivers along "C" Street was determined by modeling the traffic noise generated by Harry Bridges Boulevard using TNM Version 2.5. Example model runs are included in the Noise Appendix. Existing and future traffic data included in the Transportation/Circulation Appendix was used in the traffic noise modeling. In the baseline model, the existing four-lane section of Harry Bridges Boulevard was assumed. In the future models, a wider cross section was assumed, with widening occurring to the north bringing some of the traffic closer to the "C" Street neighbors. First, a direct comparison was made between the existing four lane section and the future widened section assuming the same traffic volume. The redistribution of traffic adjacent to the existing travel lanes would cause an increase of 0.8 dBA at reference modeling locations adjacent to the roadway where noise from Harry Bridges Boulevard dominates the noise environment and by 0.3 dBA or less at the "C" Street residences. Traffic that would be added by Alternative 3 for the years 2015 and 2038 was then added to the baseline traffic to determine the incremental increase in noise generated by Harry Bridges Boulevard traffic. The calculated increase in noise levels along Harry Bridges Boulevard was 1 dBA $L_{eq(h)}$. It is assumed that the hourly distribution of noise levels throughout the day and night would remain the same as it is today. The calculated increase in CNEL noise levels is, therefore, also calculated to be 1 dBA CNEL for both the years 2015 and 2038. At the Wilmington neighbors along "C" Street, the noise environment is affected by vehicular traffic on the I-110 freeway, local traffic on "C" Street, and, to a lesser extent, vehicular traffic along Harry Bridges Boulevard and activities at the Port. Because the noise from Harry Bridges Boulevard is a minor contributor to noise levels at the most affected receivers, the increase in the overall CNEL at these receivers would range from 0 dBA CNEL to 1 dBA CNEL. There would be no change in the character of the noise environment because the roadway traffic would not be moved noticeably closer to the community. Based on the noise monitoring and modeling completed for the proposed Project, there is no evidence to indicate that any noise abatement would be required for the proposed Project. Furthermore, because of the distances involved between the residences and the existing Harry Bridges Boulevard alignment, and parameters which affect performance of noise barriers, it is likely that a noise barrier would be of only minimal benefit in reducing noise from Harry Bridges Boulevard. Landscaped mounds are being considered within the Harry Bridges Boulevard Landscaped Area. The design for these landscaped mounds is not yet complete, and so no excess attenuation for the landscaped mounds has been included in the noise model. Landscaped mounds, depending upon their final design, could provide a further reduction in Harry Bridges Boulevard noise in the Wilmington neighborhood to the north.

The Transportation/Circulation Appendix includes turning movement volumes for 17 intersections located along roadways in the study area. Turning movement volumes for all 17 study intersections were reviewed to determine if any other roadway segments could experience a measurable increase in traffic noise as a result of traffic generated

by this alternative. It was determined by inspection that traffic added by this alternative would be insignificant and would cause a dBA increase to the CNEL on all other roadway segments studied except along Harry Bridges Boulevard adjacent to the project study area.

CEQA Impact Determination

Because operational noise levels would not result in the CNEL to be increased by 3 dBA CNEL or more to or within the "normally unacceptable" or "clearly unacceptable" category nor exceed 5 dBA over the current CNEL at sensitive locations, less than significant noise impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be less than significant residual impacts.

NEPA Impact Determination

Because operational noise levels would not substantially increase above the current CNEL at sensitive receptor locations, there would be less-than-significant impacts under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be less than significant residual impacts.

3.9.4.3.2.4 Alternative 4 – Omni Terminal

The Omni Terminal Alternative (Alternative 4) would convert the existing site into an operating Omni cargo handling terminal similar to the facility currently operating at Berths 174-181. Development of additional backlands would result in 202 acres available for container storage and terminal operations. There would, however, be no construction/operation of an on-dock ICTF rail yard (Pier A rail yard would not be relocated), and there would be no dredging, filling, or wharf construction/improvements. From the standpoint of potential noise impacts, the primary difference between the Omni Terminal alternative and the proposed Project is the elimination of the relocation of the Pier A rail yard. There would, therefore, be no construction noise impacts upon live-aboards and other users of the Berth 200-202 Marinas that would result from the relocation of the rail yard.

3.9.4.3.2.4.1 Construction Impacts

Impact NOI-1: Construction activities during Phase I and Phase II would temporarily and periodically generate noise, and noise levels during Phase I would substantially exceed existing ambient daytime noise levels at sensitive receivers along "C" Street during construction of the Buffer Area.

Construction activities would typically last more than 10 days in any 3-month period for all of the construction activities listed in Tables 3.9-6 and 3.9-7. Following the thresholds for significance, an impact would be considered significant if noise from these construction activities would exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use.

The existing Harry Bridges Boulevard is located approximately 500 feet from the "C" Street neighbors. Sensitive receivers potentially affected by Harry Bridges Boulevard construction noise are located along the north side of "C" Street. The baseline ambient noise levels at these receivers described in Section 3.9.2.2.1 were found to typically range from 63 to 67 dBA $L_{eq(h)}$ during the daytime when construction activities would occur and the CNEL ranges from 71 dBA CNEL near Hawaiian Avenue down to 65-66 dBA further east. The construction noise is calculated to be up to 65 dBA $L_{eq(h)}$ at these residences. Assuming continuous construction at a level of 65 dBA $L_{eq(h)}$ noise level for the daytime period, the construction-generated CNEL noise level would be up to 63 dBA CNEL at the closest residence. Noise from the construction activities would not exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use. Construction activities associated with the improvements to the roadway would not substantially increase noise levels in the Wilmington neighborhood. Construction activities would not generate noise levels substantially higher than noise levels typically generated by the truck traffic and rail traffic utilizing the existing transportation corridor, and local traffic along "C" Street. Residences in San Pedro located west of Knoll Hill are 6,000 feet or more from the nearest possible construction area along Harry Bridges Boulevard. The existing ambient noise levels at these receivers, described in Section 3.9.2.2.2 are similar to existing ambient noise levels in the "C" Street neighborhood of the Wilmington District. Noise levels attenuate with increasing distance. Because ambient noise levels are equivalent to those discussed in the previous paragraph and because construction noise levels would be lower than at the nearest most affected receivers in Wilmington, noise from construction activities would not exceed existing ambient noise levels in San Pedro. This is a less-than-significant impact.

