Wilmington Youth Sailing and Aquatic Center Project
Draft
Initial Study/Mitigated Negative Declaration

Prepared By:
Los Angeles City Harbor Department
Environmental Management Division

With Assistance From:
Science Applications International Corporation

August 2012

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San Pedro, CA 90731

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Section 1.0
Introduction

1.1 Overview

The City of Los Angeles Harbor Department (LAHD) (also referred to as the Port of Los Angeles [Port or POLA]) has prepared this initial study/mitigated negative declaration(IS/MND) to evaluate the potential environmental impacts associated with the construction and operation of the Wilmington Youth Sailing and Aquatic Center (WYSAC). As part of the permitting process for LAHD, the proposed project is required to undergo an environmental review pursuant to the California Environmental Quality Act (CEQA).

One of the main objectives of CEQA is to disclose the potential environmental effects of proposed activities to the public and decision-makers. Under CEQA, the lead agency prepares an IS to determine whether an environmental impact report (EIR), a negative declaration (ND), or MND is needed. CEQA requires that the potential environmental effects of a project be evaluated prior to implementation. This IS/MND includes a discussion on the proposed project's effects on the existing environment, and identifies potential avoidance, minimization, and mitigation measures.

1.2 Authority

This document has been prepared in accordance with the CEQA Public Resources Code (PRC) Section 21000 *et.seq*. and the State CEQA Guidelines, California Code of Regulations (CCR) Section 15000 *et.seq*. Under CEQA, the lead agency is the public agency with primary responsibility over approval of a proposed project. LAHD is both the lead agency (Environmental Management Division) and applicant (Engineering Division) for the proposed project. LAHD has directed the preparation of an environmental document that complies with CEQA.

The preparation of initial studies is guided by Section 15063 of the State CEQA Guidelines; whereas Sections 15070–15075 guide the process for the preparation of a ND or MND. Where appropriate and supportive to an understanding of the issues, reference will be made to the statute, the State CEQA Guidelines, or appropriate case law.

This IS/MND meets CEQA content requirements by including a project description; a description of the environmental setting, potential environmental impacts, and mitigation measures for any significant effects; discussion of consistency with plans and policies; and names of the document preparers.

1.3 Lead, Responsible and Trustee Agencies

LAHD is the lead agency for the proposed project, pursuant to Section 15367 of the CEQA Guidelines, because it has the greatest degree of discretion to approve or deny the proposed project. Approvals of permits include, but are not limited to, final design of public spaces and construction contracts.

In addition to the lead agency, several other agencies have special roles with respect to the proposed project as responsible or trustee agencies. These agencies will use this IS/MND as the basis for their decisions to issue any approvals and/or permits that may be required. The following responsible and trustee agencies may rely on this IS/MND in a review capacity or as a basis for issuance of permits for the proposed project.

- State Water Resources Control Board (SWRCB),
- California Department of Toxic Substances Control (DTSC),
- California State Historic Preservation Officer,
- California Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR),
- South Coast Air Quality Management District (SCAQMD),
- Los Angeles Regional Water Quality Control Board (RWQCB),
- City of Los Angeles Department of Transportation,
- City of Los Angeles Planning Department,
- City of Los Angeles Department of Public Works, and
- City of Los Angeles Fire Department (LAFD).

The following permits and approvals would be required to implement the proposed project.

- RWQCB permits including Clean Water Act (CWA) Section 401 Water Quality,
- Certification Permit and Waste Discharge Requirement, and remedial plans and site cleanup under Voluntary Cleanup Oversight Agreement,
- SCAQMD permits including SCAQMD Rules 403 and 1166,

- DOGGR,
- Storm Water Pollution Prevention Plan (SWPPP) approval,
- City of Los Angeles permits for disposal of materials and haul routes,
- City of Los Angeles, Department of Building and Safety Building Permit and Grading Permit, and
- Coastal Development Permit.

1.4 Scope of the IS/MND

This IS/MND evaluates the project's effects on the following resource areas:

- Aesthetics
- Air Quality
- Cultural Resources
- Greenhouse Gas Emissions
- Land Use & Planning
- Noise
- Public Services
- Transportation & Traffic
- Utilities & Service Systems
- Agriculture & Forestry Resources
- Biological Resources
- Geology/Soils
- Hazards & Hazardous Materials
- Hydrology & Water Quality
- Mineral Resources
- Population/Housing
- Recreation
- Mandatory Findings of Significance

1.5 Impact Terminology

The following terminology is used to describe each impact's level of significance.

Potentially Significant Impact. This category is only applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce impacts to a less than significant level. Given that this is an IS/MND, no impacts were identified that fall into this category.

Less than Significant After Mitigation Incorporated. This category applies where the incorporation of mitigation measures would reduce an effect from a "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measure(s), and briefly explain how it would reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced).

Less than Significant Impact. This category is identified when the proposed project would result in impacts below the threshold of significance, and no mitigation measures are required.

No Impact. This category applies when a proposed project would not create an impact in the specific environmental issue area. "No Impact" answers do not require a detailed explanation if they are adequately supported by the information sources cited by the lead agency, which show that the impact does not apply to the specific project (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors

as well as general standards (e.g., the proposed project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

LAHD and other public agencies have identified applicable "thresholds of significance" for certain types of environmental impacts, such as traffic, noise, and air quality impacts. Thresholds of significance for the proposed project are based on the *Los Angeles Draft CEQA Thresholds Guide*, and are identified in this IS/MND where applicable.

1.6 Document Format

This IS/MND contains eight sections.

Section 1. **Introduction.** This section provides an overview of the proposed project and the CEQA environmental documentation process.

Section 2. Project Description. This section provides a detailed description of the proposed project objectives and components.

Section 3. Initial Study Checklist. This section presents the CEQA checklist for all impact areas and mandatory findings of significance.

Section 4. Impacts and Mitigation Measures. This section presents the environmental analysis for each issue area identified on the environmental checklist form. If the proposed project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why no impacts are expected. If the proposed project could have a potentially significant impact on a resource, the issue area discussion provides a description of potential impacts and appropriate mitigation measures and/or permit requirements that would reduce those impacts to a less than significant level.

Section 5. Mitigation Monitoring and Reporting Plan. This section presents a matrix of proposed mitigation measures and reporting requirements.

Section 6. Proposed Finding. This section provides the proposed findings regarding environmental impacts associated with the proposed project.

Section 7. References. This section provides a list of reference materials used during the preparation of the IS/MND.

Section 8. Preparers and Contributors. This section provides a list of key personnel involved in the preparation of the IS/MND.

