Section 3.11
Marine Transportation

SECTION SUMMARY

This section describes existing marine transportation within the Port and identifies potential impacts on marine transportation, including navigation and safety, that would result from the implementation of the proposed Project or an alternative.

Section 3.11, Marine Transportation, provides the following:

- a description of existing levels of marine vessel traffic in the Port area;
- a description of existing navigational hazards and factors affecting vessel traffic safety in the Port, including regulations and policies;
- a discussion of the methodology used to determine whether the proposed Project or alternatives would result in an impact on marine transportation;
- an impact analysis of both the proposed Project and alternatives; and
- a description of any mitigation measures proposed to reduce any potential impacts, as applicable.

Key Points of Section 3.11:

There are numerous existing regulations and standards that deal directly with marine vessel traffic and its management. The two primary management services are the Vessel Traffic Service (VTS) and the Los Angeles Pilot Service. VTS is jointly operated by the United States Coast Guard (USCG) and Marine Exchange of Southern California (Marine Exchange), and provides real-time ship locations from a 25-mile radius area of responsibility right to berth. VTS implements the USCG Captain of the Port's (COTP) uniform procedures, including advance notification to vessel operators, vessel traffic managers, and port pilots[1] identifying the locations of dredges, derrick barges, and any associated operational procedures or restrictions (e.g., one-way traffic), to ensure safe transit of vessels in and to and from the proposed project area. The Los Angeles Pilot Service provides pilots who board arriving vessels in the vicinity of the Los Angeles Sea Buoy to guide incoming ships to dock. They also provide assistance to outbound ships. Use of a Port Pilot is required for all vessels of foreign registry and U.S. vessels that do not have a federally licensed pilot on board. Adherence to the existing standards, including use of the harbor safety plan's operational procedures, and application of Port Tariffs further reduces the safety risks associated with vessel movement within the Port Complex. In addition, a communication system links USCG COTP, VTS, Los Angeles Pilot Station, Long Beach Pilot Station, and Port of Long Beach Security. This system is used to exchange vessel movement information and safety notices among the various organizations.

[1] A local master with a small vessel who can be retained to help guide large commercial craft.

The existing and projected terminal throughput, vessel activity, and vessel sizes that can be accommodated at the YTI Terminal are shown in Table 3.11-1 below. As shown in the table, the proposed Project and Alternatives 1 (No Project) and 2 (No Federal Action) would result in an increase of 44 ship calls per year (approximately 4 additional ship calls per month) by 2026 as compared to the CEQA baseline. The addition of 44 ship calls annually would represent an increase of 2.0% over total annual ship calls of 2,180 at the Port in 2012. It should be noted that this increase in the number of vessels serving YTI would occur by 2026 even without the dredging of Berths 214–216 and 217–220 as described under the proposed Project due to projected increases in cargo at the YTI Terminal up to its existing maximum capacity of 1,692,000 TEUs. Alternative 3 (Reduced Project: Improve Berths 217–220 Only) would result in an increase of 70 vessels by 2026 compared to the CEQA baseline, representing an increase of 3.2% over the total annual ship calls at the Port in 2012.

Although both the proposed Project and Alternative 3 would increase the capacity of the YTI Terminal to accommodate up to 1,913,000 TEUs, Alternative 3 would require more vessel calls than the proposed Project. This is because Alternative 3 would not be able to accommodate the very largest ships at Berths 214–216 (13,000 TEU vessels), and consequently smaller ships would have to be serviced at a greater frequency to reach the capacity of the terminal.

The proposed Project and Alternatives 1 and 2 would result in no increase in the number of ship calls per year by 2026, compared to the NEPA baseline. Alternative 3 would result in an increase of 26 ship calls by 2026 compared to the NEPA Baseline.

Table 3.11-1: Existing and Projected Terminal Throughput, Vessel Activity, and Vessel Size for the Proposed Project and Alternatives

	CEQA Baseline (January 2012 – December 2012)	Proposed Project (2026)	Alternative 1 – CEQA No Project (2026)	Alternative 2 – No Federal Action/NEPA Baseline (2026)	Alternative 3 – Reduced Project (2026)
Annual Throughput (TEUs)	996,109	1,913,000	1,692,000	1,692,000	1,913,000
Annual Ship Calls	162	206	206	206	232
Peak Day Ship Calls (24-hour)	3	4	4	4	5
Peak Day Number of Transits	3	4	4	4	4
Maximum Vessel Size					
Berths 212–213	6,500	6,500	6,500	6,500	6,500
Berths 214–216	8,500	13,000	8,500	8,500	8,500
Berths 217–220	N/A	11,000	N/A	N/A	11,000

Neither the proposed Project nor any of the alternatives would result in a significant impact on Marine Transportation under both CEQA and NEPA. Specifically:

- during construction, the proposed Project (and each of the alternatives) would not substantially interfere with operation of designated vessel traffic lanes or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area; and

- during operation, the proposed Project (and each of the alternatives) would not substantially interfere with operation of designated vessel traffic lanes or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.

3.11.1 Introduction

This section describes existing marine transportation within the Port and identifies potential impacts on marine transportation, including navigation and safety, that would occur as a result of implementation of the proposed Project or alternatives.

3.11.2 Environmental Setting

The Port is located in San Pedro Bay and is protected from Pacific Ocean surge conditions by the San Pedro, Middle, and Long Beach breakwaters (see Figure 3.11-1). The openings between these breakwaters, known as Angels Gate and Queens Gate, provide entry to the Ports of Los Angeles and Long Beach, respectively. Vessel traffic channels have been established in the Los Angeles Harbor, and numerous aids to navigation have been developed.

Numerous types of vessels, including fishing boats, pleasure vessels, passenger-carrying vessels, tankers, auto carriers, container vessels, dry bulk carriers, and barges, call at or reside in the Port. When approaching and leaving the harbor, commercial vessels follow vessel traffic lanes established by the USCG. Designated traffic lanes converge at the Precautionary Area (see Figure 3.11-1). The Federal Channels in the Port Complex are maintained by USACE.

3.11.2.1 Vessel Transportation Safety

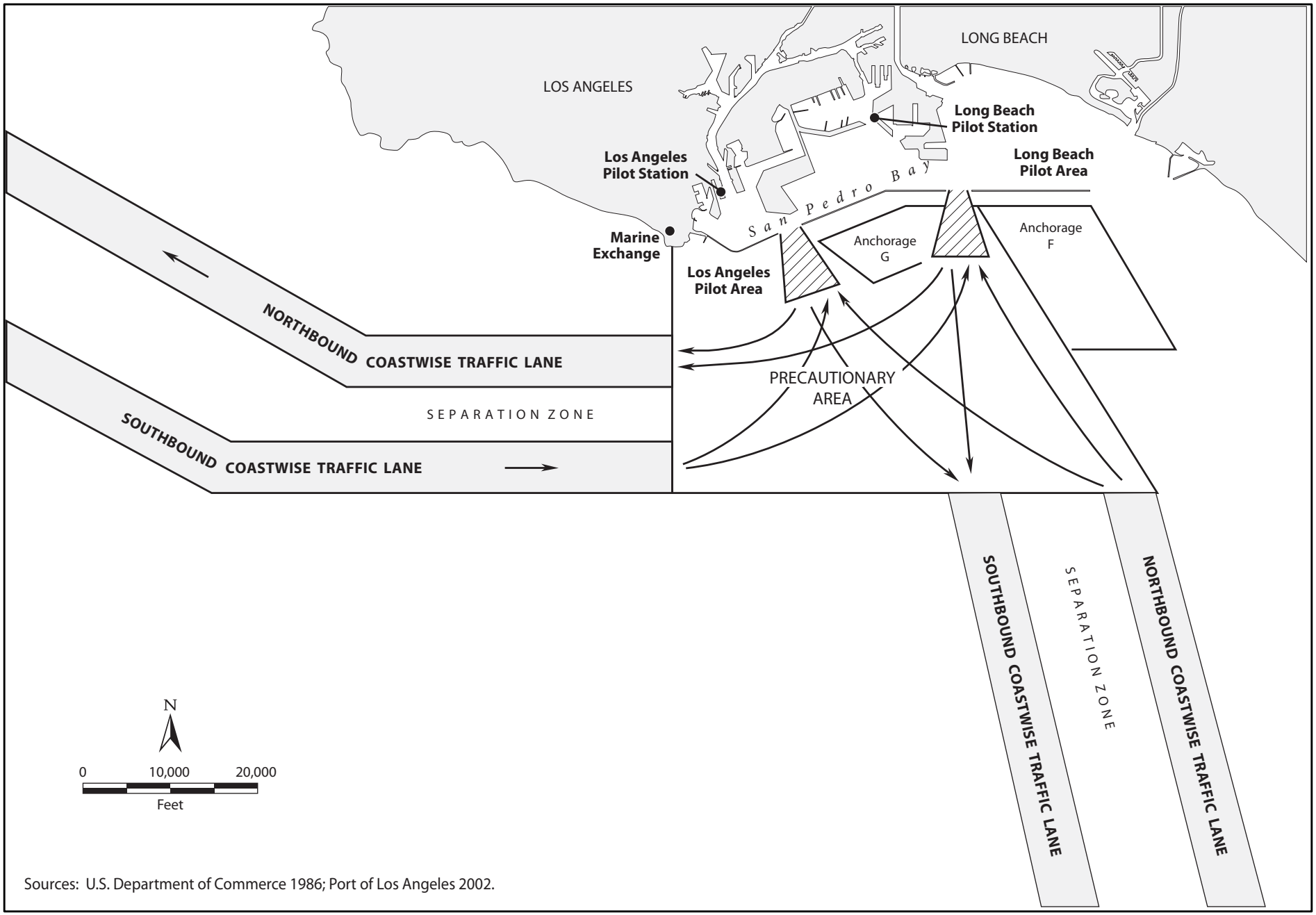
Vessel traffic within and approaching the harbor is managed primarily by two entities: the VTS and the Los Angeles Pilot Service, both of which are described below in detail. Moreover, there are several measures in place to ensure the safety of vessel navigation in the harbor area. These measures and the agencies and organizations responsible for their enforcement are described below.