The Omni Alternative (Alternative 4) would include construction of a buffer area between Harry Bridges Boulevard and "C" Street. Construction equipment required for this project element would include but not be limited to dozers, loaders, backhoes, trucks, graders, compactors and trenchers. Construction activities would be occurring as close as within approximately 50-75 feet of residences along "C" Street. Typically, construction activities would be occurring within distances of between 50 and 200 feet of these residences. Maximum noise levels would intermittently reach 80-90 dBA and average noise levels would reach 88 dBA L_{eq}, the levels shown in the tables above at the reference distances. On a worst case day, when construction in the buffer area is

immediately adjacent to a residence, the CNEL could be up to 86 dBA CNEL. It should be noted that pile driving, which is included for information purposes, is the noisiest individual source of construction noise and would not occur as part of buffer construction. Construction noise levels would exceed ambient noise levels discussed in the preceding paragraph by 5 dBA or more. This would occur intermittently and would depend upon the staging of the work as the buffer construction proceeds. This is a significant impact. Construction activities in the buffer area will be located at an even greater distance from the residences in San Pedro than the Harry Bridges Boulevard construction activities, so as discussed in the previous paragraph, these construction activities would not exceed ambient noise levels in other sensitive neighborhoods and would cause a less-than-significant impact there.

The next nearest construction area to the Wilmington neighborhood would be located at a distance of more than 2,000 feet from the Wilmington neighborhood. Other construction activities that would be necessary to implement the Omni Alternative include backland development at Berths 136-147. The data in Table 3.9-6 shows that source construction noise levels are similar to and fall within the range of construction noise levels assessed in the previous paragraphs. These construction activities would all occur at locations at distances equivalent to or greater than the distances between the construction activities discussed in the previous paragraphs. Predicted construction noise levels would, therefore, be less than the construction noise levels assessed and found to be less than significant for worst case construction activities discussed in previous paragraphs. This is a less-than-significant impact.

CEQA Impact Determination

Construction noise levels near Harry Bridges Boulevard and at Berths 136-147 would not cause a substantial increase in noise levels at sensitive receivers. This would be a less than significant impact. The construction activities at the Harry Bridges Buffer Area would cause temporary and periodic noise levels substantially above existing ambient noise levels in the Wilmington neighborhood north of "C" Street. Therefore, significant short-term impacts would occur under CEQA.

Mitigation Measures

NOI-1: The following mitigation measures would reduce impact of noise from construction activities:

a) **Construction Hours.** Limit construction to the hours of 7:00 am to 9:00 pm on weekdays, between 8:00 am and 6:00 pm on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays as prescribed in the City of Los Angeles Noise Ordinance.

b) **Construction Days.** Do not conduct noise-generating construction activities on weekends or holidays unless critical to a particular activity (e.g., concrete work).

c) **Temporary Noise Barriers.** When construction is occurring within 500 feet of a residence or park, temporary noise barriers (solid fences or curtains) shall be located between noise-generating construction activities and sensitive receptors.

d) **Construction Equipment.** Properly muffle and maintain all construction equipment powered by internal combustion engines.

e) **Idling Prohibitions.** Prohibit unnecessary idling of internal combustion engines near noise sensitive areas.

f) **Equipment Location.** Locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far as practical from existing noise sensitive land uses.

g) **Quiet Equipment Selection.** Select quiet construction equipment whenever possible. Comply where feasible with noise limits established in the City of Los Angeles Noise Ordinance.

h) **Notification.** Notify residents adjacent to the proposed Project site of the construction schedule in writing.

Residual Impacts

Considering the distances between the construction noise sources and receivers, the standard controls and temporary noise barriers may not be sufficient to reduce the projected increase in the ambient noise level to the point where it would no longer cause a substantial increase. With implementation of these measures, construction equipment noise levels generated at the Buffer Area could substantially exceed existing ambient noise levels. This impact remains significant after mitigation.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water project area (i.e., no dredging, filling of the Northwest Slip or wharf construction). Therefore, potential impacts are not applicable under NEPA since there would be no federal action under this alternative.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation measures are necessary under NEPA.

Residual Impacts

With no mitigation required, there would be no residual impacts under NEPA.

Impact NOI-2: Construction activities would not exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.

No construction activities are planned to occur between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.

CEQA Impact Determination

There would be no construction-related noise impacts during prohibited hours as described above; consequently, no impacts under CEQA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water project area (i.e., no dredging, filling of the Northwest Slip or wharf construction). Therefore, potential impacts are not applicable under NEPA since there would be no federal action under this alternative.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation measures are necessary under NEPA.

Residual Impacts

With no mitigation required, there would be no residual impacts under NEPA.

3.9.4.3.2.4.2 Operational Impacts

Impact NOI-3: On-site operations would generate noise, but noise levels would not substantially exceed existing ambient noise levels at sensitive receivers.

On-Site Operations

Operation activities that would generate noise would include truck and rail movements in the newly developed backland areas and container terminal operations. Truck movements and truck container loading were monitored April 30, 2002 along the backland areas of Berths 136-139 during the noise monitoring survey in the Wilmington District. Noise levels generated in these areas are more than 10 dBA lower than, and not distinguishable from, noise levels generated by truck traffic circulating on the Port's perimeter roadways. Terminals would be located more than 2,000 feet from the Wilmington residential neighbors located north of "C" Street and farther from residences west of I-110 and Knoll Hill. Noise from truck operations at the terminals would cause no increase in noise at sensitive receivers. This is a less-than-significant impact.

Noise levels resulting from container terminal operations were monitored at the Port of Los Angeles in June 1990 (I&R 1990). These data represent noise levels of typical operations at a container terminal from typical/standard equipment including but not limited to: container ships, assist tugs, electric container cranes, yard hostlers, toppicks, side picks, heavy duty vehicles. These pieces of equipment are the same equipment pieces operating at the Berth 136-147 container terminal. Two ships were being unloaded simultaneously at the Evergreen Lines Terminal. Four large gantry cranes were operating simultaneously. Several straddle loaders were observed to be loading and unloading trucks. Many trucks were circulating at the terminal. Noise levels were monitored at a point directly across the main channel from the container terminal at a distance of about 1,100 feet from the container terminal. The cranes generated maximum noise levels of 56 to 57 dBA. The sounds of containers clanking reached a maximum noise level of 63 dBA. Truck horns were the most identifiable noise sources, with maximum levels reaching 70 dBA. The average noise level generated by the operations was 59 dBA L_{eq}. Accounting for the difference in distance where these measurements were conducted, and the distance of 2,000 feet over ground between the Wilmington residential neighbors and the proposed terminal activities, the average noise level from this level of activity is calculated to be about 50-53dBA L_{eq}. Noise generated by container terminal loading operations would be below existing ambient noise levels day or night at these nearest residential neighbors. Intermittent noises would be indistinguishable from road traffic on the Port's perimeter roadways, local street traffic noise, and existing sources of intermittent noise within the Port. Assuming 24-hour per day continuous operations, Port-related activities would cause, by themselves, a CNEL in the range of 57-60 dBA CNEL. As discussed in previous paragraphs and in Section 3.9.2.2.1, baseline noise levels range from 65 dBA CNEL to 71 dBA CNEL at the most affected sensitive receiver locations. Port-related activities already occur at Berths 136-147. Projected noise levels under maximum activities that would include ship loading, would generate noise levels below existing ambient noise levels resulting primarily from vehicular on the roadway networks. Such activities would cause no significant increase in CNEL levels at these locations.