Section 9. Acronyms and Abbreviations. This section provides a list of acronyms and abbreviations used throughout the IS/MND.

1.7 Availability of the IS/MND

In accordance with the CEQA statutes and Guidelines, the IS/MND is being circulated for a period of 30 days for public review and comment. The public

review period for this IS/MND is scheduled to begin on August 1, 2012, and will conclude on August 31, 2012. The IS/MND has been distributed to interested or involved public agencies, organizations, and private individuals for review. The IS/MND is available for general public review at the following locations:

- Los Angeles Harbor Department Environmental Management Division at 222 W. 6th Street, Suite 1080, San Pedro, CA 90731;
- Los Angeles City Library, San Pedro Branch at 931 S. Gaffey Street, San Pedro, CA 90731; and
- Los Angeles City Library, Wilmington Branch at 1300 North Avalon, Wilmington, CA 90744.

In addition, the IS/MND is available online at: http://www.portoflosangeles.org.

Approximately 200 notices were sent to community residents, stakeholders, and local agencies.

During the 30-day public review period, the public has the opportunity to provide written comments on the information contained within this IS/MND. The public comments on the IS/MND and responses to public comments will be included in the record and considered by LAHD during deliberation as to whether or not necessary approvals should be granted for the proposed project. A project will only be approved when LAHD "finds that there is no substantial evidence that the project will have a significant effect on the environment and that the IS/MND reflects the lead agency's independent judgment and analysis." When adopting an IS/MND, a Mitigation Monitoring and Reporting Program (MMRP) must also be adopted to ensure implementation of mitigation required as a condition of approval.

In reviewing the IS/MND, affected public agencies and interested members of the public should focus on the sufficiency of the document in identifying and analyzing potential project impacts on the environment, and ways in which the potential significant effects of the proposed project are proposed to be avoided or mitigated. Comments on the IS/MND should be submitted in writing prior to the end of the 30-day public review period and must be postmarked by August 31, 2012. Please submit written comments to:

Christopher Cannon, Director
City of Los Angeles Harbor Department
Environmental Management Division
425 S. Palos Verdes St.
San Pedro, CA 90731

Written comments may also be sent via email to ceqacomments@portla.org. Comments sent via email should include the project title in the subject line and a valid mailing address in the email.

If you have any questions regarding this document or the proposed project, please contact Jan Green Rebstock, Environmental Project Manager at (310) 732-3949.

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Section 2.0
Project Background

2.1 Introduction and Overview

LAHD has prepared this IS/MND to address the potential environmental impacts of the WYSAC Project (hereafter "proposed project") on LAHD property in the Port of Los Angeles within the City of Wilmington, California (Figure 1). The site for the proposed project is at Berth 204 in Wilmington, and is bounded by Shore Road and Anchorage Road to the south and east and by the East Basin to the west (Figure 2). The land side portion of the parcel is 32,000 square feet, and it is presently used for vehicle and boat storage. The water side portion of the parcel is 45,000 square feet, and supports an existing dock with 25 boat slips that is accessed by locked gates and dock ramps at the northern and southern end of the boat dock (Figure 3).

The proposed project would construct a facility that includes the sailing center and adjacent boat dock and launch ramp and operate a program to teach underserved youths how to sail as well as provide instruction on environmental programs and Port activities. The sailing program would provide classroom instruction and on-water lessons, and would be operated by full-time, part-time, and volunteer staff. The program would be operated by a non-profit organization, and would be expected to serve approximately 1,000, 8 to 18 year old youths from the Wilmington area per year. Classes would occur primarily during summer months, although some after-school and weekend activities, as well as special events, also could occur year-round.

The lessons would use small (approximately 8 to 15 feet long) sail boats that are appropriate for beginning sailing classes. Sailing lessons would occur primarily within a defined area of the East Basin; no sailing would occur in the Consolidated Slip due to the presence of contaminated sediments or in the Cerritos Channel due to potential risks associated with commercial marine vessel traffic.