Marine Exchange of Southern California

The Marine Exchange is a voluntary, non-profit organization affiliated with the Los Angeles Chamber of Commerce. This voluntary service is designated to enhance navigation safety in the precautionary and harbor areas of the Ports of Los Angeles and Long Beach. The service consists of a coordinating office, specific reporting points, and very high frequency-frequency modulation (VHF-FM) radio communications used with participating vessels. The Marine Exchange also operates the Physical Oceanographic Real Time System (PORTS) as a service to organizations making operational decisions based on oceanographic and meteorological conditions in the vicinity of the harbor. PORTS collects and disseminates accurate real-time information on tides, visibility, winds, currents, and sea swell to maritime users to assist in the safe and efficient transit of vessels in the harbor area. The Marine Exchange also jointly operates the VTS with the USCG.

Vessel Traffic Service

VTS is operated jointly by the USCG COTP and the Marine Exchange. VTS uses radar, radio, and visual inputs to collect real-time vessel traffic information, and broadcasts traffic advisories to assist mariners in both the main approach and departure lanes, including the Precautionary Area, as well as internal movement inside the harbor. Thus,



Sources: U.S. Department of Commerce 1986; Port of Los Angeles 2002.

K:\Irvine\GIS\Projects\POLA\00070 13\mapdoc\Fig3 10 1 vessel traffic lanes.ai DD (10-03-13)

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Figure 3.11-1
Precautionary Area and Designated Vessel Traffic Lanes
Berths 212-224 [YTI] Container Terminal Improvements Project

VTS helps to ensure that the total number of vessels transiting the Port does not exceed the design capacity of the Federal Channel limits. Container vessels are required to report their position and destination to the VTS at certain times and locations, and may also request information about traffic that could be encountered in the Precautionary Area.

Further, VTS implements the COTP's uniform procedures, including advance notification to vessel operators, vessel traffic managers, and Port Pilots identifying the locations of dredges, derrick barges, and any associated operational procedures or restrictions (e.g., one-way traffic), to ensure safe transit of vessels in and to and from the proposed project area. In addition, a communication system links USCG COTP, VTS, Los Angeles Pilot Station, Long Beach Pilot Station, and Port of Long Beach Security. This system is used to exchange vessel movement information and safety notices among the various organizations.

If there are scheduling conflicts and/or if vessel occupancy within the harbor reaches operating capacity, vessels are required to anchor at the anchorages outside the breakwater until mariners receive COTP authorization to initiate transit into the harbor.

Traffic Separation Schemes

A Traffic Separation Scheme (TSS) is an internationally recognized vessel routing designation, which separates opposing flows of vessel traffic into lanes, including a zone between lanes where transit is to be avoided. TSSs have been designated to help direct offshore vessel traffic along portions of the California coastline, such as the Santa Barbara Channel. Vessels are not required to use a TSS, but failure to do so, if one is available, would be a major factor for determining liability in the event of a collision. TSS designations are proposed by USCG, but they must be approved by the International Maritime Organization (IMO), which is part of the United Nations.

Safety Fairways

Offshore waters in high traffic areas are designated as safety fairways, which means that placement of surface structures, such as oil platforms, is prohibited to ensure safer navigation. USACE is prohibited from issuing permits for surface structures (e.g., oil platforms) in safety fairways, which are frequently located between a port and the entry into a TSS.

Precautionary and Regulated Navigation Areas

A Precautionary Area is designated in congested areas near the harbor entrances. A Precautionary Area enables harbor officials to set speed limits or establish other safety precautions for ships entering or departing a harbor. A regulated navigation area (RNA) is a water area within a defined boundary for which federal regulations have been established under 33 CFR 165.1109 for vessels navigating in this area. In the harbor, RNA boundaries match the designated Precautionary Area. For example, 33 CFR 165.1152 identifies portions of the Precautionary Area as RNA.

The Precautionary Area for the Port is defined by a line that extends south from Point Fermin approximately 7 nautical miles (nm), then due east approximately 7 nm, then

northeast for approximately 3 nm, and then back northwest (see Figure 3.11-1). Ships are required to cruise at speeds of 12 knots or less upon entering the Precautionary Area.[2] A minimum vessel separation of 0.25 nm is also required in the Precautionary Area. The Marine Exchange monitors vessel traffic within the Precautionary Area.

Pilotage

The Port Complex does not require the use of a Port Pilot for every vessel that transits in or out of the San Pedro Bay area and adjacent waterways. Use of a Port Pilot is required, however, for all vessels of foreign registry and U.S. vessels that do not have a federally licensed pilot on board. Because most commercial vessels entering the Port are of foreign registry, the number of large commercial vessels transiting without Port Pilot services is negligible. The Los Angeles and Long Beach pilot services and the Marine Exchange all operate radar systems to monitor vessel traffic in the harbor, and information is available to all vessels upon request. The pilot services also manage the use of anchorages under an agreement with USCG. A communication system links key operational centers: USCG COTP, VTS, Los Angeles Pilot Station, Long Beach Pilot Station, and Port of Long Beach Security. This system is used to exchange vessel-movement information and safety notices among the various organizations.

Los Angeles Pilot Service

Los Angeles Port Pilots maintain round-the-clock service in San Pedro Bay, ensuring a safe flow of ship traffic to and from Los Angeles Harbor. Based at Berth 68, pilots board arriving vessels in the vicinity of the Los Angeles Sea Buoy to guide incoming ships to dock. They also provide assistance to outbound ships.

The Los Angeles Pilot Service dates back to 1907, when the Port of Los Angeles was founded. Today, the Pilot Service employs 31 dedicated professionals, combining the skills of pilots, dispatchers, and boat crews to provide expert pilotage services to Port of Los Angeles customers.

The mission of the Los Angeles Pilot Service is to provide safe, reliable, and efficient pilotage and marine services. Over the last decade, the Los Angeles Pilots have safely completed more than 55,000 vessel movements. They are among the best-trained pilots in the maritime industry. After a rigorous two-year training program, each pilot attends manned-model shiphandling courses in Grenoble, France, once every four years. Each pilot also attends ship simulator training every two years. The Los Angeles Pilots have an average of 33 years of marine experience and 16 years of piloting experience in San Pedro Bay.

Port Tariffs

The Port also enforces numerous federal navigation regulations (e.g., Port Tariffs) in the harbor. Specifically, larger commercial vessels (i.e., greater than 300 gross tons) are required to use a federally licensed pilot when navigating inside the breakwater. In most circumstances, vessels employ the services of a federally licensed local pilot from the

[2] According to 33 CFR 165.1152, the speed restriction to 12 knots or less when entering the Precautionary Area applies to power driven vessels of 1,600 or more gross tons, a towing vessel of 8 meters (approximately 26 feet) or more in length engaged in towing, or vessels of 100 or more gross tons carrying one or more passengers for hire.

Los Angeles Pilot Service. When a local pilot is not used, masters must have a local federal pilot license and receive approval from the USCG COTP prior to entering or departing the Port. Port Tariffs also require vessels to notify the affected pilot station(s) in situations when a pilot is not needed before entering, leaving, shifting, or moving between the Ports.

Tug Escort/Assist for Tank Vessels

"Tug Escort" refers to the stationing of tugs in proximity to a vessel as it transits into port to provide immediate assistance should a steering or propulsion failure develop. "Tug Assist" refers to the positioning of tugs alongside a vessel and applying force to assist in making turns, reducing speed, providing propulsion, and docking. Commercial container vessels, as well as most of the ocean-going vessels, are required to have tug assistance in the harbor (Los Angeles/Long Beach Harbor Safety Committee 2011). However, some vessels have internal "tugs" (typically bow and stern thrusters) that allow the vessel to propel without engaging the main engines, and thus can accomplish maneuvers with the same precision as a tug-assisted vessel. These ships are not required to have external tug assistance.

Physical Oceanographic Real Time System

In partnership with the National Oceanographic and Atmospheric Association (NOAA), National Ocean Service (NOS), California Office of Spill Prevention and Response (OSPR), USCG, and some businesses operating in the Ports, the Marine Exchange operates PORTS as a service to those making operational decisions based on oceanographic and meteorological conditions in the vicinity of the Port. PORTS is a system of environmental sensors and supporting telemetry equipment that gathers and disseminates accurate real-time information on tides, visibility, winds, currents, and sea swell to maritime users to assist in the safe and efficient transit of vessels in the Port area. Locally, PORTS is designed to provide crucial information in real time to mariners, oil spill response teams, managers of coastal resources, and others about harbor water levels, currents, salinity, and winds.

The instruments that collect the PORTS information are deployed to provide data at critical locations and to allow "now-casting" and forecasting using a mathematical model of the oceanographic processes of the harbor. Data from the sensors are fed into a central collection point. Raw data from the sensors are integrated and synthesized into information and analysis products, including graphical displays of PORTS data.