The Omni Alternative includes a 30-acre buffer area between Harry Bridges Boulevard and "C" Street from Figueroa Street to Laguna Avenue, on vacant, Port-owned property (see Figure 2-3). The creation of this buffer area would ensure that no development that would potentially increase noise levels in the buffer area would occur, protecting the noise environment of the most affected residents.

Railway Corridor Noise

The Omni Terminal Alternative would not include an ICTF rail yard. Table 2-4 in the project description shows annual rail trips of 409 and 463 in the years 2015 and 2038, respectively. This would be a reduction from the 731 annual rail trips at the CEQA 2003 Baseline. There would, therefore, be no increase in railroad train noise along the railway corridors.

Harry Bridges Boulevard Widening

Harry Bridges Boulevard is proposed to be widened but would remain four lanes. Over the past several years, various roadway alignments have been considered for Harry Bridges Boulevard. The proposed Project includes a 30-acre buffer area between Harry Bridges Boulevard and "C" Street from Figueroa Street to Laguna Avenue, on vacant, port-owned property (see Figure 2-3). The creation of this buffer area would ensure that no development that would potentially increase noise levels within the buffer area would occur, including the realignment of the Harry Bridges Boulevard transportation corridor closer to the residences located along "C" Street. By designating this as a buffer area, port-related activities that would potentially increase noise level in the area would not be developed.

The incremental increase in noise at the most affected sensitive receivers along "C" Street was determined by modeling the traffic noise generated by Harry Bridges Boulevard using TNM Version 2.5. Example model runs are included in the Noise Appendix. Existing and future traffic data included in the Transportation/Circulation Appendix was used in the traffic noise modeling. In the baseline model, the existing four-lane section of Harry Bridges Boulevard was assumed. In the future models, a wider cross section was assumed, with widening occurring to the north bringing some of the traffic closer to the "C" Street neighbors. First, a direct comparison was made between the existing four lane section and the future widened section assuming the same traffic volume. The redistribution of traffic adjacent to the existing travel lanes would cause an increase of 0.8 dBA at reference modeling locations adjacent to the roadway where noise from Harry Bridges Boulevard dominates the noise environment and by 0.3 dBA or less at the "C" Street residences. Traffic that would be added by the Omni Alternative for the years 2015 and 2038 was then added to the baseline traffic to determine the incremental increase in noise generated by Harry Bridges Boulevard traffic. The calculated increase in noise levels along Harry Bridges Boulevard was 0 dBA $L_{eq(h)}$. It is assumed that the hourly distribution of noise levels throughout the day and night would remain the same as it is today. The calculated increase in CNEL noise levels is, therefore, also calculated to be 0 dBA CNEL for both the years 2015 and 2038. At the Wilmington neighbors along "C" Street, the noise environment is affected by vehicular traffic on the I-110 freeway, local traffic on "C" Street, and, to a lesser extent, vehicular traffic along Harry Bridges Boulevard and activities at the Port. The increase in the overall CNEL at these receivers would be 0 dBA CNEL. There would be no change in the character of the noise environment because the roadway traffic would not be moved noticeably closer to the community. Based on the noise monitoring and modeling completed for the Project, there is no evidence to indicate that any noise abatement would be required for the proposed Project. Furthermore, because of the distances involved between the residences and the existing Harry Bridges Boulevard alignment, and parameters which affect performance of noise barriers, it is likely that a noise barrier would be of only minimal benefit in reducing noise from Harry Bridges Boulevard. Landscaped mounds are being considered within the Harry Bridges Boulevard Landscaped Area. The design for these landscaped mounds is not yet complete, and so no excess attenuation for the landscaped mounds has been included in the noise model. Landscaped mounds, depending upon their final design, could provide a further reduction in Harry Bridges Boulevard noise in the Wilmington neighborhood to the north.

The Transportation/Circulation Appendix includes turning movement volumes for 17 intersections located along roadways in the study area. Turning movement volumes for all 17 study intersections were reviewed to determine if any other roadway segments could experience a measurable increase in traffic noise as a result of traffic generated by this alternative. It was determined by inspection that traffic added by this alternative would be insignificant and would cause a dBA increase to the CNEL on all other roadway segments studied except along Harry Bridges Boulevard adjacent to the project study area.

CEQA Impact Determination

Because operational noise levels would not result in the CNEL to be increased to or within the "normally unacceptable" or "clearly unacceptable" category nor exceed 5 dBA over the current CNEL at sensitive locations, less than significant noise impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, the residual impacts would be less than significant.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water project area (i.e., no dredging, filling of the Northwest Slip or wharf construction). Therefore, potential impacts are not applicable under NEPA since there would be no federal action under this alternative.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation measures are necessary under NEPA.

Residual Impacts

With no mitigation required, there would be no residential impacts under NEPA.

3.9.4.3.2.5 Alternative 5 – Landside Terminal Improvements

Under the Landside Terminal Improvements Alternative (Alternative 5), no new developments in Harbor waters would occur (e.g., dredging, filling, and wharf reconstruction/upgrades). Backland infrastructure improvements, however would take place, including the new on-dock rail yard Harry Bridges Boulevard widening and buffer area as well as the rail yard relocation. Terminal acreage would increase from 176 acres in 2003 to 190 acres in 2015 and remain at that level through 2038. The increased acreage for backland infrastructure would be located entirely within Port boundaries and

would be well within industrial areas at the Port. The extent of on-land ground disturbances would be somewhat less than the proposed Project. All mitigation measures of the proposed Project, except for mitigations relating to dredging and new cranes, would apply. Because no federal action would occur, NEPA would not apply and no impacts would occur.

3.9.4.3.2.5.1 Construction Impacts

Impact NOI-1: Construction activities would temporarily and periodically generate noise, and noise levels would substantially exceed existing ambient daytime noise levels at sensitive receivers near the new Pier A rail yard and along "C" Street during construction of the Buffer Area.

Construction activities would typically last more than 10 days in any 3-month period for all of the construction activities listed in Tables 3.9-6 and 3.9-7. Following the thresholds for significance, an impact would be considered significant if noise from these construction activities would exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use.