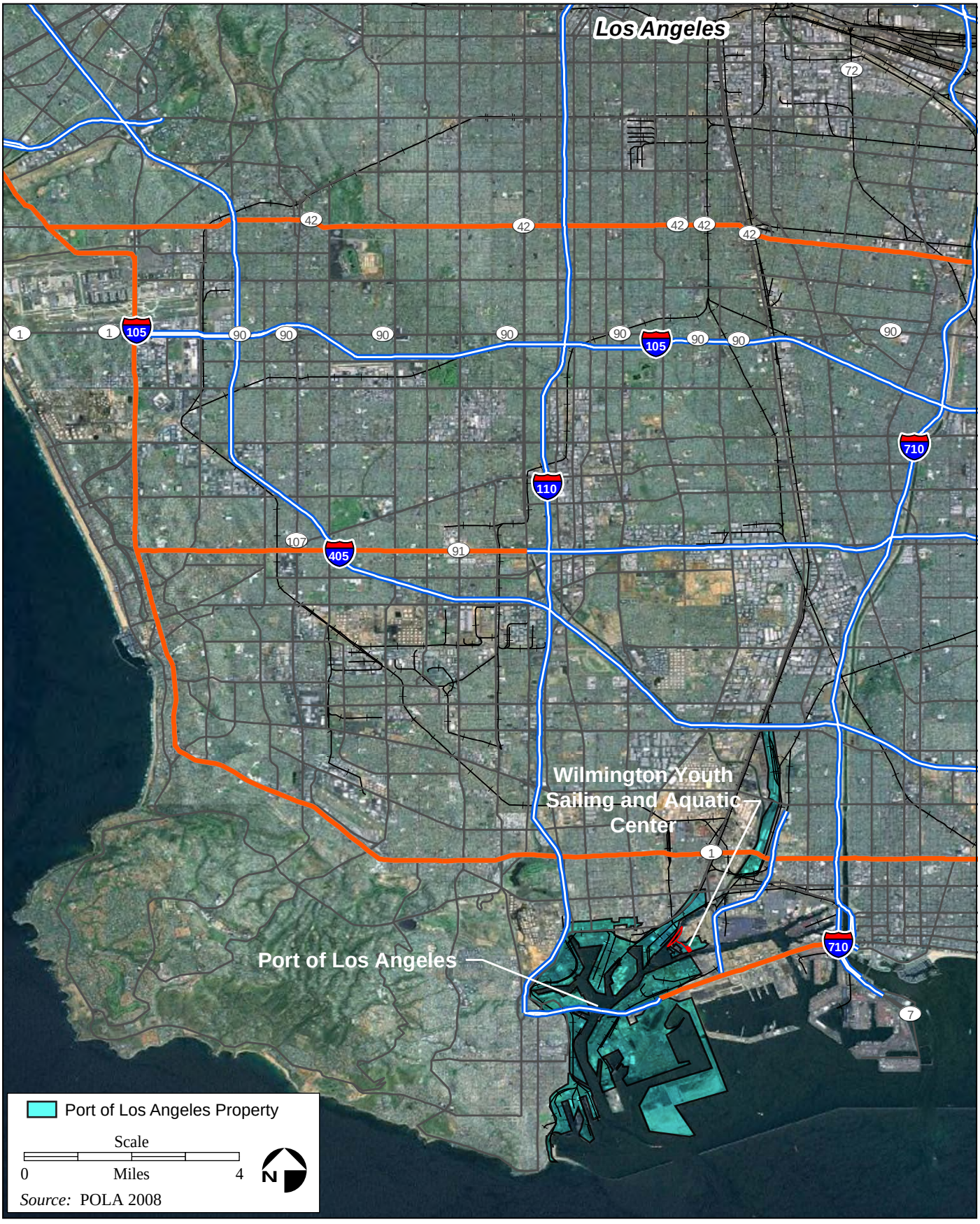

Figure 1. Regional Map

Figure 2. Location of the Proposed WYSAC Project Site (in red) in Wilmington

Figure 3. Aerial Photograph of the Project Site

2.2 Project Location and Existing Conditions

2.2.1 Regional Setting

The Port is located in San Pedro Bay, approximately 20 miles south of downtown Los Angeles, encompassing 7,500 acres of land and water along 43 miles of waterfront (Figure 1). POLA has 25 passenger and cargo terminals, including automobile, breakbulk, container, dry and liquid bulk; 270 berths and 3,800 recreational boat slips; and warehouse facilities that handle billions of dollars worth of cargo each year.

POLA has consecutively ranked as the number one port in the nation for cargo volumes. Amidst the backdrop of international trade and shipping, POLA includes the World Cruise Center, Ports O' Call Village, Vincent Thomas Bridge, Fanfare Fountains and Water Features, Angels Gate Lighthouse, Waterfront Red Car Line, and 22nd Street Park.

The project site is within the Port Community Plan area in the community of Wilmington. Access to and from the project site is provided by a network of freeways and arterial routes. The freeway network consists of the Harbor Freeway (Interstate [I]-110), the Long Beach Freeway (I-710), the San Diego Freeway (I-405), and the Terminal Island Freeway (State Route [SR]-47), while the arterial street network that serves the proposed project site includes Alameda Street, Anaheim Street, Henry Ford Avenue, and Anchorage Road.

2.2.2 Project Setting

Existing Conditions

The project site is located on the northwest corner of the intersection of Shore Road and Anchorage Road (Figure 2), within Planning Area 6 of the Port Master Plan (see Section 2.5.2). The land side portion of the parcel is L-shaped and covers approximately 32,000 square feet. The site is unpaved and largely unvegetated with no existing landscaping, and there are no permanent structures on the property. The water side portion of the parcel is 45,000 square feet , and it supports an existing boat dock with 25 slips that is accessed by locked gates and dock ramps at the northern and southern end of the boat dock. A Parcel (Assessors Identification Number 7440-011-908) Profile Report is provided in Appendix A.

Zoning

The General Plan land use designation for the project site is "Recreation and Commercial." The project site is zoned for industrial uses ([Q]M3-1), which is for "heavy industrial" uses. This designation permits all M2 ("light industrial") uses, including cargo container storage yard, when located in whole or in part within the boundaries of the Port Community Plan area (City of Los Angeles 2011). According to the *City of Los Angeles Zoning Code Manual and Commentary*, the "[Q]" prefix is a qualified zone designation. In this case, the 'Q' Condition refers to zoning restrictions placed by the harbor department.

Residential uses and schools are prohibited (City of Los Angeles 2011). Properties zoned [Q]M3-1 are also found north of the project site (City of Los Angeles 2011). The property has been designated by City Planning as within a 2,000 feet 'buffer zone' for border zone properties and has development limitations placed upon it. Any proposed development on the property requires approval from the DOGGR. This designation would not prohibit the proposed project, but it requires that the City disclose to the applicant that the site may be hazardous. In addition, the 'Q' condition requires a separate approval process with City Planning. The proposed project is consistent with the zoning, and would not be prohibited by the 'Q' condition.

Surrounding Land Uses

The project site is adjacent to other small boat marinas and a commercial boat yard (Figure 4). The channel leading from the project site connects to the East Basin area of the Port. Sailing exercises conducted by the proposed project would occur in the East Basin between the Consolidated Slip and Cerritos Channel. The nearest residence is within the community of Wilmington, approximately 450 feet to the northwest, although approximately 30 liveaboards are present at the adjacent marinas, and 3 liveaboards presently are within 250 to 400 feet of the project boundary.

Berths 195-199 are located on the opposite side of East Basin from the proposed project site (Figure 2). This 85 acre auto terminal site is leased by Wallenius Wilhelmsen Logistics (WWL) and used for vehicle processing and storage. The site has capacity to store up to 8,000 vehicles. WWL has been a tenant at POLA since 1969 (POLA 2012).

The Anchorage Road Sediment Storage Site (ARSSS) is located on the opposite side of Shore Road from the project site (Figure 2). The ARSSS encompasses approximately 31 acre, and it was approved for use by the RWQCB as an upland soil storage site in the early 1990s. The site has been used for storage of dredged materials that are unsuitable for open water disposal but not classified as hazardous waste. The ARSSS site was closed in December 2011, and a polymer coating will be placed as a site cap in 2012.

LAHD conducted environmental analyses of the ARSSS to (1) assess the presence of contaminants in soil, sediment, and air samples from the site and (2) evaluate potential health effects of these contaminants to surrounding receptors by comparing concentrations to regulatory standards through use of a health risk assessment (HRA) (Tetra Tech 2006, 2008). The results of these analyses showed that a majority of contaminant concentrations are below the residential Preliminary Remediation Goals (PRGs), California Human Health Screening Levels (CHHSLs), or regional background concentrations and, with the exception of polycyclic aromatic hydrocarbons (PAHs), comparable to those found at residential sites. The HRA concluded that it is unlikely that soil and dredged sediment at the ARSSS cause any adverse health effects to onsite workers, who represent the highest risk group because they are in closest contact to the soil and/or dredged sediment. Additionally, as noted above, none of the contaminant concentrations in the soils and sediments exceeded the federal and state regulated hazardous waste levels.