Additional Safety Measures

The Harbor Safety Plan (HSP) contains additional procedures for vessels operating in the Port vicinity. The vessel operating procedures stipulated in the HSP are considered Good Marine Practice. Some of the procedures are federal, state, or local regulations, while other guidelines are non-regulatory "Standards of Care." Another important safety measure is the issuance of the weekly *Local Notice to Mariners* by the USCG. These notices list various activities that could pose a hazard to mariners in the Port.

Additional Navigation Rules

The USCG "Rules of the Road" apply to all marine vessels, regardless of size. To minimize the potential for accidents, all marine vessels in the Port Complex are required

to follow vessel safety policies and regulations contained in the *Navigation Rules: International and Inland* (USCG Nav. Rule CG-169).

For the open seas, the International Rules apply and were ratified at the Convention on the International Regulations for Preventing Collisions at Sea, 1972. The International Rules apply to all vessels of nations that ratified the treaty, in addition to the United Nations. The International Rules include 38 numbered rules organized into five parts: A – General, B – Steering and Sailing Rules, C – Lights and Shapes, D – Sound and Light Signals, and E – Exemptions.

Efforts to unify and update various inland navigation rules culminated in 1980 with the enactment of the Inland Navigation Rules Act (22 CFR 83). The Inland Rules were established under the authorization of International Rule 1(b) to apply to all inland waters of the United States. The Inland Rules numbered 1 through 38 closely match, in some cases exactly, the International Rules. All marine vessels in the Port are required to follow these vessel safety policies and regulations.

3.11.2.2 Navigational Hazards

Port Pilots can easily identify fixed navigational hazards in the Ports, including breakwaters protecting the Outer Harbor, anchorage areas, and various wharfs and landmasses that compose the Port Complex. These hazards are readily apparent on radar and are currently illuminated. Four bridges cross the navigation channels of both Ports. All bridges have restricted vertical clearances, and two have restricted horizontal clearances as well.

Vessels that are waiting to enter the harbor and moor at a berth can anchor at the anchorages outside and inside the breakwaters. Vessels do not require tug assistance to anchor outside the breakwater. The Port currently does not have any anchorages inside the breakwater (Chesser pers. comm.). For safety reasons, VTS will not assign an anchorage in the first row of sites closest to the breakwater to vessels longer than 656 feet.

Vessels are required by law to report failures of navigational equipment, propulsion, steering, or other vital systems to USCG via the COTP office or the COTP representative at VTS as soon as possible. According to VTS, approximately 1 in 100 vessels calling at the Port Complex experiences a mechanical failure during their inbound or outbound transit.

Vessel Accidents

Although marine safety is thoroughly regulated and managed, accidents can occur during marine navigation. Marine vessel accidents include vessel collisions (between two moving vessels), allisions (between a moving vessel and a stationary object, including another vessel), and vessel groundings. As shown in Table 3.11-2, the number of vessel allisions, collisions, and groundings (ACGs) in the harbor has remained fairly constant between 1996 and 2012. The number of ACGs ranged from 3 to 12 per year between 1996 and 2012, at an average of 7 ACG incidents per year (U.S. Naval Academy 1999; Los Angeles/Long Beach Harbor Safety Committee 2007, 2011, 2012, and 2013). Although there are no reliable data on the level of recreational boating incidents in the harbor over this period, the amount of commercial vessel traffic into and out of the harbor has remained fairly constant (± 2%). During this time, there has also been a large amount

of construction and channel deepening within the Ports. Each of these accidents was subject to a USCG marine casualty investigation, and the subsequent actions taken were targeted at preventing future occurrences.

Table 3.11-2: Allisions, Collisions, and Groundings – Port Complex (1996–2012)

	ACG Incidents			
Year	Allisions	Collisions	Groundings	Total
1996	2	4	1	7
1997	1	3	2	6
1998	1	2	3	6
1999	3	4	2	9
2000	3	2	1	6
2001	4	1	0	5
2002	6	5	0	11
2003	4	2	2	8
2004	2	4	6	12
2005	0	1	3	4
2006	4	0	5	9
2007	3	1	6	10
2008	1	1	1	3
2009	3	0	0	3
2010	1*	1*	0	1
2011	7*	7*	1	8
2012	6*	6*	1	7

Sources: Los Angeles/Long Beach Harbor Safety Committee 2004, 2007, 2011, 2012, and 2013; U.S. Naval Academy 1999.

*Allisions and Collisions are not separated in this year's data.

Note: These commercial vessel accidents meet a reportable level defined in 46 CFR 4.05, but do not include commercial fishing vessel or recreational boating incidents.

Close Quarters

To avoid vessels passing too close together, the VTS documents, reports, and takes action on "close-quarters" situations. VTS close-quarters situations are described as vessels passing an object or another vessel closer than 0.25 nm, or 500 yards. These incidents usually occur in the Precautionary Area. No reliable data are available for close-quarters incidents outside the VTS area. Normal action taken in response to close-quarters situations includes initiating informal USCG investigation, sending Letters of Concern to owners and operators, having the involved vessel master visit VTS and review the incident, and USCG enforcement boardings. A 15-year history of the number of close-quarters situations is presented in Table 3.11-3. Recent near-miss data for 2006 through 2012 were obtained from the 2013 Harbor Safety Plan, which is also included in Table 3.11-3 (Los Angeles/Long Beach Harbor Safety Committee 2013). However, correspondence with the Marine Exchange indicated that close-quarters encounters were not available for the 2010 and 2011 years (Chesser pers. comm.). Given the relatively

steady number of commercial transits over the past several years, a decreasing trend in close-quarters incidents is discernible (Los Angeles/Long Beach Harbor Safety Committee 2013). This is noticeable in the low number of near-miss situations from 2004 to 2008 and 2012.

Table 3.11-3: Number of VTS-Recorded Close-Quarters Incidents, 1998–2012

Year	Number of Close-Quarters Incidents
1998	9
1999	5
2000	1
2001	2
2002	6
2003	4
2004	0
2005	0
2006	0
2007	1
2008	1
2009	5
2010	No data
2011	No data
2012	3

Source: Los Angeles/Long Beach Harbor Safety Committee 2007, 2009 and 2013.

3.11.2.3 Factors Affecting Vessel Traffic Safety

This section summarizes environmental conditions that could affect vessel safety in the harbor area.

Fog

Fog is a well-known weather condition in southern California. Harbor area fog occurs most frequently in April and from October through February, when visibility over the San Pedro Bay is below 0.5 mile for seven to ten days per month. Fog at the Port is mostly a land (radiation) type fog that drifts off shore and worsens in the late night and early morning. Smoke from nearby industrial areas often adds to its thickness and persistence. Along the shore, fog drops visibility to less than 0.5 mile on three to eight days per month from August through April and is generally at its worst in December. (Los Angeles/Long Beach Harbor Safety Committee 2011.)

Winds

Wind conditions vary, particularly in fall and winter. Winds can be strongest when the Santa Ana (prevailing winds from the northeast occurring from October through March) winds blow. The Santa Ana winds, though infrequent, may be violent. A Santa Ana

condition occurs when a strong high-pressure system resides over the plateau region of Nevada and Utah and generates a northeasterly to easterly flow over Southern California. Aside from weather forecasts, there is little warning of a Santa Ana wind onset. Good visibility and unusually low humidity often prevail for some hours before it arrives. Shortly before arriving on the coast, the Santa Ana may appear as an approaching dark brown dust cloud. This positive indication often provides a 10- to 30-minute warning. The Santa Ana wind may come at any time of day and can be reinforced by an early morning land breeze or weakened by an afternoon sea breeze. (Los Angeles/Long Beach Harbor Safety Committee 2011.)

Winter storms produce strong winds over San Pedro Bay, particularly southwesterly through northwesterly winds. Winds of 17 knots or greater occur about 1 to 2% of the time from November through May. Southwesterly through westerly winds begin to prevail in the spring and last into early fall. (Los Angeles/Long Beach Harbor Safety Committee 2011.)

Tides

The mean range of tide is 3.8 feet for the Port. The diurnal range is about 5.4 feet, and a range of 9 feet may occur at maximum tide. (Los Angeles/Long Beach Harbor Safety Plan 2011.)

Currents

Harbor tidal currents follow the axes of the channels and rarely exceed one knot. The harbor area is subject to seiches (i.e., waves that surge back and forth in an enclosed basin as a result of earthquakes) and surge, with the most persistent and conspicuous oscillation having about a one-hour period. Near Reservation Point, the prominent hourly surge causes velocity variations as great as one knot. These variations often overcome the lesser tidal current, so that the current ebbs and flows at half-hour intervals. The more restricted channel usually causes the surge through the Back Channel to reach a greater velocity at the east end of Terminal Island, rather than west of Reservation Point. In the Back Channel, hourly variation may be 1.5 knots or more. At times, the hourly surge, together with shorter, irregular oscillations, causes a very rapid change in water height and current direction/velocity, which may endanger vessels moored at the piers (Los Angeles/Long Beach Harbor Safety Plan 2011).

USACE ship navigation studies indicate that in the Port channels, current magnitudes are essentially a negligible one-third knot or less. Maximum current velocity in the Angels Gate area is less than one knot. These current magnitudes, determined during a simulation study, are depth-averaged values over three layers. According to Jacobsen Pilot Service, the Long Beach Queens Gate has deeper water than Angels Gate and has more open waterways just inside the breakwater. The pilots have never experienced a current greater than one knot in this area. (Los Angeles/Long Beach Harbor Safety Committee 2011.)