The existing Harry Bridges Boulevard is located approximately 500 feet from the "C" Street neighbors. Sensitive receivers potentially affected by Harry Bridges Boulevard construction noise are located along the north side of "C" Street. The baseline ambient noise levels at these receivers described in Section 3.9.2.2.1 were found to typically range from 63 to 67 dBA $L_{eq(h)}$ during the daytime when construction activities would occur and the CNEL ranges from 71 dBA CNEL near Hawaiian Avenue down to 65-66 dBA further east. The construction noise is calculated to be up to 65 dBA $L_{eq(h)}$ at these residences. Assuming continuous construction at a level of 65 dBA $L_{eq(h)}$ noise level for the daytime period, the construction-generated CNEL noise level would be up to 63 dBA CNEL at the closest residence. Noise from the construction activities would not exceed existing ambient exterior noise levels by 5 dBA or more at a noise sensitive use. Construction activities associated with the improvements to the roadway would not substantially increase noise levels in the Wilmington neighborhood. Construction activities would not generate noise levels substantially higher than noise levels typically generated by the truck traffic and rail traffic utilizing the existing transportation corridor, and local traffic along "C" Street. Residences in San Pedro located west of Knoll Hill are 6,000 feet or more from the nearest possible construction area along Harry Bridges Boulevard. The existing ambient noise levels at these receivers, described in Section 3.9.2.2.2 are similar to existing ambient noise levels in the "C" Street neighborhood of the Wilmington District. Noise levels attenuate with increasing distance. Because ambient noise levels are equivalent to those discussed in the previous paragraph and because construction noise levels would be lower than at the nearest most affected receivers in Wilmington, noise from construction activities would not exceed existing ambient noise levels in San Pedro. This is a less-than-significant impact.

The Landside Development Alternative (Alternative 5) would include construction of a landscaped buffer area between Harry Bridges Boulevard and "C" Street. Construction equipment required for this project element would include but not be limited to dozers, loaders, backhoes, trucks, graders, compactors and trenchers.

Construction activities would be occurring as close as within approximately 50-75 feet of residences along "C" Street. Typically, construction activities would be occurring within distances of between 50 and 200 feet of these residences. Maximum noise levels would intermittently reach 80-90 dBA and average noise levels would reach 88 dBA L_{eq}, the levels shown in the tables above at the reference distances. On a worst case day, when construction in the buffer area is immediately adjacent to a residence, the CNEL could be up to 86 dBA CNEL. It should be noted that pile driving, which is included for information purposes, is the noisiest individual source of construction noise and would not occur as part of buffer construction. Construction noise levels would exceed ambient noise levels discussed in the preceding paragraph by 5 dBA or more. This would occur intermittently and would depend upon the staging of the work as the buffer construction proceeds. This is a significant impact. Construction activities in the buffer area will be located at an even greater distance from the residences in San Pedro than the Harry Bridges Boulevard construction activities, so as discussed in the previous paragraph, these construction activities would not exceed ambient noise levels in other sensitive neighborhoods and would cause a less-than-significant impact there.

The next nearest construction area to the Wilmington neighborhood would be located at a distance of more than 2,000 feet from the Wilmington neighborhood. Other construction activities that would be necessary to implement the Landside Terminal Improvements Alternative include backland development at Berths 136-147, wharf reconstruction at Berths 145-147, rip rap placement and dredging at Berths 145-147, and construction of the intermodal container transfer facility. The data in Table 3.9-6 shows that source construction noise levels are similar to and fall within the range of construction noise levels assessed in the previous paragraphs. These construction activities would all occur at locations at distances equivalent to or greater than the distances between the construction activities discussed in the previous paragraphs. Predicted construction noise levels would, therefore, be less than the construction noise levels assessed and found to be less than significant for worst case construction activities discussed in previous paragraphs. This is a less-than-significant impact.

The Pier A rail yard would be moved to a new location northeast of the TraPac Terminal near the Berth 200-202 Marinas. The new rail yard would be constructed within 5 months after a 1-month mobilization period. It would take 3 months for utilities (drainage system, electricity, water, gas, sewer, and lighting) to be provided to the site. It would take 5 months to prepare the site and lay tracks. Sources of construction noise that are unique to railroad yard construction include a rail saw, spike driver, tie cutter, tie handler, and tie inserter. Otherwise, general construction equipment would be the same. Typical A-weighted noise levels resulting from this additional equipment typically ranges from about 77 to 90 dBA, measured at a distance of 50 feet (USDOT 1995). The (total) source noise level would be 89 dBA $L_{eq(h)}$ at 100 feet from the construction activity. Sensitive receivers near the rail yard include live-aboards located in marinas across the channel from the new rail yard site. Residents in the Wilmington and San Pedro neighborhoods are located more than 3,000 feet from this construction area and would not be affected by construction noise because the noise would be inaudible at this distance. Construction activities would be located within approximately 500 to 800 feet of the nearest noise sensitive marina areas. Hourly average noise levels could reach 70-dBA L_{eq} during busy construction periods. Existing ambient noise levels in the marinas range from about

50 to 60 dBA. During construction at the new Pier A rail yard, construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more. This is a significant impact.

CEQA Impact Determination

Construction noise levels for the Harry Bridges Boulevard widening and at Berths 136-147 would not cause a substantial increase in noise levels at sensitive receivers. This would be a less than significant impact. The construction activities at the Harry Bridges Buffer Area would cause temporary and periodic noise levels substantially above existing ambient noise levels in the Wilmington neighborhood north of "C" Street. The construction activities at the proposed Pier A rail yard near the Berth 200-202 Marinas would generate construction noise levels that would cause temporary and periodic noise levels substantially above existing ambient noise levels in nearby marinas where people live. Therefore, significant short-term impacts would occur under CEQA.

Mitigation Measures

NOI-1: The following mitigation measures would reduce impact of noise from construction activities:

a) **Construction Hours.** Limit construction to the hours of 7:00 AM to 9:00 PM on weekdays, between 8:00 AM and 6:00 PM on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays as prescribed in the City of Los Angeles Noise Ordinance.

b) **Construction Days.** Do not conduct noise-generating construction activities on weekends or holidays unless critical to a particular activity (e.g., concrete work).

c) **Temporary Noise Barriers.** When construction is occurring within 500 feet of a residence or park, temporary noise barriers (solid fences or curtains) shall be located between noise-generating construction activities and sensitive receptors.

d) **Construction Equipment.** Properly muffle and maintain all construction equipment powered by internal combustion engines.

e) **Idling Prohibitions.** Prohibit unnecessary idling of internal combustion engines near noise sensitive areas.

f) **Equipment Location.** Locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far as practical from existing noise sensitive land uses.

g) **Quiet Equipment Selection.** Select quiet construction equipment whenever possible. Comply where feasible with noise limits established in the City of Los Angeles Noise Ordinance.