Figure 4. East Basin Marinas Adjacent to the Proposed WYSAC Project Site

The ARSSS site is planned to be converted to a park as part of the proposed Wilmington Marina/Marina Parkway Project, which will plant trees, construct a walking path, and provide additional street parking. The potential for cumulative impacts associated with the proposed project and closure of the ARSSS site is addressed in Section 4.18.

The Consolidated Slip, located at the mouth of the Dominguez Channel (Figure 2) and less than 0.5 mile from the project site, is in "Operable Unit 2" of the Montrose Superfund Site, which is on the National Priority List (NPL), and the largest remaining toxic hotspot in the harbor due to the presence of contaminated sediments (POLA and POLB 2009). The Consolidated Slip is also identified on the current Section 303(d) List of Water Quality Limited Segments Requiring Pollutant-Specific Total Maximum Daily Loads (TMDL) for a variety of sediment contaminants (cadmium, chromium, copper, lead, mercury, zinc, chlordane, total dichlorodiphenyltrichloroethane [DDT], total polychlorinated biphenyls [PCBs], benzo(a)pyrene, 2-methyl naphthalene, phenanthrene, benzo(a)anthroacene, chrysene, and pyrene), tissue contaminants (chlordane, dieldrin, DDTs, PCBs, and toxaphene), sediment toxicity, and benthic community effects (POLA and POLB 2009). A plan was developed to remove the contaminated sediments from this area and isolate them in a confined disposal facility at Berths 243-245. After extensive coordination with the United States Environmental Protection Agency (USEPA), this plan was determined to be infeasible as part of the Channel Deepening Project due to uncertainty related to completion of USEPA superfund requirements within the timeframe of completing the Channel Deepening Project. Coordination with USEPA for this remediation project is ongoing (POLA 2009).

Results from sediment sampling in the harbor indicate that chemical contaminants, such as PCBs, PAHs, and several metals (arsenic, chromium, copper, lead, and mercury), have dispersed from the Consolidated Slip area to other portions of the East Basin and adjacent marina areas, including those at or near the project site (Weston 2009; Anchor/QEA 2010). The presence of chemical contaminants in the project vicinity, and potential health risk to sensitive receptors, is an important condition that is evaluated in this IS/MND.

Historical Uses of the Project Site

The land portion of the project site is currently used for boat, car, and truck storage, and the in-water portion of the project site is used for boat berthing.

The project site is located on the southern portion of the extensive Wilmington Oil Field (Figure 5). More than 5,300 oil wells have been drilled in the oil field, and approximately 45 percent of these wells currently are active (Locus 2010).

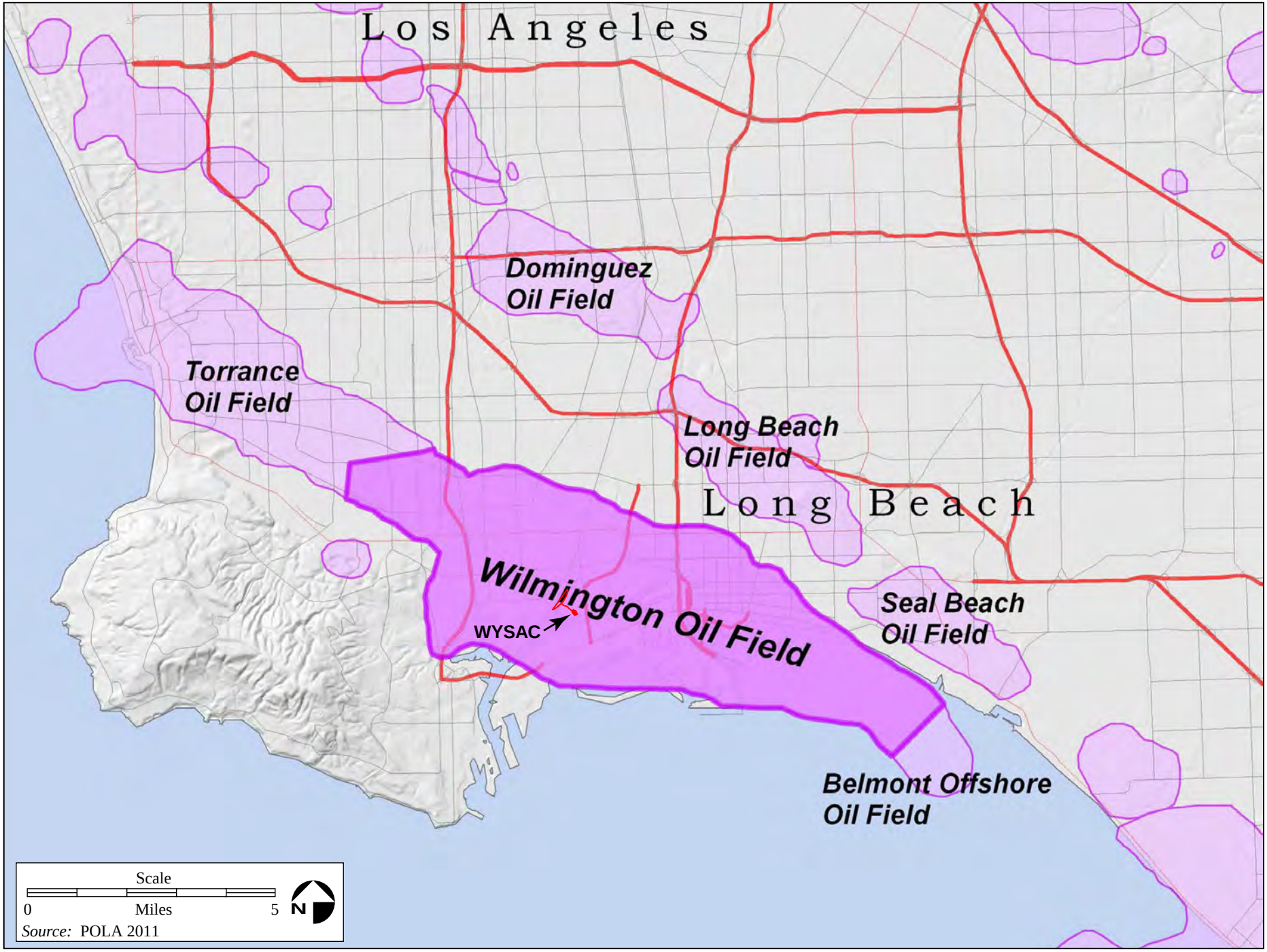

Figure 5. Location of the Wilmington Oil Field

An estimated 64 wells were drilled within 0.25 mile of the project site, but most of these have been abandoned. The project site property historically was occupied by one oil production well operated by ExxonMobil and several aboveground storage tanks. The well was plugged in 1987 (Locus 2010). A site investigation conducted in 2002 (CH2M Hill 2002) determined that the oil well was located within an approximately 10 feet deep pit. The DOGGR website indicates that there were two wells on the project site and two wells on the adjacent property. The wells within the property boundaries were located near the northwest corner (Well W.1. 16) and on the western portion (Well Tua-2 244) of the project site. The two wells on the adjacent property (Tua-2 250 and Tua-2 248) were located approximately 50 feet east and 50 feet southeast, respectively, of the project site boundary. Well W.1. 16 is listed as a waterflood (water injection) well, whereas the other three wells are listed as production oil wells. Water injection wells also were operated on the adjacent property. The DOGGR website indicates that all wells have been plugged.