Water Depths

Table 3.11-4 includes the water depth at various locations in the harbor. The existing depth of the harbor at the YTI Terminal (Berths 212–220) is -45 feet mean lower low water (MLLW).

Table 3.11-4: Water Depths within the Port of Los Angeles

Channel/Basin	Depth – MLLW in feet (meters)
Main Channel	-53 (-16.2)
Turning Basin	-53 (-16.2)
West Basin	-53 (-16.2)
East Basin	-53 (-16.2)
North Channel (Pier 300/400)	-53 (-16.2)
North Turning Basin (Pier 300)	-81 (-24.7)
Approach and Entrance Channels	-81 (-24.7)

Sources: Los Angeles/Long Beach Harbor Safety Committee 2011; LAHD 2013.

3.11.2.4 Vessel Traffic

A total of 2,180 vessels called at the Port in 2012. Vessel traffic to the Port was relatively constant through 2007, but has declined since, as indicated in Table 3.11-5. The increase in cargo volumes prior to 2012 has been accommodated primarily by larger vessels, rather than additional vessels. The Main Channel sees a majority of the commercial vessel traffic and allows access to terminals such as TraPac, China Shipping, Yang Ming, Pasha, Evergreen, and the YTI Terminal at the proposed project site.

Table 3.11-5: Ship Calls at the Port of Los Angeles

Year	Ship Calls
1997	2,786
1998	2,569
1999	2,630
2000	3,060
2001	2,717
2002	2,526
2003	2,660
2004	2,850
2005	2,500
2006	2,701
2007	2,537
2008	2,239
2009	2,010
2010	2,182
2011	2,181
2012	2,180

Source: USACE and LAHD 2009; Port of Los Angeles 2010, 2013.

There are three berths at the YTI Terminal: Berths 212–213, Berths 214–216, and Berths 217–220; however, Berths 217–220 are not currently operating. No vessel berthing occurs between Berths 221 and 224. In 2012, the YTI Terminal moved 996,109 TEUs, the result of 162 vessel calls. The terminal handled a maximum of three vessels in a peak day. The majority of vessels calling at the YTI Terminal were 6,000- and 2,000-TEU-capacity vessels. No vessels over 8,000 TEUs called on the YTI Terminal in 2012. The deepest existing berth can only accommodate 8,500 TEU vessels. To accommodate berthing, tugboat operations are required. For the YTI Terminal, two tugs generally are required for each ship docking and undocking, for a total of four tugs per vessel call. In the case of the 2,000 TEU class vessels, one tug is required each for ship docking and undocking, for a total of two tugs per call.

3.11.3 Applicable Regulations

Many laws and regulations are in place to regulate marine terminals, vessels calling at marine terminals, and emergency response/contingency planning. Responsibilities for enforcing or executing these laws and regulations are governed by various federal and local agencies, as described below.

3.11.3.1 Federal Agencies

A number of federal laws regulate marine terminals and vessels. In general, these laws address design and construction standards, operational standards, and spill prevention and cleanup. Regulations to implement these laws are contained primarily in CFR Titles 33 (Navigation and Navigable Waters), 40 (Protection of Environment), and 46 (Shipping).

Since 1789, the federal government has authorized navigation channel improvement projects, and the General Survey Act of 1824 established the role of USACE as the agency responsible for the navigation system. Since then, ports have worked in partnership with USACE to maintain waterside access to port facilities.

3.11.3.2 U.S. Coast Guard

USCG, through CFR Titles 33 (Navigation and Navigable Waters) and 46 (Shipping), is the federal agency responsible for vessel inspection, marine terminal operations safety, coordination of federal responses to marine emergencies, enforcement of marine pollution statutes, marine safety (navigation aids), and operation of the National Response Center (NRC) for spill response. Current USCG regulations require a federally licensed pilot aboard every tanker vessel mooring and unmooring at offshore marine terminals. At the request of USCG, the Los Angeles Pilots (within the Los Angeles Harbor) and Jacobsen Pilots (within the Long Beach Harbor) have agreed to ensure continuous service of a licensed pilot for vessels moving between the Port Complex outside the breakwaters.

3.11.3.3 Department of Defense

The Department of Defense (DoD), through USACE, is responsible for reviewing all aspects of a project and spill response activities that could affect navigation. The USACE Operations and Maintenance (O&M) program is responsible for maintaining navigation channels, removing navigation obstructions, and accomplishing structural repairs. USACE also has regulatory jurisdiction under Section 10 of the Rivers and

Harbors Appropriation Act of 1899 for all work and structures in, over, or under navigable waters that could affect the course, location, condition, or navigable capacity of any navigable waters of the United States.

3.11.3.4 Other Organizations

Marine Exchange of Southern California

As described in Section 3.11.2.1, "Vessel Transportation Safety," the Marine Exchange is a non-profit organization affiliated with the Los Angeles Chamber of Commerce. The organization is supported by subscriptions from Port-related organizations that recognize the need for such an organization and use its services. This voluntary service is designated to enhance navigation safety in the Precautionary Area and harbor area of the Ports. The Marine Exchange monitors vessel traffic in the Precautionary Area and operates PORTS (see Section 3.11.2.1) as a service to those making operational decisions based on oceanographic and meteorological conditions in the vicinity of the Ports. The Marine Exchange also jointly operates the VTS with the USCG.

Harbor Safety Committee

The Los Angeles/Long Beach Harbor Safety Committee (Committee) is responsible for planning the safe navigation and operation of tankers, barges, and other vessels in San Pedro Bay and approach areas. The Committee was created under the authority of Government Code Section 8670.23(a), which requires the Administrator of the Office of Oil Spill Prevention and Response to create a Harbor Safety Committee for the Los Angeles/Long Beach Harbor area. The Committee issued the original HSP in 1991 and has issued annual updates since. Major issues facing the Committee include the need for escort tugs, required capabilities of escort tugs, and need for new or enhanced vessel traffic information systems to monitor and advise vessel traffic.

The Committee is required to review and evaluate the following:

1) sounding checks;
2) anchorage designations;
3) traffic and routings from Port construction and dredging projects;
4) procedures for routing vessels during emergencies that impact navigation;
5) communications systems;
6) channel design plans;
7) placement and effectiveness of navigational aids;
8) bridge management requirements;
9) small vessel congestion in shipping channels;
10) recommendation as to whether establishing or expanding VTS systems within the harbors is desirable, and recommendations for funding projects;
11) recommendation for determining when tankers must be accompanied by an escort tug(s);

12) competitive aspects of recommendations; and

13) suggested mechanisms to ensure that the provisions of the plan are fully and regularly enforced.

The Committee developed a regulatory scheme to institutionalize Good Marine Practices and guide those involved in moving tanker vessels, which include the minimum standards that are applicable under favorable circumstances and conditions. The master or pilot arranges for additional tug assistance if bad weather, unusual Port congestion, or other circumstances so require.

Harbor Safety Plan

The HSP contains operating procedures for vessels. All of the procedures are considered Best Maritime Practices, but some are regulations while others are non-regulatory Standards of Care. These Vessel Operating Procedures (VOP) have been extracted from the main text of the HSP in order to create a helpful *Quick Reference Guide* containing the most important information necessary for safe, reliable, and environmentally sound vessel movements in and around the Port area. These VOP list only the basics; additional and more detailed information are provided in the chapters of the HSP addressing each topic. Port Tariffs also contain requirements for vessels operating in and around the Port. Nothing in these procedures precludes a master and/or pilot from taking necessary and prudent actions to avoid or mitigate unsafe conditions.

The Committee expanded the initial 13 areas targeted for study or comment to 17, and added, in the appendices, the policy for operation of the Catalina Federal Anchorages and guidelines for container vessel bunker barge safety. Previously separate Chapters XVII, "Inclement Weather," and XVIII, "Restricted Visibility," were combined.

Among other requirements and standards, the HSP provides specific rules for navigation of vessels in reduced visibility conditions. The HSP does not recommend transit for vessels greater than 150,000 deadweight tonnage (DWT) if visibility is less than 1 nm. For all other vessels, transit is not recommended if visibility is less than 0.5 nm.

The HSP also establishes vessel speed limits. In general, speeds should not exceed 12 knots inside the Precautionary Area or 6 knots in the harbor. These speed restrictions do not preclude the master or pilot from adjusting speeds to avoid or mitigate unsafe conditions. Weather, vessel maneuvering characteristics, traffic density, construction, dredging, and other possible issues are taken into account.

Vessel Transportation Service

As described previously, VTS is a shipping service operated by USCG or public/private sector consortiums (see Section 3.11.2.1). These services monitor traffic in both approach and departure lanes, as well as internal movement in harbor areas. These services use radar, radio, and visual inputs to gather real time vessel traffic information and broadcast traffic advisories and summaries to assist mariners. The VTS that services the Port Complex is located at the entrance of the Los Angeles/Long Beach Harbor area. The system is owned by the Marine Exchange and is operated jointly by the Marine Exchange and USCG under the oversight of the OSPR and the Committee.

This system provides information on vessel traffic and ship locations so that vessels can avoid collisions, allisions, and groundings in the approaches to the harbor. The VTS

assists in the safe navigation of vessels approaching the Port in the Precautionary Area. The partnership is a unique and effective approach that has gained acceptance from the maritime community.

3.11.4 Impacts and Mitigation Measures

3.11.4.1 Methodology

Impacts on marine transportation are assessed by determining the general increase in vessel traffic resulting from the proposed Project or an alternative compared to the ability of the Port to safely accommodate vessel traffic and the potential for proposed Project– or alternative-related activities during both construction and operation to increase risks to vessel traffic. Existing regulations regarding vessel safety are designed to avoid potential impacts and are considered standard practice.