Residual Impacts

Considering the distances between the construction noise sources and receivers, the standard controls and temporary noise barriers may not be sufficient to reduce the projected increase in the ambient noise level to the point where it would no longer cause

a substantial increase. With implementation of these measures, construction equipment noise levels generated at the buffer area and rail yard sites could substantially exceed existing ambient noise levels. This impact remains significant after mitigation.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water project area (i.e., no dredging, filling of the Northwest Slip or wharf construction). Therefore, potential impacts are not applicable under NEPA since there would be no federal action under this alternative.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts under NEPA.

Impact NOI-2: Construction activities would not exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.

No construction activities are planned to occur between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.

CEQA Impact Determination

There would be no construction-related noise impacts during prohibited hours as described above; consequently, no impacts under CEQA would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water project area (i.e., no dredging, filling of the Northwest Slip or wharf construction). Therefore, potential impacts are not applicable under NEPA since there would be no federal action under this alternative.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts under NEPA.

3.9.4.3.2.5.2 Operational Impacts

Impact NOI-3: Operations would generate noise, but noise levels would not substantially exceed existing ambient noise levels at sensitive receivers.

On-Site Operations

Operation activities that would generate noise would include truck and rail movements in the newly developed backland areas and container terminal operations. Truck movements and truck container loading were monitored April 30, 2002 along the backland areas of Berths 136-139 during the noise monitoring survey in the Wilmington District. Noise levels generated in these areas are more than 10 dBA lower than, and not distinguishable from, noise levels generated by truck traffic circulating on the Port's perimeter roadways. Terminals would be located more than 2,000 feet from the Wilmington residential neighbors located north of "C" Street and farther from residences west of I-110 and Knoll Hill. Noise from truck operations at the terminals would cause no increase in noise at sensitive receivers. This is a less-than-significant impact. Noise levels resulting from container terminal operations were monitored at the Port of Los Angeles in June 1990 (I&R 1990). These data represent noise levels of typical operations at a container terminal from typical/standard equipment including but not limited to: container ships, assist tugs, electric container cranes, yard hostlers, toppicks, side picks, heavy duty vehicles. These pieces of equipment are the same equipment pieces operating at the Berth 136-147 container terminal. Two ships were being unloaded simultaneously at the Evergreen Lines Terminal. Four large gantry cranes were operating simultaneously. Several straddle loaders were observed to be loading and unloading trucks. Many trucks were circulating at the terminal. Noise levels were monitored at a point directly across the main channel from the container terminal at a distance of about 1,100 feet from the container terminal. The cranes generated maximum noise levels of 56 to 57 dBA. The sounds of containers clanking reached a maximum noise level of 63 dBA. Truck horns were the most identifiable noise sources, with maximum levels reaching 70 dBA. The average noise level generated by the operations was 59 dBA L_{eq}. Accounting for the difference in distance where these measurements were conducted, and the distance of 2,000 feet over ground between the Wilmington residential neighbors and the proposed terminal activities, the average noise level from this level of activity is calculated to be about 50-53dBA L_{eq}. Noise generated by container terminal loading operations would be below existing ambient noise levels day or night at these nearest residential neighbors. Intermittent noises would be indistinguishable from road traffic on the Port's perimeter roadways, local street traffic noise, and existing sources of intermittent noise within the Port. Assuming 24-

hour per day continuous operations, Port-related activities would cause, by themselves, a CNEL in the range of 57-60 dBA CNEL. As discussed in previous paragraphs and in Section 3.9.2.2.1, baseline noise levels range from 65 dBA CNEL to 71 dBA CNEL at the most affected sensitive receiver locations. Port-related activities already occur at Berths 136-147. Projected noise levels under maximum activities that would include ship loading, would generate noise levels below existing ambient noise levels resulting primarily from vehicular on the roadway networks. Such activities would cause no significant increase in CNEL levels at these locations.

The Landside Terminal Improvements Alternative includes a 30-acre buffer area between Harry Bridges Boulevard and "C" Street from Figueroa Street to Laguna Avenue, on vacant, Port-owned property (see Figure 2-3). The creation of this buffer area would ensure that no development that would potentially increase noise levels in the buffer area would occur, protecting the noise environment of the most affected residents.

The operation of the new Pier A rail yard near the Berth 200-202 Marinas would generate noise. A noise monitoring survey was conducted at the existing Pier A rail yard in November 2005 to quantify noise levels from railroad operations. The noise survey included noise measurements made during a one-hour period when the rail yard was actively working between 10:00 AM and 11:00 AM on November 8, 2005. The noise measurements were conducted at the Port of Los Angeles Materials and Environmental Testing Lab located across Pier A Street from the active area in the Pier A rail yard. The measurements were made at a distance of about 200 feet from where the engines were operating. The activity consisted of a train engine coupling to and uncoupling from groups of railroad cars, shuttling the cars back and forth on different tracks, and recoupling the cars to other strings of railroad cars. Noise sources included the engine, the train horn, the crunching sounds associated with the slack action of the strings of cars starting and stopping, and the sounds of the impacts of cars being coupled together. During the hour of attended noise measurements, maximum noise levels resulting from these activities typically ranged from about 65 dBA to 75 dBA at a distance of about 200 to 300 feet from the source. The highest noise level measured was 97 dBA, resulting from a train horn. Occasionally, the sound of cars crunching together when coupling ranged from 78 to 80 dBA. The average noise level for the hour of busy activity was 68 dBA $L_{eq(h)}$.

The Harbor Belt Line Railroad was contacted to determine typical daily operations (personal communication, Fox 2005). The busiest level of activity occurs between 6:00 AM and 3:00 PM when incoming trains are sorted. Between 3:00 PM and 6:00 PM is the lowest activity period. Between 6:00 PM and 6:00 AM, the activity level is substantially less than during the busier daytime period when crews deliver cars to other areas of the port.

The proposed rail yard would operate as it presently does at the existing rail yard. The primary activity would occur near the western end of the new rail yard. This would place the activity area furthest from sensitive receivers, approximately 800 feet from the nearest residence in a yacht marina. Maximum noise levels at this distance would be reduced at least 12 dBA below the maximum noise levels described above due to increased distance. Maximum and average noise levels would typically fall between the range of 53 to 63 dBA and could occasionally reach

68 dBA. The average noise level for the hour of busy activity is calculated to be about 56 dBA $L_{eq(h)}$. To calculate the CNEL, one must assume a level of activity and associated noise level during each of the three time periods discussed above (6:00 AM to 3:00 PM, 3:00 PM to 6:00 PM, and 6:00 PM to 6:00 AM). Based on measurements and observations previously described for the Harbor Belt Line Railroad, it is assumed that during the busiest activity period, the hourly average noise level would be 56 dBA L_{eq}. A noise level of 50 dBA L_{eq} would occur for the 3:00 PM to 6:00 PM period and the 6:00 PM to 6:00 AM period. After adjusting the hourly average noise levels by adding 5 dBA to the evening period (7:00 PM to 10:00 PM) and 10 dBA to the average noise levels during the nighttime (10:00 PM to 7:00 AM), based on the definition of CNEL, the calculated noise level is 58 dBA CNEL. The baseline ambient noise level in the marinas, based on measurements as discussed in Section 3.9.2.2.3, is 61 dBA CNEL. When the noise level from operations at the relocated Pier A rail yard is added to the ambient noise level, the noise level is calculated to increase to, at most, 63 dBA CNEL. This would be a 2 dBA increase in the CNEL. This is a less-than-significant impact.