A Phase I/Limited Phase II site investigation (Locus 2010) was conducted to evaluate the extent of soil and groundwater contamination at the project site. The investigation detected total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, and xylene (BTEX), and PAHs in soil samples, as well as high methane gas concentrations (up to 15 percent of the lower explosive limit [LEL]). The investigation concluded that the site was minimally impacted and did not require further investigation. However, soils encountered during excavation activities that are discolored, odiferous, determined by on-site monitoring devices to potentially contain organic contaminants, or that appear to be of a different composition than typical site soils, would require additional screening prior to disposal. Additionally, any groundwater effluent generated during future construction activities would need to be addressed in accordance with National Pollutant Discharge Elimination System (NPDES) permit requirements.

Subsurface methane is commonly associated with oil production. The project site is located in an area identified as a potential methane hazard site (City of Los Angeles 1996) due to its proximity to methane gas sources such as oil wells and oil fields. As such, methane gas mitigation systems would be incorporated into the design of any paved area or inhabited structure on the project site, as required by City of Los Angeles Municipal Code, Section 91.106.4.1 and Division 71 of Article 1, Chapter IX. Due to the high methane gas concentrations present, a Level V methane collection/venting system would be required for the proposed project (Section 2.4.2).

2.3 Project Background and Objectives

The LAHD issued a request for proposals for Wilmington Community Aesthetic Mitigation Projects that would increase public access to the waterfront and offset the loss of recreational resources associated with development and operation of a commercial ship terminal in Wilmington. In response to the request, Pacific Unicomm Corp. submitted a proposal to operate the WYSAC as the non-profit organization. The proposed project concept was approved by the California State

Lands Commission, and the LAHD Board of Harbor Commissioners approved $3.1 million dollars in funding.

The primary objective of the program is to provide an opportunity for local and inner-city youths to develop life skills through sailing exercises, safe boating courses, and exposure to career opportunities at the Port. The program would accommodate up to 1,000 under-served, at-risk, 8 to 18 year old youths per year. Students would be from an area within Wilmington and surrounding communities. Classes would occur primarily during summer months, although some after-school and weekend activities, as well as special events, also could occur year-round. The WYSAC also would provide a base for other sailing programs, such as the Jordan High School Sailing Program and Access to Sailing, that provides youth and adult therapeutic rehabilitation programs. In addition to youth sailing programs, the WYSAC would offer United States Coast Guard safe boating and navigation courses for boat owners and special weekend events which would include youth sailing clubs, regattas, and events for disabled individuals.

The LAHD evaluated potential sites for the sailing center and determined that a site on Consolidated Slip would be unavailable for a period of approximately 10 years due to ongoing remediation plans. The LAHD evaluated other potential sites in Wilmington and determined that the underutilized storage site at Berth 204 would be the most suitable location for the sailing center because it provided existing slips and docks that required some repairs, along with modification and installation of utilities.

2.4 Project Description

The proposed project would construct and operate facilities supporting a youth sailing program. The proposed project would construct an approximately 6,650 square feet building for the sailing center, with 11,000 square feet of on-site parking (15 standard stalls, 1 van accessible stall, and 1 accessible stall), and install utilities, security fencing, lighting, and landscaping. The proposed project also would reconfigure and refurbish the existing boat dock by removing 11 slips to accommodate a new 100 feet dock and a 12 by 40 feet boat launch/gangway, and enlarge the remaining 14 slips to accommodate more than one boat per slip. Proposed project operations would include classroom instruction and on-water sailing exercises, as described below. The proposed project is anticipated to be fully operational in 2014.

2.4.1 Project Elements

A site plot for the proposed WYSAC facility is shown in Figure 6. A rendering of the proposed facility is shown in Figure 7. A summary of the primary elements that would be constructed for the proposed project is provided in Table 1. Final design elements would be determined by the LAHD Engineering Division and approved by the City of Los Angeles Department of Building and Safety. Prior to the start of proposed construction activities, the LAHD would conduct a geotechnical survey of the project site to determine the need for any special building restrictions or additional requirements, such as a piling supported foundation.