CEQA Baseline

Section 15125 of the CEQA Guidelines requires EIRs to include a description of the physical environmental conditions in the vicinity of a project that exist at the time of the NOP. These environmental conditions normally would constitute the baseline physical conditions by which the CEQA lead agency determines if an impact is significant. The NOP for the proposed Project was published in April 2013. For purposes of this Draft EIS/EIR, the CEQA baseline takes into account the throughput for the 12-month calendar year preceding NOP publication (January through December 2012) in order to provide a representative characterization of activity levels throughout the complete calendar year preceding release of the NOP. In 2012, the YTI Terminal encompassed approximately 185 acres under its long-term lease, supported 14 cranes (10 operating), and handled approximately 996,109 TEUs and 162 vessel calls. The CEQA baseline conditions are also described in Section 2.7.1 and summarized in Table 2-1.

The CEQA baseline represents the setting at a fixed point in time. The CEQA baseline differs from the No Project Alternative (Alternative 1) in that the No Project Alternative addresses what is likely to happen at the proposed project site over time, starting from the existing conditions. Therefore, the No Project Alternative allows for growth at the proposed project site that could be expected to occur without additional approvals, whereas the CEQA baseline does not.

NEPA Baseline

For purposes of this Draft EIS/EIR, the evaluation of significance under NEPA is defined by comparing the proposed Project or other alternative to the NEPA baseline. The NEPA baseline conditions are described in Section 2.7.2 and summarized in Table 2-1. The NEPA baseline condition for determining significance of impacts includes the full range of construction and operational activities the applicant could implement and is likely to implement absent a federal action, in this case the issuance of a USACE permit.

Unlike the CEQA baseline, which is defined by conditions at a point in time, the NEPA baseline is not bound by statute to a "flat" or "no-growth" scenario. Instead, the NEPA baseline is dynamic and includes increases in operations for each study year (2015, 2016, 2017, 2020, and 2026), which are projected to occur absent a federal permit. Federal permit decisions focus on direct impacts of the proposed Project to the aquatic

environment, as well as indirect and cumulative impacts in the uplands determined to be within the scope of federal control and responsibility. Significance of the proposed Project or the alternatives under NEPA is defined by comparing the proposed Project or the alternatives to the NEPA baseline.

The NEPA baseline, for purposes of this Draft EIS/EIR, is the same as the No Federal Action Alternative. Under the No Federal Action Alternative (Alternative 2), no dredging, dredged material disposal, in-water pile installation, or crane installation/extension would occur. Expansion of the TICTF and extension of the crane rail would also not occur. The No Federal Action Alternative includes only backlands improvements consisting of slurry sealing, deep cold planning, asphalt concrete overlay, restriping, and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. These activities do not change the physical or operational capacity of the existing terminal.

The NEPA baseline assumes that by 2026 the terminal would handle up to approximately 1,692,000 TEUs annually, accommodate 206 annual ships calls at two berths, and be occupied by 14 cranes (10 operating).

3.11.4.2 Thresholds of Significance

There are no marine transportation thresholds specific to NEPA; therefore, the CEQA thresholds are used for both NEPA and CEQA analysis.

According to the *L.A CEQA Thresholds Guide* (City of Los Angeles 2006), the determination of significance for marine transportation impacts are made on a case-by-case basis. Although this document does not include specific provisions regarding marine transportation, the following criterion was developed in cooperation with LAHD. The proposed Project or alternative would have a significant impact on marine transportation if it would:

VT-1: Substantially interfere with the operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.

3.11.4.3 Impact Determination

Proposed Project

Impact VT-1a: Proposed project construction-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.

Construction of the proposed Project would include the following improvements to Berths 214–216: (1) dredging to increase the depth from -45 to -53 feet MLLW and (2) installing sheet piles and king piles to accommodate the dredging activities and stabilize the existing wharf structure. Dredging would remove approximately 21,000 cubic yards (cy) of sediment from the berth. The king piles would be installed approximately 35 feet below the mudline, and the sheet piles would be installed 15 feet

below the mudline and would be installed over approximately 1,400 linear feet along the berth.

The proposed improvements at Berths 217–220 would include dredging to increase the depth from -45 to -47 feet MLLW. Dredging would require the removal of approximately 6,000 cy of sediment. Sheet piles would be installed approximately 15 feet below the mudline and would be installed over approximately 1,200 linear feet along the berth.

All of the dredged material, approximately 27,000 cubic yards, would be disposed of at an approved site, which may include LA-2, the Berths 243–245 confined disposal facility (CDF), or another approved location. Ocean disposal would involve relatively minor vessel traffic as it would entail up to two tugboats assisting the transit of a dump scow over a 4-day period. A sampling and analysis program would be implemented to determine suitability for any offshore disposal of material at LA-2.

The proposed Project would be constructed in two phases; Phase I is expected to take approximately 12 months beginning in mid-2015, and Phase II is expected to take approximately 10 months beginning in mid-2016. During Phase I of construction, Berths 212–213 and Berths 214–216 would remain in operation. During Phase II of construction, Berths 212–213 and the newly improved Berths 217–220 would be in operation. In order to ensure that peak construction emissions are estimated, the schedule assumes that all of the work on the cranes to be modified and replaced would take place during the 22-month construction period. It is possible that some of the cranes would not be modified or replaced until a later date. Table 2-4 in Chapter 2, "Project Description," provides a detailed schedule of the proposed construction and associated improvements.

Under the proposed Project, a maximum of four new super post-Panamax cranes would be added to replace smaller cranes at the YTI Terminal. Delivery of the new cranes would require the use of a general cargo ship.

The types of marine-based construction equipment and duration of use at the proposed project site are presented in Table 3.11-6. Phase I in-water construction activity extends over a 5-month period during which equipment would be active for a total of approximately 56 workdays. Total marine-based construction activity during Phase I would amount to approximately 652 hours. However, in-water construction equipment would be located within the navigation channel for the full 5-month duration. Phase II in-water construction activity extends over a 7-month period during which equipment would be active for a total of approximately 56 workdays. Total marine-based construction activity during Phase II would amount to approximately 744 hours. Similar to Phase I, in-water construction equipment would be located within the navigation channel for the full 7-month duration. In total, in-water construction activity would occur over a 13-month period during which equipment would be active for a total of approximately 112 workdays and comprise approximately 1,396 hours of operation. Construction activity would occur within the East Basin Channel.

Table 3.11-6: Proposed Project Marine-Based Construction Equipment

Proposed Project Element	Activity	Marine-Based Equipment Type	Number of Active Equipment[1]	Estimated Duration (months)	Days of Activity[2]
Phase I: Berths 217–220 Dredging and Pile Installation, Crane Rail Extension, TICTF Expansion, Backland Improvements					
Crane Relocations	In-Water Transit	Transit Barge	1	1	10
		Tug Boat	1		
Sheet Pile Installation	Pile Driving	Derrick Barge (for pile/vibratory hammer)	1	4	35
		Tug Boat (to move derrick and supply barges)	1		
		Supply Barge (for sheet piles)	1		
		Dive Boat (for inspections)	1		
Dredging – Ocean and/or Upland Disposal[4]	Dredging	Derrick Barge (for clamshell bucket)	1	1	4
		Supply Barge (for sheet piles)	1		
		Dump Scow (to hold and haul dredge material)	2		
		Tug Boat	2		
New Crane Delivery	In-Water Transit	Self-propelled Barge	1	1	7
Phase I Total			**8**	**5**	**56**
Phase II: Berths 214–216 Dredging and Pile Installation, Backland Improvements					
Sheet and King Pile Installation	Pile Driving	Derrick Barge	1	6	50
		Tug Boat	1		
		Supply Barge	1		
		Dive Boat	1		
Dredging – Ocean and/or Upland Disposal[4]	Dredging	Derrick Barge	1	2	6
		Dump Scow	2		
		Tug Boat	3		
Phase II Total			**13**	**7**	**56**
Total (Phase I and II)			**--**	**13**	**112**

Source: iLanco 2013.

[1] May extend to other activities, resulting in use of same equipment for a different activity.

[2] May overlap with other activities, resulting in fewer actual days of equipment operation.

[3] Accounts for equipment working only partial days. One day is considered 8 hours; therefore, equipment operating 4 hours in an 8-hour shift is the equivalent to a ½ day, and equipment active for a 24-hour period is equivalent to 3 days.

[4] Assumes ocean disposal as it has more potential for impact because more equipment would be marine-based.

In-water and over-water construction activities in the East Basin Channel are not expected to result in substantial hazards to vessel traffic or substantially increase the potential for accidents. Although marine-based construction equipment could restrict some vessel movement inside the East Basin Channel during the few months of dredging,

the derrick and supply barges as well as support boats would be highly visible, well-marked, and relatively stationary. In-water and over-water construction activities are conducted routinely in the Port; and contractors performing in-water and over-water construction activities are subject to applicable rules and regulations stipulated in all LAHD contracts, including navigation hazard markings. Prior to activities that require anchoring vessels in the main navigation channels, the standard vessel safety regulations of the Port require dredging contractors to acquire an Anchorage Waiver Permit. An Anchorage Waiver Permit, issued by USCG, requires notifying the COTP of expected activities, providing official and ongoing notice to mariners during construction, developing a mooring plan, and marking equipment and any debris for visibility. Compliance with Anchorage Waiver Permit requirements would ensure compliance with regulations governing the Outer Harbor of the Port and main navigation channel areas during construction of the proposed Project. Because standard safety precautions would be utilized by all contractors, the presence of the barges and supporting boats would not substantially affect marine vessel safety in the main channels and connected basin areas. Accordingly, proposed in-water construction equipment would not interfere with existing operations within the East Basin Channel.