Railway Corridor Noise

The implementation of the project would result in an increase in the number of rail movements into and out of the Port of Los Angeles along the Alameda Transportation Corridor. Project throughput comparisons presented in Table 2-4 of the project description include the number of annual rail trips generated from Berths 136-147 under the proposed Project and alternatives in the years 2015 and 2038. To determine the maximum possible increase in noise along the rail corridors resulting from Alternative 5, a comparison was made between the CEQA 2003 Baseline of 731 annual rail trips and the year 2038 with Alternative 5 of 1,390 annual rail trips. This is an increase of about two rail trips per day. There would be about four more events per day when a train horn is sounded at the Henry Ford Avenue grade crossing north of the consolidated slip causing audible noise at the Leeward Marine. There are currently approximately 68 peak rail trips per day in and out of the San Pedro Bay Ports excluding light engine switching operations (Parsons 2006). The incremental increase in noise levels along the railroad corridors serving the Port of Los Angeles is calculated to be 0.2 dBA CNEL. This is a less-than-significant impact.

Train horns are a part of the acoustical environment in the environs of the Port of Los Angeles. There is an existing at-grade crossing at Henry Ford Avenue north of the Consolidated Slip and this was discussed in the noise setting section. This project will not change the level of noise from a train horn, it will result in an increase in the number of times the horns are sounded because there would be about four more intermodal train movements per day through this crossing. The significance threshold is based on increased noise above the baseline level in terms of the CNEL noise metric, and this is a function of the level, duration, and time of day the noise occurs; as well as the existing noise level. There are currently about 8 train movements per day through this crossing distributed throughout the day and night. The project would add 4 movements distributed throughout the day and night. The increase in the train generated CNEL is calculated to be 1.8 dBA CNEL. An increase of at least 3 dBA in the CNEL is considered to be a substantial increase causing a significant impact. Also, because vehicular traffic on Henry Ford Avenue and other

railroad trains traveling adjacent to Henry Ford Avenue are more significant sources of noise at the Leeward Marina, the increase in the overall CNEL would be less than 1.8 dBA CNEL. So, while there will be an increase in the number of audible train horns, this is a less than significant environmental impact.

Harry Bridges Boulevard Widening

Harry Bridges Boulevard is proposed to be widened but would remain four lanes. Over the past several years, various roadway alignments have been considered for Harry Bridges Boulevard. The proposed Project includes a 30-acre buffer area between Harry Bridges Boulevard and "C" Street from Figueroa Street to Laguna Avenue, on vacant, port-owned property (see Figure 2-3). The creation of this buffer area would ensure that no development that would potentially increase noise levels within the buffer area would occur, including the realignment of the Harry Bridges Boulevard transportation corridor closer to the residences located along "C" Street. By designating this as a buffer area, port-related activities that would potentially increase noise level in the area would not be developed.

The incremental increase in noise at the most affected sensitive receivers along "C" Street was determined by modeling the traffic noise generated by Harry Bridges Boulevard using TNM Version 2.5. Example model runs are included in the Noise Appendix. Existing and future traffic data included in the Transportation/Circulation Appendix was used in the traffic noise modeling. In the baseline model, the existing four-lane section of Harry Bridges Boulevard was assumed. In the future models, a wider cross section was assumed, with widening occurring to the north bringing some of the traffic closer to the "C" Street neighbors. First, a direct comparison was made between the existing four lane section and the future widened section assuming the same traffic volume. The redistribution of traffic adjacent to the existing travel lanes would cause an increase of 0.8 dBA at reference modeling locations adjacent to the roadway where noise from Harry Bridges Boulevard dominates the noise environment and by 0.3 dBA or less at the "C" Street residences. Traffic that would be added by Alternative 5 for the years 2015 and 2038 was then added to the baseline traffic to determine the incremental increase in noise generated by Harry Bridges Boulevard traffic. The calculated increase in noise levels along Harry Bridges Boulevard was 1 dBA $L_{eq(h)}$. It is assumed that the hourly distribution of noise levels throughout the day and night would remain the same as it is today. The calculated increase in CNEL noise levels is, therefore, also calculated to be 1 dBA CNEL for both the years 2015 and 2038. At the Wilmington neighbors along "C" Street, the noise environment is affected by vehicular traffic on the I-110 freeway, local traffic on "C" Street, and, to a lesser extent, vehicular traffic along Harry Bridges Boulevard and activities at the Port. Because the noise from Harry Bridges Boulevard is a minor contributor to noise levels at the most affected receivers, the increase in the overall CNEL at these receivers would range from 0 dBA CNEL to 1 dBA CNEL. There would be no change in the character of the noise environment because the roadway traffic would not be moved noticeably closer to the community. Based on the noise monitoring and modeling completed for the proposed Project, there is no evidence to indicate that any noise abatement would be required for the proposed Project. Furthermore, because of the distances involved between the residences and the existing Harry Bridges Boulevard alignment, and parameters which affect performance of noise barriers, it is likely that a

noise barrier would be of only minimal benefit in reducing noise from Harry Bridges Boulevard. Landscaped mounds are being considered within the Harry Bridges Boulevard Landscaped Area. The design for these landscaped mounds is not yet complete, and so no excess attenuation for the landscaped mounds has been included in the noise model. Landscaped mounds, depending upon their final design, could provide a further reduction in Harry Bridges Boulevard noise in the Wilmington neighborhood to the north.

The Transportation/Circulation Appendix includes turning movement volumes for 17 intersections located along roadways in the study area. Turning movement volumes for all 17 study intersections were reviewed to determine if any other roadway segments could experience a measurable increase in traffic noise as a result of traffic generated by this alternative. It was determined by inspection that traffic added by this alternative would be insignificant and would cause a dBA increase to the CNEL on all other roadway segments studied except along Harry Bridges Boulevard adjacent to the project study area.

CEQA Impact Determination

Because operational noise levels would not result in the CNEL to be increased by 3 dBA CNEL or more to or within the "normally unacceptable" or "clearly unacceptable" category nor exceed 5 dBA over the current CNEL at sensitive locations, less than significant noise impacts would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

With no mitigation required, there would be less than significant residual impacts.