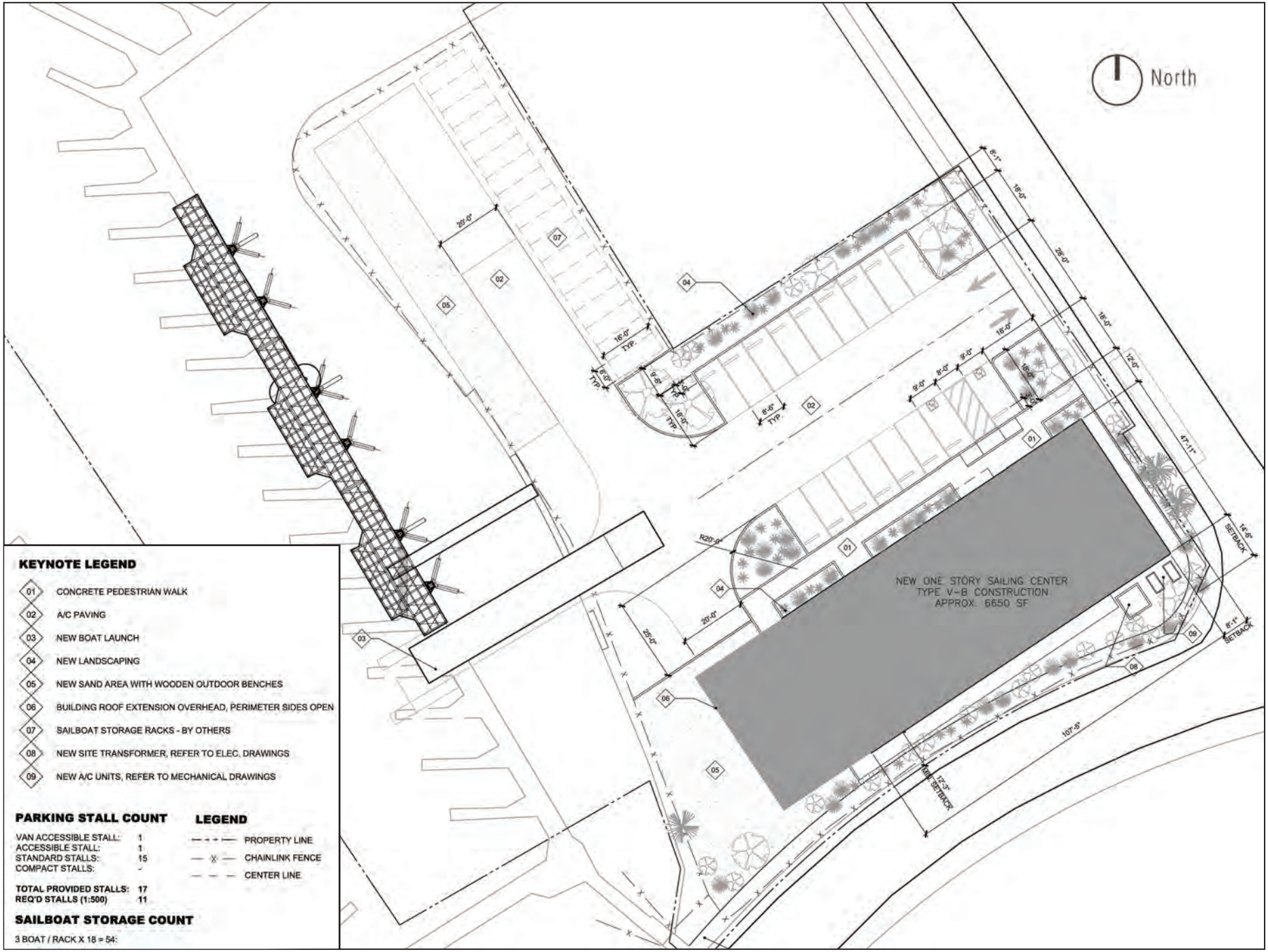

Figure 6. Site Plot for the Proposed WYSAC Facility

Figure 7. Rendering of the Proposed WYSAC Facility

Table 1. Summary of Proposed Project Components

Project Element	*Description*
Site Preparation Activities	▪ Scrape and grade the upland parcel (32,000 square feet) in preparation for construction of building foundation ▪ Trench for utilities ▪ Remove and dispose of contaminated soils in accordance with applicable laws and regulations. ▪ Dispose of contaminated groundwater from building and utility excavations in accordance with NPDES permit requirements.
Construct WYSAC Building	▪ Install the building foundation using a spread foundation or piles, depending on the results of a pre-construction geotechnical evaluation. ▪ Install a Level V methane collection/venting system. ▪ Construct a 6,650 square feet, pre-fabricated, single-story building achieving LEED Silver Certification that would provide classroom and meeting space and administrative offices for conducting the sailing program.
Building Interior	▪ Install offices, meeting room, and restrooms/lockers/showers.
Utility Connection	▪ Install utility services (i.e., power, water, and sewage).
Storm Drain System	▪ Construct a storm drain system (i.e. curbs and gutters) and install a new outfall.
On-Site Parking	▪ Construct dedicated on-site parking. ▪ Install lighting. ▪ Construct a fence enclosure with entrance to the parking lot secured by a lockable gate.
Landscaping	▪ Install landscaping
Boat Dock	▪ Reconfigure the existing primary dock by eliminating 11 slips ▪ Replace approximately half (6 of 12) of the existing pilings ▪ Construct a new dock (8 by 100 feet) ▪ Reconfigure (enlarge) 14 existing slips to accommodate multiple boats
Launch Ramp	▪ Construct a 12 by 40 feet launch ramp from the shoreline to the new boat dock

The proposed project would conform to LAHD's Green Building program and would achieve the United States Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) Silver certification based on credits from the building manufacturer. The sailing center building would be constructed using a pre-fabricated, tilt-up package that meets LEED silver certification standards from the manufacturer (Project Frog).

The WYSAC building would be designed for all methane pressures, with both a passive methane gas protection system (sub-slab vent system and impervious membrane) and an active methane gas protection system (sub-slab system and lowest occupied space system, including control panel). A methane vapor system would be installed beneath the floor of the new building. The Level V design is the most stringent and protects against methane concentrations greater than 12,500 parts per million volume (ppmv). The sub-slab passive vent system is a combination of perforated pipes, gravel, and a High Density Polyethylene (HDPE) geomembrane liner. The pipe is machined perforated to meet the following specifications: maximum of 6 slots per row, 1.10-inch slot length, 0.125-inch slot width, 0.5-inch slot spacing, 19 slot/row per foot.

Gravel is placed around the perforated pipe. The geomembrane liner is smooth textured, oil-resistant, 60- millimeter thick HDPE. The methane gas transmission rate for the membrane is less than 40 cubic centimeters/square meter-24 hours atm.

The active system comprises a combustible hydrocarbon (methane) sensor and methane sensor digital controller. The sensor is capable of determining which hydrocarbon gas is being detected, and it transmits a signal proportional to the LEL concentration of that gas or vapor. The direct current (DC) controller is a micro controller-based system capable of continuously monitoring single sensors for combustible gases and displaying readings and information in an light-emitting diode display. The sensors, DC controllers, and alarm strobe light and horn are powered by a 24 Volt DC power supply. The horn is capable of a sound pressure level of 93 decibels (dB) at a distance of 10 feet.

The proposed project would install utility services (i.e., power, water, and sewage) and connect these to existing systems at adjacent properties. The proposed project also would construct a storm drain system (i.e., curbs and gutters) and install a new outfall that would discharge stormwater to the marina.

A pervious, paved parking lot would be constructed and enclosed on three sides by a fence, with a lockable access gate. The parking lot would provide parking for 17 vehicles, including 15 standard stalls, 1 van accessible stall, and 1 accessible stall; 1,600 square feet of the parking lot would support landscaping. The remaining parcel would be used for boat storage.