Although proposed project construction would require the operation of marine construction equipment within the East Basin Channel, such activities are routine at the Port, and the East Basin Channel is of sufficient width to allow for marine-based construction equipment and regular Port operations to co-exist for temporary periods of time. This co-existence is further improved because contractors performing in-water construction activities are subject to all applicable rules and regulations stipulated in all LAHD contracts (see Section 3.11.3 for descriptions of standard safety precautions). Because the standard safety precautions would be utilized in piloting these vessels, the short-term presence of one to two barges or one to three boats at a time would not reduce the existing level of safety for vessel navigation in the harbor. Therefore, construction impacts on vessel traffic would be less than significant.

CEQA Impact Determination

The increase in construction vessels—approximately 8–13 vessels during the 22-month construction period with only up to an estimated maximum of 6 vessels at one time—in the East Basin Channel is not expected to significantly increase the potential accident risk for vessel navigation or navigation safety. As discussed above, the waterside construction timeframe is relatively short (5 months for Phase I and 7 months for Phase II), and all marine construction vessels would be highly visible, well-marked, and relatively stationary. All construction would occur within the East Basin Channel, which is of sufficient width to allow for marine-based construction equipment and regular Port operations to co-exist for temporary periods of time. The type of construction for the proposed Project is routine, and adherence to applicable rules, regulations, and safety precautions, as well as preparing and implementing a mooring plan approved by the USCG during construction, would minimize the potential for navigation hazards. Therefore, construction impacts on vessel traffic would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The increase in construction—approximately 8–13 vessels during the 13-month waterside construction period with only up to an estimated maximum of 6 vessels at one time—is not expected to significantly increase the potential accident risk for vessel navigation or navigation safety. As discussed above, all marine construction vessels would be highly visible, well-marked, and relatively stationary. All construction would occur within the East Basin Channel, which is of sufficient width to allow for marine-based construction equipment and regular Port operations to co-exist for temporary periods of time. The type of construction for the proposed Project is routine, and adherence to applicable rules, regulations, and safety precautions, as well as preparing and implementing a mooring plan approved by the USCG during construction, would minimize the potential for navigation hazards. Therefore, construction impacts on vessel traffic would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact VT-1b: Proposed project operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.

By 2026, the projected operational throughput at the YTI Terminal is expected to grow from 996,109 TEUs annually to 1,913,000 TEUs annually. The projected annual vessel traffic represents an increase over the existing operational conditions as shown in Table 3.11-7 below.

Table 3.11-7: Existing and Projected Annual Ship Calls at the Project Site at Full Build-Out (2026)

				Annual Increase	
	CEQA Baseline (January–December 2012)	NEPA Baseline Year 2015–2026	Proposed Project (2015–2026)	Proposed Project Compared to CEQA Baseline (2015–2026)	Proposed Project Compared to NEPA Baseline (2015–2026)
Ship Calls	162	206	206	+44	0

The proposed Project would also improve the YTI Terminal by extending the height and outreach of up to six existing cranes, replacing up to four existing non-operating cranes, dredging to a depth of -53 feet MLLW at Berths 214–216 and -47 feet MLLW at Berths

217–220 to ensure larger deep-draft ships would be able to navigate and berth safely, and extending the existing 100-foot gauge landside crane rail to Berths 217–220.

The proposed Project would result in approximately 206 annual ship calls per year (approximately 17 vessel calls per month) beginning in 2015 and when functioning at maximum capacity in 2026, compared to the existing conditions (27.2% increase). As described above and shown in Table 3.11-1, the proposed Project would also accommodate larger vessels at Berths 214–216 and Berths 217–220 than currently call at the YTI Terminal. Berths 212–213 can currently service vessels up to 6,500 TEU, Berths 214–216 can currently service vessels up to 8,500 TEUs, and Berths 217–220 currently do not service any vessels. The proposed dredging to deepen Berths 214–216 and Berths 217–220, along with extension of the crane rail, modification of several cranes to increase the reach over water, and addition of new larger cranes, would allow Berths 214–216 to service vessels up to 13,000 TEUs, and Berths 217–220 to service vessels up to 11,000 TEUs. Thus, the proposed Project would not only result in an increase in the number of vessels, but would result in larger vessels calling at the terminal and navigating the harbor waters.

Although there would be an increase in the size of vessels and an increase in annual ship calls (44), which would increase vessel traffic in the Main Channel, East Basin Channel, Outer Harbor, and Precautionary Area, the harbor—including the Main Channel and East Basin channel—are of sufficient size and depth to accommodate the proposed increase in operational vessel traffic.

Moreover, given the continued use of standard practices, including adherence to HSP speed-limit regulations, adherence to limited-visibility guidelines, VTS monitoring requirements, and Port Tariffs requiring vessels of foreign registry and U.S. vessels that do not have a federally licensed pilot on board to use a Port Pilot for transit in and out of the San Pedro Bay area and adjacent waterways, the projected increase in annual ship calls in the East Basin Channel at Berths 212–220 would not significantly decrease the margin of safety for marine vessels in the proposed project area. Scheduling of ship calls from outside the breakwaters to Berths 212–220 would continue to be authorized by the COTP to ensure that the projected increase in vessel traffic would not result in changes to routing or vessel safety procedures. Continued implementation of COTP uniform procedures, including providing advanced notification to vessel operators, vessel traffic managers, and Port Pilots to identify the location of dredges, derrick barges, or other possible obstructions and any associated operational procedures or restrictions (e.g., one-way traffic), would ensure safe transit of vessels operating within and to and from the proposed project site.

CEQA Impact Determination

The proposed project operations would result in an increase of up to 44 ship calls per year (approximately 4 ship calls per month) beginning in 2015 and when functioning at maximum capacity in 2026, compared to the existing 162 ship calls under the CEQA baseline. The addition of 44 ship calls annually would represent an increase of only 2% over total annual ship calls at the Port Complex in 2012, which was 2,180. The proposed Project would also result in an increase in the size of vessels calling at the YTI Terminal. Although the additional 4 ship calls per month would increase vessel traffic in the Main Channel, East Basin Channel, Outer Harbor, and Precautionary Area, the proposed Project would not significantly increase vessel congestion or compromise safety within

these areas or in the open-ocean approach corridors. The Main Channel, East Basin Channel, Outer Harbor, and Precautionary Areas are of sufficient size and depth to accommodate the proposed increase in operational vessel traffic. Continued use of standard practices, including adherence to HSP speed-limit regulations, adherence to limited-visibility guidelines, VTS monitoring, and Port Tariffs would help to ensure safe transit. More specifically, for vessels over 300 tons, the Los Angeles Port Pilot Service would directly assist with transit in and out of the San Pedro Bay area and adjacent waterways, including to dock for inbound vessels. These highly trained professionals have successfully navigated over 52,000 vessel movements over the past decade. Adherence to the many standards and regulations in place combined with the use of a highly trained Los Angeles Port Pilot significantly minimizes the potential of encountering or causing a navigation hazard. Therefore, vessel navigation impacts associated with operation of the proposed Project would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The proposed project operations would result in a maximum of 206 ship calls per year between 2015 and 2026. This number of ship calls is the same as the NEPA baseline. However, ships calling will be larger in 2026, resulting in an additional 221,000 TEUs by 2026 over the NEPA baseline. The Main Channel, East Basin Channel, Outer Harbor, and Precautionary Areas are of sufficient size and depth to accommodate the anticipated increase in vessel size calling at the YTI Terminal. Continued use of standard practices, including adherence to HSP speed-limit regulations, adherence to limited-visibility guidelines, VTS monitoring, and Port Tariffs would help to ensure safe transit. More specifically, for vessels over 300 tons, the Los Angeles Port Pilot Service would directly assist with transit in and out of the San Pedro Bay area and adjacent waterways, including to dock for inbound vessels. These highly trained professionals have successfully navigated over 52,000 vessel movements over the past decade. Adherence to the many standards and regulations in place combined with the use of a highly trained Los Angeles Port Pilot significantly minimizes the potential of encountering or causing a navigation hazard. Therefore, the proposed Project would not impact vessel congestion or navigation that would in the open-ocean approach corridors or result in adverse safety impacts under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Alternative 1 – No Project

Under Alternative 1, none of the proposed construction activities would occur in water or in water-side or backland areas. LAHD would not implement any terminal

improvements. No new cranes would be added and no dredging would occur. The No Project Alternative would not include the 100-foot gauge crane rail extension, expansion of the TICTF on-dock rail yard, or backland repairs.

Under the No Project Alternative, the existing YTI Terminal would continue to operate as an approximately 185-acre container terminal. Based on LAHD's throughput projections, the YTI Terminal is expected to reach its operating capacity of approximately 1,692,000 TEUs with 206 ship calls by 2026.

Impact VT-1a: Alternative 1 construction-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.

Under the No Project Alternative, no terminal improvements, in-water, or over-water construction would occur, and the 185-acre terminal would continue to operate through 2026.

CEQA Impact Determination

Alternative 1 would result in no construction-related vessel trips; therefore, no impacts would occur.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

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

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Impact VT-1b: Alternative 1 operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.