NEPA Impact Determination

Under this alternative, no development would occur within the in-water project area (i.e., no dredging, filling of the Northwest Slip or wharf construction). Therefore, potential impacts are not applicable under NEPA since there would be no federal action under this alternative.

Mitigation Measures

Due to No Federal Action, mitigation is not applicable. No mitigation is required.

Residual Impacts

With no mitigation required, there would be no residual impacts under NEPA.

3.9.4.3.3 Summary of Impact Determinations

The following Table 3.9-10 summarizes the CEQA and NEPA impact determinations of the proposed Project and its Alternatives related to Noise, as described in the detailed discussion in Sections 3.9.4.3.1 and 3.9.4.3.2. This table is meant to allow easy comparison between the potential impacts of the proposed Project and its Alternatives with respect to this resource. Identified potential impacts may be based on Federal, State, or City of Los Angeles significance criteria, Port criteria, and the scientific judgment of the report preparers.

For each type of potential impact, the table describes the impact, notes the CEQA and NEPA impact determinations, describes any applicable mitigation measures, and notes the residual impacts (i.e.: the impact remaining after mitigation). All impacts, whether significant or not, are included in this table. Note that impact descriptions for each of the Alternatives are the same as for the proposed Project, unless otherwise noted.

Table 3.9-10: 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*
3.9 Noise				
Proposed Project	**NOI-1:** Construction activities occurring during Phase I would temporarily and periodically generate noise, and noise levels would substantially exceed existing ambient daytime noise levels at sensitive receivers at the new Pier A rail yard and along "C" Street.	CEQA: **Significant** impact	**NOI-1a.** When construction is occurring within 500 feet of a residence or park, temporary noise barriers (solid fences or curtains) shall be located between noise-generating construction activities and sensitive receptors. Implement the following standard controls: **NOI-1b:** Construction Hours. Limit construction to the hours of 7:00 AM to 9:00 PM on weekdays, between 8:00 AM and 6:00 PM on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays as prescribed in the City of Los Angeles Noise Ordinance. **NOI-1c:** Construction Days. Do not conduct noise-generating construction activities on weekends or holidays unless critical to a particular activity (e.g., concrete work). **NOI-1d:** Construction Equipment. Properly muffle and maintain all construction equipment powered by internal combustion engines. **NOI-1e:** Idling Prohibitions. Prohibit unnecessary idling of internal combustion engines near noise sensitive areas. **NOI-1f:** Equipment Location. Locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far as practical from existing noise sensitive land uses. **NOI-1g:** Quiet Equipment Selection. Select quiet construction equipment whenever possible. Comply where feasible with noise limits established in the City of Los Angeles Noise Ordinance. **NOI-1h:** Notification. Notify residents adjacent to the proposed Project site of the construction schedule in writing.	CEQA: **Significant** impact after mitigation
		NEPA: Not Applicable	Mitigation not required	NEPA: Not applicable

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Table 3.9-10: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.9 Noise (continued)				
Proposed Project (continued)	**NOI-2:** Construction activities would not exceed the ambient noise level by 5 dBA at a noise sensitive use between the hours of 9:00 PM and 7:00 AM Monday through Friday, before 8:00 AM or after 6:00 PM on Saturday, or at any time on Sunday.	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact
	NOI-3: On-site operations would generate noise, but noise levels would not substantially exceed existing ambient noise levels at sensitive receivers.	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
Alternative 1	**NOI-1:** Construction activities at Berths 136-147 that could be implemented under the No Project alternative would not generate noise levels that would exceed existing ambient noise levels at sensitive receivers.	CEQA: No impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: No impact NEPA: Not applicable
	NOI-2	CEQA: No impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: No impact NEPA: Not applicable
	NOI-3	CEQA: Less than significant impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Not applicable

Table 3.9-10: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.9 Noise (continued)				
Alternative 2	**NOI-1:** Construction activities during Phase I would temporarily and periodically generate noise, and noise levels would substantially exceed existing ambient daytime noise levels at sensitive receivers at the new Pier A rail yard and along "C" Street.	CEQA: **Significant** impact NEPA: Not applicable	**NOI-1a:** When construction is occurring within 500 feet of a residence or park, temporary noise barriers (solid fences or curtains) shall be located between noise-generating construction activities and sensitive receptors. Implement the following standard controls: **NOI-1b:** Construction Hours. Limit construction to the hours of 7:00 AM to 9:00 PM on weekdays, between 8:00 AM and 6:00 PM on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays as prescribed in the City of Los Angeles Noise Ordinance. **NOI-1c:** Construction Days. Do not conduct noise-generating construction activities on weekends or holidays unless critical to a particular activity (e.g., concrete work). **NOI-1d:** Construction Equipment. Properly muffle and maintain all construction equipment powered by internal combustion engines. **NOI-1e:** Idling Prohibitions. Prohibit unnecessary idling of internal combustion engines near noise sensitive areas. **NOI-1f:** Equipment Location. Locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far as practical from existing noise sensitive land uses. **NOI-1g:** Quiet Equipment Selection. Select quiet construction equipment whenever possible. Comply where feasible with noise limits established in the City of Los Angeles Noise Ordinance. **NOI-1h:** Notification. Notify residents adjacent to the proposed Project site of the construction schedule in writing. Mitigation not required	CEQA: **Significant** impact after mitigation NEPA: Not applicable
	NOI-2	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact

Table 3.9-10: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.9 Noise (continued)				
Alternative 2 (continued)	**NOI-3**	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
Alternative 3	**NOI-1:** Construction activities during Phase I would temporarily and periodically generate noise, and noise levels would substantially exceed existing ambient daytime noise levels at sensitive receivers at the new Pier A rail yard and along "C" Street.	CEQA: **Significant** impact NEPA: Not applicable	**NOI-1a:** When construction is occurring within 500 feet of a residence or park, temporary noise barriers (solid fences or curtains) shall be located between noise-generating construction activities and sensitive receptors. Implement the following standard controls: **NOI-1b:** Construction Hours. Limit construction to the hours of 7:00 AM to 9:00 PM on weekdays, between 8:00 AM and 6:00 PM on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays as prescribed in the City of Los Angeles Noise Ordinance. **NOI-1c:** Construction Days. Do not conduct noise-generating construction activities on weekends or holidays unless critical to a particular activity (e.g., concrete work). **NOI-1d:** Construction Equipment. Properly muffle and maintain all construction equipment powered by internal combustion engines. **NOI-1e:** Idling Prohibitions. Prohibit unnecessary idling of internal combustion engines near noise sensitive areas. **NOI-1f:** Equipment Location. Locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far as practical from existing noise sensitive land uses. **NOI-1g:** Quiet Equipment Selection. Select quiet construction equipment whenever possible. Comply where feasible with noise limits established in the City of Los Angeles Noise Ordinance. **NOI-1h:** Notification. Notify residents adjacent to the proposed Project site of the construction schedule in writing. Mitigation not required	CEQA: **Significant** impact after mitigation NEPA: Not applicable
	NOI-2	CEQA: No impact NEPA: No impact	Mitigation not required Mitigation not required	CEQA: No impact NEPA: No impact