An existing boat dock and slips would be reconfigured and replaced with a new, 8 by 100 feet, primary dock that would be used for practicing docking, as well as space for temporary docking/berthing of visiting boats. A 12 by 40 feet gangway/launch ramp would be constructed from the shore to the primary boat dock. The launch ramp would allow the students to transport boats from the storage facility to the primary dock. The new dock configuration would eliminate 11 of the existing boat slips. The remaining 14 boat slips would be reconfigured (enlarged) to accommodate more than one boat per slip.

No dredging or placement of fill would be required for the proposed project. The launch ramp would be floating with pile supports, and would not constitute fill of any areas below the mean higher high water line.

2.4.2 Construction Scenario

2.4.2.1 Construction

Prior to initiating construction, the LAHD would conduct a geotechnical survey of the project site and obtain all required permits and approvals. The anticipated types and numbers of construction equipment, including duration and horsepower ratings, that would be used during the different construction phases are provided in Appendix B. Construction equipment would conform with LAHD's Sustainable Construction Guidelines for Reducing Air Emissions.

Construction would occur in three phases:

- Phase 1: Site Preparation;
- Phase 2: Underground Utilities and Structure; and
- Phase 3: Interior and Site Work.

Work on multiple phases may occur concurrently.

Phase 1: Site Preparation

Site preparation would include scraping and grading the surface of the project site, trenching, and, if needed, removal and disposal of contaminated soil and/or groundwater. Any soil encountered during excavation activities that is discolored, odoriferous, or appears to be of different composition than typical site soil, would be separately stockpiled, covered, and evaluated by soil sampling and analyses to properly characterize the soil for treatment and/or disposal at a State-permitted LAHD approved facility. Any soil may be used on-site as backfill material if it meets LAHD environmental criteria for re-use. Any excavated soil that does not meet LAHD's environmental criteria for reuse cannot be reused onsite or at any other Port site, but would be treated and/or disposed of at a State-permitted LAHD approved facility. Any discharge of groundwater to land or surface harbor water must be under an appropriate NPDES permit. If disposed of or treated, the groundwater must be sent to a State-permitted disposal/recycling facility. These requirements would be incorporated as conditions into the permits.

Construction activities would not require a separate construction stormwater permit because the construction area would be smaller than one acre. However, the construction contractor would be required to implement best management practices (BMPs), such as: general site management, construction and waste materials management, erosion control, and dust control. In particular, BMPs likely would include water spraying to control dust and covering stockpiled soils to prevent wind erosion. LAHD also may require the development and implementation of a SWPPP, which specifies BMPs for controlling construction-related pollutants originating from the project site as a result of construction-related activities. Construction projects would be inspected by LAHD construction inspectors to ensure that BMPs are in place and that construction SWPPPs are updated and adequate.

Phase 2: Underground Utilities and Structure

A previous LAHD Engineering survey of the project site identified the existing sewer, water, and electric systems. The electric line runs directly underneath the proposed building footprint and would most likely be relocated. Gas was not identified at the project site; therefore, all building systems would be electric.

The proposed project would install utility services (i.e. power, water, and sewage) and connect these to existing systems at adjacent properties. Trenching for utilities would not extend below 5 feet below ground surface (bgs). The proposed project also would install a storm drain system (i.e. curbs and gutters),

and a stormwater outfall, 36 inches in diameter or less, that would discharge to the marina. A new outfall is required because there is no existing storm drain infrastructure in the area to tie into (B. Low; pers. comm.).

The building foundation is the only proposed project component with the potential to disturb soils below 5 feet bgs. The need to disturb soils below 5 feet bgs would depend on the findings of the geotechnical survey and recommendations for the design of the building foundation. A spread footing foundation would stay within 5 feet of the ground surface, whereas a pile foundation would extend below 5 feet bgs.

Phase 3: Interior and Site Work

This phase would include installing the building interior and heating, ventilation, and air conditioning (HVAC), electrical, and water systems; constructing the parking lot, fencing, and landscaping; and replacing the dock and launch ramp facilities.

The old docks would be broken into pieces and then lifted out of water and into dump trucks for off-site disposal. Approximately half (6 of 12) of the existing pilings would be replaced Old, decomposing piles would be removed completely and replaced with 18 or 24-inch cement piles. New pilings would be installed using a barge-mounted vibratory hammer. The 12 by 40 feet launch ramp would be a floating structure connecting the main dock to the shore.

Construction Schedule

The construction phase for the proposed project is anticipated to commence in January 2013 and the entire construction process would take approximately nine months to complete. The site preparation phase is anticipated to take approximately one month. Utilities installation is expected to take approximately two months, although it could be longer if contaminated soils are encountered. Construction of the main building is anticipated to take six months. Note that this completion schedule likely would be extended if some of the soils appear to be contaminated and required testing to evaluate disposal options. The interior and site work phase would take approximately four months. Construction would occur only during weekdays between 8am and 4pm in accordance with Los Angeles Municipal Code requirements. The estimated daily construction workforce is approximately 30 persons. The proposed project is anticipated to be fully operational in 2014.

2.4.2.2 Operation

The primary activities associated with the proposed project would be classroom instruction and in-water sailing exercises for 8 to 18 year old youth. The operation scenario would be as follows: students would be bused to the sailing center from facilities (e.g., YMCA) within the City of Wilmington and surrounding communities or dropped off by parents.

The WYSAC would operate a minimum of five days per week and a minimum of eight hours per day. It is anticipated that the hours of operation would be adjusted seasonally to match the activity demand. However, the facility would not be opened prior to 6am or remain open after 10pm under any conditions. The facility would be operated on weekend days, except holidays, although, the Marina Office would remain open during peak summer holidays, such as Memorial Day, Fourth of July, and Labor Day, or during any boating event. No overnight accommodations would be provided within the WYSAC grounds. Transit hours during the summer are expected to be between 8-9am, 12-1pm, and 3-4pm. During the school year, the transit times would be the same during weekends only.

Once constructed and habitable, the facility operator would comply with limitations set for maximum capacity. The maximum use would be restricted through development of program planning and processes which estimate participation in various membership activities. WYSAC staff would be responsible for recording instructional classes and public use attendance.

The sailing program would provide classroom instruction and on-water lessons. Each 64 to 70 hour class would include water safety, first aid and rescue techniques, proper care and maintenance of the boats, and the opportunity to sail and race in the larger keel boats. Classroom curriculum would include sailing skills, navigation, navigation rules, and a safe boating course. Swimming, first aid, and cardiopulmonary resuscitation (CPR) would be taught at the local YMCA. The WYSAC classes would accommodate up to 75 students per day (up to approximately 1,000 students per year) and would be coordinated by full-time, part-time, and volunteer staff.