Under the No Project Alternative, when operating at full capacity in 2026, the YTI Terminal is projected to grow from 996,109 TEUs annually to 1,692,000 TEUs annually. The projected annual vessel traffic represents an increase over the existing operational conditions, as shown in Table 3.11-8 below. This increase in throughput would require

206 annual ship calls, which is a net increase of 44 vessel calls per year, similar to the proposed Project. However, this alternative would result in the YTI Terminal continuing to operate with only two berths (Berths 212–213 and Berths 214–216). Additionally, as shown in Table 3.11-1, the vessel sizes that can be serviced at the YTI Terminal associated with Alternative 1 would be similar to existing conditions and smaller than the proposed project (Berths 212–213 can service vessels up to 6,500 TEU, and Berths 214–216 can currently service vessels up to 8,500 TEUs).

Table 3.11-8: Existing and Projected Annual Ship Calls at the Project Site at Full Build-Out (2026)

				Annual Increase	
	CEQA Baseline (January–December 2012)	NEPA Baseline Year 2015–2026	Alternative 1 – No Project (2015–2026)	Alternative 1 Compared to CEQA Baseline (2015–2026)	Alternative 1 Compared to NEPA Baseline (2015–2026)
Ship Calls	162	206	206	+44	N/A

CEQA Impact Determination

Operations under Alternative 1 would result in an increase of up to 44 ship calls per year (approximately 4 ship calls per month) beginning in 2015 and when functioning at maximum capacity in 2026, compared to the existing 162 ship calls under the CEQA baseline period. The addition of 44 ship calls annually would represent an increase of only 2% over total annual ship calls at the Port Complex in 2012, which was 2,180. Although the additional 4 ship calls per month would increase vessel traffic in the Main Channel, East Basin Channel, Outer Harbor, and Precautionary Area, the proposed Project would not significantly increase vessel congestion or compromise safety within these areas or in the open-ocean approach corridors. The Main Channel, East Basin Channel, Outer Harbor, and Precautionary Areas are of sufficient size and depth to accommodate the proposed increase in operational vessel traffic. Continued use of standard practices, including adherence to HSP speed-limit regulations, adherence to limited-visibility guidelines, VTS monitoring requirements, and Port Tariffs requiring the use a Port Pilot for transit in and out of the San Pedro Bay area and adjacent waterways, would minimize potential navigation hazards. Therefore, vessel congestion and safety impacts associated with operation of Alternative 1 would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

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

Mitigation Measures

Mitigation measures are not applicable.

Residual Impacts

An impact determination is not applicable.

Alternative 2 – No Federal Action

Alternative 2 is a NEPA-required no-action alternative for purposes of this Draft EIS/EIR. This alternative includes the activities that would occur absent a USACE permit and could include improvements that require a local permit. Absent a USACE permit, no dredging, dredged material disposal, in-water pile installation, or crane installation/extension would occur. Expansion of the TICTF and extension of the crane rail also would not occur. The No Federal Action alternative includes only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. These activities would not change the capacity of the existing terminal.

The site would continue to operate as an approximately 185-acre container terminal where cargo containers are loaded to/from vessels, temporarily stored on backlands, and transferred to/from trucks or on-dock rail. Based on the throughput projections, the YTI Terminal is expected to reach its operating capacity of approximately 1,692,000 TEUs with 206 ship calls by 2026.

Impact VT-1a: Alternative 2 construction-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.

CEQA Impact Determination

Alternative 2 would include only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. No construction of in-water or over-water features would occur under Alternative 2, and therefore, no increase in marine vessels or safety impacts associated with construction of Alternative 2 improvements would occur under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

NEPA Impact Determination

Alternative 2 would include only backlands improvements consisting of slurry sealing; deep cold planing; asphalt concrete overlay; restriping; and removal, relocation, or modification of any underground conduits and pipes necessary to complete repairs. No

construction of in-water or over-water features would occur under Alternative 2, and, therefore, no increase in marine vessels or safety impacts associated with construction of Alternative 2 improvements would occur. The No Federal Action Alternative would involve the same construction activities as would occur under the NEPA baseline. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Impact VT-1b: Alternative 2 operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.

Under the No Federal Action Alternative, when operating at full capacity in 2026, the YTI Terminal is projected to grow from 996,109 TEUs annually to 1,692,000 TEUs annually. The projected annual vessel traffic represents an increase over the existing (baseline) operational conditions as shown in Table 3.11-9 below. This increase in throughput would require 206 annual ship calls, which is a net increase of 44 vessel calls per year, similar to the proposed Project. However, this alternative would result in the YTI Terminal continuing to operate with only two berths (Berths 212–213 and Berths 214–216). Additionally, as shown in Table 3.11-1, the vessel sizes that can be serviced at the YTI Terminal associated with Alternative 2 would be similar to existing conditions and smaller than the proposed project (Berths 212–213 can service vessels up to 6,500 TEU, and Berths 214–216 can currently service vessels up to 8,500 TEUs).

Table 3.11-9: Existing and Projected Annual Ship Calls at the Project Site at Full Build-Out (2026)

				Annual Increase	
	CEQA Baseline (January–December 2012)	NEPA Baseline Year 2015–2026	Alternative 2 – No Federal Action (2015–2026)	Alternative 2 Compared to CEQA Baseline (2015–2026)	Alternative 2 Compared to NEPA Baseline (2015–2026)
Ship Calls	162	206	206	+44	0

CEQA Impact Determination

Similar to Alternative 1, the existing YTI Terminal under Alternative 2 would increase its throughput to 1,692,000 TEUs, which would require 206 annual ship calls compared to the existing 162 ship calls under the CEQA baseline. The addition of 44 ship calls annually would represent an increase of only 2% over total annual ship calls at the Port Complex in 2012, which was 2,180. Given the continued adherence to standard navigation and piloting safety protocols and measures, as previously described for the

proposed Project, the projected increase in annual ship calls in the harbor would not significantly decrease the margin of safety for marine vessels in the proposed project area or transit of vessels operating within and to and from the proposed project area. Therefore, marine vessel safety impacts associated with terminal operations under Alternative 2 would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

The No Federal Action Alternative would have the same operational conditions as the NEPA baseline, including 1,692,000 TEUs, 206 ship calls, and 4 peak day ship calls. Therefore, there would be no incremental difference between Alternative 2 and the NEPA baseline. As a consequence, Alternative 2 would result in no impact under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

No impacts would occur.

Alternative 3 – Reduced Project: Improve Berths 217–220 Only

This alternative includes all components of the proposed Project except dredging and pile driving at Berths 214–216. The following components of the proposed Project are unchanged under the Reduced Project Alternative:

- modifying up to six existing cranes;
- replacing up to four existing non-operating cranes;
- dredging 6,000 cy from a depth of -45 to -47 feet MLLW (with an additional 2 feet of overdredge depth, for a total depth of -49 feet MLLW), and installing 1,200 linear feet of sheet piles and king piles to support and stabilize the existing wharf structure at Berths 217–220;
- disposing of dredged material at LA-2, the Berths 243–245 CDF, or another approved upland location;
- extending the existing 100-foot gauge landside crane rail through Berths 217–220;
- performing ground repairs and maintenance activities in the backlands area; and
- expanding the TICTF on-dock rail by adding a single rail loading track.

Under this alternative, there would be three operating berths after construction, similar to the proposed Project, but Berths 214–216 would remain at their existing depth. This alternative would require less dredging (by approximately 21,000 cy) and pile driving and a shorter construction period than the proposed Project. Based on the throughput

projections, this alternative is expected to operate at its capacity of approximately 1,913,000 TEUs by 2026, similar to the proposed Project. However, while the terminal could handle similar levels of cargo, the reduced project alternative would not achieve the same level of efficient operations as achieved by the proposed Project. This alternative would not accommodate the largest vessels (13,000 TEUs). The depth achieved at Berths 217–220 would only be capable of handling vessels up to 11,000 TEUs, requiring additional vessels to call on the terminal to meet future growth projections up to the capacity of the terminal. Therefore, under this alternative, 232 vessels would call on the terminal in 2020 and 2026, compared to 206 vessels for the proposed Project. Additionally, because of the higher number of annual vessel calls, this alternative would result in a maximum of five peak day ship calls (over a 24-hour period) compared to four for the proposed Project.

Impact VT-1a: Alternative 3 construction-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.

Construction of Alternative 3 would include dredging to increase the depth from -45 to -47 feet MLLW at Berths 217–220. Dredging would require the removal of approximately 6,000 cy of sediment. Sheet piles would be installed approximately 15 feet below the mudline and would be installed over approximately 1,200 linear feet along the berth. All of the dredged material would be disposed of at an approved site, which may include LA-2, the Berths 243–245 confined disposal facility (CDF), or another approved location. Ocean disposal would involve relatively minor vessel traffic as it would entail up to two tugboats assisting the transit of a dump scow over a 4-day period. A sampling and analysis program would be implemented to determine suitability for any offshore disposal of material at LA-2.

Alternative 3 would involve construction only during Phase I (as described for the proposed Project), and would involve approximately 5 months of in-water construction activities within the East Basin Channel beginning in mid-2015, amounting to approximately 652 hours. However, in-water construction equipment would be located within the navigation channel for the full 5-month duration. As described for the proposed Project, in-water and over-water construction activities in the East Basin Channel are not expected to result in substantial hazards to vessel traffic or substantially increase the potential for accidents. Although construction would require the operation of marine construction equipment within the East Basin Channel, such activities are routine at the Port, and the East Basin Channel is of sufficient width to allow for marine-based construction equipment and regular Port operations to co-exist for temporary periods of time. This co-existence is further improved because contractors performing in-water construction activities are subject to all applicable rules and regulations stipulated in all LAHD contracts (see Section 3.11.3 for descriptions of standard safety precautions). Because the standard safety precautions would be utilized in piloting these vessels, the short-term presence of one to two barges or one to three boats at a time would not reduce the existing level of safety for vessel navigation in the harbor. Therefore, construction impacts on vessel traffic would be less than significant.