Table 3.9-10: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.9 Noise (continued)				
Alternative 3 (continued)	**NOI-3**	CEQA: Less than significant impact NEPA: Less than significant impact	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Less than significant impact
Alternative 4	**NOI-1:** Construction activities during Phase I would temporarily and periodically generate noise, and noise levels would substantially exceed existing ambient daytime noise levels at sensitive receivers along "C" Street.	CEQA: **Significant** impact NEPA: Not applicable	**NOI-1a:** When construction is occurring within 500 feet of a residence or park, temporary noise barriers (solid fences or curtains) shall be located between noise-generating construction activities and sensitive receptors. Implement the following standard controls: **NOI-1b:** Construction Hours. Limit construction to the hours of 7:00 AM to 9:00 PM on weekdays, between 8:00 AM and 6:00 PM on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays as prescribed in the City of Los Angeles Noise Ordinance. **NOI-1c:** Construction Days. Do not conduct noise-generating construction activities on weekends or holidays unless critical to a particular activity (e.g., concrete work). **NOI-1d:** Construction Equipment. Properly muffle and maintain all construction equipment powered by internal combustion engines. **NOI-1e**: Idling Prohibitions. Prohibit unnecessary idling of internal combustion engines near noise sensitive areas. **NOI-1f:** Equipment Location. Locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far as practical from existing noise sensitive land uses. **NOI-1g:** Quiet Equipment Selection. Select quiet construction equipment whenever possible. Comply where feasible with noise limits established in the City of Los Angeles Noise Ordinance. **NOI-1h:** Notification. Notify residents adjacent to the proposed Project site of the construction schedule in writing. Mitigation not required	CEQA: **Significant** impact after mitigation NEPA: Not applicable
	NOI-2	CEQA: No impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: No impact NEPA: Not applicable

Table 3.9-10: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.9 Noise (continued)				
Alternative 4 (continued)	**NOI-3**	CEQA: Less than significant impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Not applicable
Alternative 5	**NOI-1:** Construction activities would temporarily and periodically generate noise, and noise levels would substantially exceed existing ambient daytime noise levels at sensitive receivers at the new Pier A rail yard and along "C" Street during construction of the Buffer Area.	CEQA: **Significant** impact NEPA: Not applicable	**NOI-1a:** When construction is occurring within 500 feet of a residence or park, temporary noise barriers (solid fences or curtains) shall be located between noise-generating construction activities and sensitive receptors. Implement the following standard controls: **NOI-1b:** Construction Hours. Limit construction to the hours of 7:00 AM to 9:00 PM on weekdays, between 8:00 AM and 6:00 PM on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays as prescribed in the City of Los Angeles Noise Ordinance. **NOI-1c:** Construction Days. Do not conduct noise-generating construction activities on weekends or holidays unless critical to a particular activity (e.g., concrete work). **NOI-1d:** Construction Equipment. Properly muffle and maintain all construction equipment powered by internal combustion engines. **NOI-1e:** Idling Prohibitions. Prohibit unnecessary idling of internal combustion engines near noise sensitive areas. **NOI-1f:** Equipment Location. Locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far as practical from existing noise sensitive land uses. **NOI-1g:** Quiet Equipment Selection. Select quiet construction equipment whenever possible. Comply where feasible with noise limits established in the City of Los Angeles Noise Ordinance. **NOI-1h:** Notification. Notify residents adjacent to the proposed Project site of the construction schedule in writing. Mitigation not required	CEQA: **Significant** impact after mitigation NEPA: Not applicable

Table 3.9-10: Summary Matrix of Potential Impacts and Mitigation Measures for Noise Associated with the Proposed Project and Alternatives (continued)

Alternative	*Environmental Impacts**	*Impact Determination*	*Mitigation Measures*	*Impacts after Mitigation*
3.9 Noise (continued)				
Alternative 5 (continued)	**NOI-2**	CEQA: No impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: No impact NEPA: Not applicable
	NOI-3	CEQA: Less than significant impact NEPA: Not applicable	Mitigation not required Mitigation not required	CEQA: Less than significant impact NEPA: Not applicable
* Unless otherwise noted, all impact descriptions for each of the Alternatives are the same as those described for the Proposed Project.				

3.9.4.4 Mitigation Monitoring

NOI-1: Noise levels would substantially exceed existing ambient daytime noise levels at sensitive receivers at the new Pier A rail yard and along "C" Street.	
Mitigation Measure	**NOI-1a:** When construction is occurring within 500 feet of a residence or park, temporary noise barriers (solid fences or curtains) shall be located between noise-generating construction activities and sensitive receptors. Implement the following standard controls: **NOI-1b: Construction Hours.** Limit construction to the hours of 7:00 AM to 9:00 PM on weekdays, between 8:00 AM and 6:00 PM on Saturdays, and prohibit construction equipment noise anytime on Sundays and holidays as prescribed in the City of Los Angeles Noise Ordinance. **NOI-1c: Construction Days.** Do not conduct noise-generating construction activities on weekends or holidays unless critical to a particular activity (e.g., concrete work). **NOI-1d: Construction Equipment.** Properly muffle and maintain all construction equipment powered by internal combustion engines. **NOI-1e: Idling Prohibitions.** Prohibit unnecessary idling of internal combustion engines near noise sensitive areas. **NOI-1f: Equipment Location.** Locate all stationary noise-generating construction equipment, such as air compressors and portable power generators, as far as practical from existing noise sensitive land uses. **NOI-1g: Quiet Equipment Selection.** Select quiet construction equipment whenever possible. Comply where feasible with noise limits established in the City of Los Angeles Noise Ordinance. **NOI-1h: Notification.** Notify residents adjacent to the proposed Project site of the construction schedule in writing.
Timing	During construction of the new Pier A rail yard and the Harry Bridges Buffer Area.
Methodology	The contractor shall determine necessary height and length of barriers based on field conditions. Prior to Notice to proceed Contractor shall submit a Environmental/Noise Compliance Plan to the LAHD Construction Manager for review and approval by LAHD and the Environmental Management Division.
Responsible Parties	LAHD/USACE
Residual Impacts	Significant after mitigation.

3.9.5 Significant Unavoidable Impacts

There would be a significant unavoidable short-term noise impact during the 5-month construction period of the new Pier A rail yard near the Berth 200-202 Marinas. Significant unavoidable short-term noise impacts would also occur along "C" Street as a result of construction of the Harry Bridges Buffer Area.

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