CEQA Impact Determination

Alternative 3 would result in an increase in construction vessels—approximately eight vessels during the five-month construction period with up to an estimated maximum of six vessels at one time—in the East Basin Channel. The presence of these vessels is not expected to significantly increase the potential accident risk for vessel navigation or navigation safety. As discussed above, the waterside construction timeframe is relatively short, and all marine construction vessels would be highly visible, well-marked, and relatively stationary. All construction would occur within the East Basin Channel, which is of sufficient width to allow for marine-based construction equipment and regular Port operations to coexist for temporary periods of time. The type of construction for Alternative 3 is routine, and adherence to applicable rules, regulations, and safety precautions, as well as preparing and implementing a mooring plan approved by the USCG during construction, would minimize the potential for navigation hazards. Therefore, construction impacts for Alternative 3 on vessel traffic would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Alternative 3 would result in an increase in construction vessels—approximately eight vessels during the five-month construction period with up to an estimated maximum of six vessels at one time—in the East Basin Channel. The presence of these vessels is not expected to significantly increase the potential accident risk for vessel navigation or navigation safety. As discussed above, all marine construction vessels would be highly visible, well-marked, and relatively stationary. All construction would occur within the East Basin Channel, which is of sufficient width to allow for marine-based construction equipment and regular Port operations to coexist for temporary periods of time. The type of construction for Alternative 3 is routine, and adherence to applicable rules, regulations, and safety precautions, as well as preparing and implementing a mooring plan approved by the USCG during construction, would minimize the potential for navigation hazards. Therefore, construction impacts on vessel traffic for Alternative 3 would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact VT-1b: Alternative 3 operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.

Under Alternative 3, when operating at full capacity in 2026, the YTI Terminal is projected to grow from 996,109 TEUs annually to 1,913,000 TEUs annually, similar to the proposed Project. The projected annual vessel traffic represents an increase over the existing (baseline) operational conditions, as shown in Table 3.11-10 below.

Table 3.11-10: Existing and Projected Annual Ship Calls at the Project Site at Full Build-Out (2026)

				Annual Increase	
	CEQA Baseline (January–December 2012)	NEPA Baseline Year 2015–2026	Alternative 3 – Reduced Project (2015–2026)	Alternative 3 Compared to CEQA Baseline (2015–2026)	Alternative 3 Compared to NEPA Baseline (2015–2026)
Ship Calls	162	206	232	+70	+26

As shown in Table 3.11-1, the vessel sizes that could be serviced at the YTI Terminal associated with Alternative 3 would be larger than under existing conditions, but smaller than under the proposed Project. The proposed dredging to deepen Berths 217–220, along with extension of the crane rail, modification of several cranes to increase the outreach, and addition of new larger cranes, would allow Berths 217–220 to service vessels up to 11,000 TEUs. Berths 212–213 would continue to service vessels up to 6,500 TEU, and Berths 214–216 would continue to service vessels up to 8,500 TEUs. Thus, in order to reach the capacity of the terminal, the increase in throughput would require 232 annual ship calls in 2026, which is a net increase of 70 vessel calls per year over the CEQA baseline and an increase of 26 vessel calls per year over the NEPA baseline. As described above, additional vessels are needed to achieve the capacity of the terminal because the vessels that can be serviced at the terminal would be smaller than can be accommodated under the proposed Project, and more frequent calls would be required at the terminal (a maximum of five peak day ship calls over a 24-hour period, compared to four for the proposed Project). Thus, Alternative 3 would not only result in an increase in the number of vessels, but would result in larger vessels calling at the terminal and navigating the harbor waters. Although the increase in annual ship calls and the increase in the size of vessels would increase vessel traffic in the Main Channel, East Basin Channel, Outer Harbor, and Precautionary Area, the harbor—including the Main Channel and East Basin channel—are of sufficient size and depth to accommodate the proposed increase in operational vessel traffic.

Given the continued use of standard practices, including adherence to HSP speed-limit regulations, adherence to limited-visibility guidelines, VTS monitoring requirements, and Port Tariffs requiring vessels of foreign registry and U.S. vessels that do not have a federally licensed pilot on board to use a Port Pilot for transit in and out of the San Pedro Bay area and adjacent waterways, the projected increase in annual ship calls in the East Basin Channel at Berths 212–220 would not significantly decrease the margin of safety for marine vessels in the proposed project area. Scheduling of ship calls from outside the

breakwaters to Berths 212–220 would continue to be authorized by the COTP to ensure that the projected increase in vessel traffic would not result in changes to routing or vessel safety procedures. Continued implementation of COTP uniform procedures, including providing advanced notification to vessel operators, vessel traffic managers, and Port Pilots to identify the location of dredges, derrick barges, or other possible obstructions and any associated operational procedures or restrictions (e.g., one-way traffic), would ensure safe transit of vessels operating within and to and from the proposed project site.

CEQA Impact Determination

As described above, Alternative 3 would result in 70 additional ship calls to the proposed project site over the CEQA baseline level (43.2% increase). Additionally, vessels would be larger in size compared to the CEQA baseline. This alternative would result in a maximum of five peak day ship calls (over a 24-hour period).

Given the continued adherence to standard navigation and piloting safety protocols and measures, as previously described for the proposed Project, the projected increase in annual ship calls in the East Basin Channel at Berths 212–220 would not significantly decrease the margin of safety for marine vessels in the proposed project area or transit of vessels operating within and to and from the proposed project area. Therefore, marine vessel safety impacts associated with terminal operations under Alternative 3 would be less than significant under CEQA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

NEPA Impact Determination

Alternative 3 would result in 26 additional ship calls to the proposed project site over the NEPA baseline level (12.6% increase). Additionally, vessels would be larger in size compared to the NEPA baseline. This alternative would result in a maximum of 5 peak day ship calls (over a 24-hour period).

The Main Channel, East Basin Channel, Outer Harbor, and Precautionary Areas are of sufficient size and depth to accommodate the proposed increase in operational vessel traffic. Continued use of standard practices, including adherence to HSP speed-limit regulations, adherence to limited-visibility guidelines, VTS monitoring requirements, and Port Tariffs requiring the use a Port Pilot for transit in and out of the San Pedro Bay area and adjacent waterways, would minimize potential navigation hazards. Given the continued adherence to standard navigation and piloting safety protocols and measures, as previously described for the proposed Project, the projected increase in annual ship calls in the East Basin Channel at Berths 212–220 would not significantly decrease the margin of safety for marine vessels in the proposed project area or transit of vessels operating within and to and from the proposed project area. Therefore, marine vessel safety impacts associated with terminal operations under Alternative 3 would be less than significant under NEPA.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

3.11.4.4 Summary of Impact Determinations

Table 3.11-11 summarizes the CEQA and NEPA impact determinations of the proposed Project and alternatives related to Marine Transportation, as described in the detailed discussion above. This table is meant to allow easy comparison between the potential impacts of the proposed Project and alternatives with respect to this resource. Identified potential impacts may be based on federal, state, or City significance criteria; LAHD criteria; and the scientific judgment of the report preparers.

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

Table 3.11-11: Summary Matrix of Potential Impacts and Mitigation Measures for Marine Transportation Associated with the Proposed Project and Alternatives

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Proposed Project	**VT-1a:** Proposed project construction-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant
	VT-1b: Proposed project operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.	CEQA: Less than significant NEPA: No impact	No mitigation is required.	CEQA: Less than significant NEPA: No impact
Alternative 1 – No Project	**VT-1a:** Alternative 1 construction-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.	CEQA: No impact NEPA: Not applicable	No mitigation is required. Mitigation not applicable	CEQA: No impact NEPA: Not applicable
	VT-1b: Alternative 1 operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.	CEQA: Less than significant NEPA: Not applicable	No mitigation is required. Mitigation not applicable	CEQA: Less than significant NEPA: Not applicable
Alternative 2 – No Federal Action	**VT-1a:** Alternative 2 construction-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.	CEQA: No impact NEPA: No impact	No mitigation is required.	CEQA: No impact NEPA: No impact
	VT-1b: Alternative 2 operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.	CEQA: Less than significant NEPA: No impact	No mitigation is required.	CEQA: Less than significant NEPA: No impact

Alternative	Environmental Impacts	Impact Determination	Mitigation Measures	Impacts after Mitigation
Alternative 3 – Reduced Project: Improve Berths 217–220 Only	**VT-1a:** Alternative 3 construction-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant
	VT-1b: Alternative 3 operation-related marine traffic would not substantially interfere with operation of designated vessel traffic lanes and/or impair the level of safety for vessels navigating the Main Channel, harbor, or Precautionary Area.	CEQA: Less than significant NEPA: Less than significant	No mitigation is required.	CEQA: Less than significant NEPA: Less than significant

3.11.4.5 Mitigation Monitoring

Neither the proposed Project nor any of the alternatives would result in significant impacts on Marine Transportation. Therefore, no mitigation measures are required.

3.11.5 Significant Unavoidable Impacts

No significant unavoidable impacts on Marine Transportation would occur during construction or operation of the proposed Project or alternatives.