Sailing lessons would use small (mostly 8 to 15 feet long) sail boats (Sabots, Optis, FJs, Lasers) that are appropriate for teaching beginning students. Boats would be stored out of the water within facilities constructed on-site. Students would use dollies to transport boats from the storage area to the launch ramp. Boats would be launched and recovered from the launching ramp, and rigged at the main dock. Students would sail the boats to the East Basin where the in-water exercises would be conducted. Sailing lessons would occur within a designated area of the East Basin that would be marked with temporary buoys/floats (Figure 8). No sailing would occur in the Consolidated Slip due to the presence of contaminated sediments or in the Cerritos Channel due to potential risks associated with commercial marine vessel traffic. Prior to the sailing exercises, WYSAC personnel would check with the Los Angeles Pilots Traffic to confirm that no commercial traffic would be expected in the area of the East Basin during the time planned sailing exercises are occurring. A WYSAC instructor in a motorized inflatable or launch would accompany the students during sailing exercises. The instructor would be trained in first aid and CPR, and would carry a very high frequency (VHF) radio and other safety equipment. Students would be required to wear life vests/personal floatation devices. Swimming near the WYSAC, East Basin, and Consolidated Slip would be prohibited.

Figure 8. Location of the Proposed Sailing Area in the East Basin (indicated by the red dashed line)

The water depth near the proposed project site is approximately 11 feet. Given the presence of contaminated sediments in the area, and because the masts of training boats are typically 14 feet or taller, tipping exercises within the designated sailing area would not be permitted because there is a potential for the mast to resuspend bottom sediments into the water column, which could risk exposing students to chemical contaminants. Therefore, tipping exercises would occur elsewhere in the harbor, potentially near Cabrillo Beach. In these cases, the boats would either be transported by car/truck and then launched at the site or rafted together and towed to the site by a motorized launch. If boats are towed to Cabrillo Beach, the WYSAC operator would coordinate movements with the Port Pilots to minimize potentials for encountering commercial vessel traffic.

The WYSAC could also sponsor special events during weeknights and weekends that could include on-site classes, meetings, banquets, as well as on-water events, such as sail boat races, regattas, special classes, demonstrations, etc. Sailing races likely would occur in the outer harbor and/or outside of the harbor breakwater. Similar conditions as listed above would apply to the special, on-water events.

2.5 Relationship with Other Plans and Polices

CEQA requires that an IS include a discussion regarding the project's consistency with existing plans and policies. The following summary provides a brief discussion of the proposed project's consistency with plans and policies that have jurisdiction over the proposed project. Additional analysis of the proposed project's consistency with relevant plans and policies is contained in Chapter 4, Impacts and Mitigation Measures, under Land Use and Planning.

2.5.1 Los Angeles General Plan—Port of Los Angeles Plan

The Los Angeles General Plan (General Plan) is the fundamental policy document of the City of Los Angeles as it defines the framework by which the City's physical and economic resources are to be managed and used over time. The General Plan contains 35 community plans that are intended to promote an arrangement of land uses, streets, and services. The Port of Los Angeles Plan (Port Plan) is the community plan that applies to the project area. It provides precise land use designations and determinations of goals, objectives, policies, programs, and planning decisions that pertain to the Port (City of Los Angeles 1982).

The Port Plan, adopted in 1982, is an element of the General Plan, and is intended to be consistent with the Port of Los Angeles Master Plan (PMP; see Section 2.5.2). The Port Plan provides a 20-year official guide to the continued development and operation of the LAHD. The Port Plan describes major land use categories that encompass the unique nature of LAHD operations and development. The proposed project would be consistent with both the General Plan and Port Plan because the proposed project would be consistent with the adjacent marina activities, and the project site and surrounding area are

designated as having "Commercial/Industrial" land uses with provisions for general and bulk cargo involving non-hazardous materials.

2.5.2 Port of Los Angeles Master Plan

The PMP, which was most recently amended in July 2002, guides development within the LAHD. The PMP designates nine individual planning areas (PAs). The proposed project is located within PA 6 (Cerritos Channel), which is in the extreme northwest portion of the Los Angeles Harbor between the Cerritos Channel and East Basin. Oil drilling (71 percent of the area) and recreation/small craft marinas (25 percent of the area) are the primary uses accommodated in PA 6. The PMP states that for long-range preferred use "If sufficient land is available elsewhere in the port to serve future shipping needs, Area 6 could be devoted to recreation and supporting uses. In this regard, preference should be given to recreation and related compatible uses for the oil field site when it becomes available for alternative uses."

The proposed project would be consistent with the primary land uses identified for this planning area in the PMP.

2.5.3 Los Angeles Zoning Ordinance

The General Plan land use designation for the project site is "Recreation and Commercial". The project site is zoned for industrial uses ([Q]M3-1), which is for "heavy industrial" uses. This designation permits all M2 ("light industrial") uses, including cargo container storage yard, when located in whole or in part within the boundaries of the Port of Los Angeles Community Plan area (City of Los Angeles Municipal Code 2011). Residential uses and schools are prohibited (City of Los Angeles 2011). Properties zoned [Q]M3-1 are also found north of the project site (City of Los Angeles 2011). The property has been designated by City Planning as within a 2,000 feet 'buffer zone' for border zone properties and has development limitations placed upon it possibly based upon proposed uses. Any proposed development on the property requires approval from DOGGR. This designation does not prohibit the proposed project, but it requires that the City disclose to the applicant that the site may be hazardous. In addition, the property has been tagged with a 'Q' condition which requires a separate approval process with City Planning. The proposed WYSAC is consistent with the zoning, and it would not be prohibited by the 'Q' condition.

2.5.4 Local Coastal Program

Local coastal programs are basic planning tools that local governments, in partnership with the California Coastal Commission, use to guide development in the coastal zone. Local coastal programs contain the ground rules for future development and protection of coastal resources. They specify appropriate location, type, and scale of new or changed uses of land and water. Local coastal programs are based on decisions that determine the short- and long-term conservation and use of coastal resources. Following adoption by a city council or county board of supervisors, a local coastal program is submitted to the

California Coastal Commission for review for consistency with Coastal Act requirements (California Coastal Commission 2004). In accordance with this process, LAHD has approved the PMP, and the California Coastal Commission has certified it. Under provisions of the California Coastal Act of 1976, the PMP represents the local coastal program for the Port. Therefore, because the proposed project is consistent with the PMP, the proposed project is consistent with the local coastal program.

2.5.5 Risk Management Plan

The LAHD Risk Management Plan is an element of the PMP that was adopted in 1983 in accordance with California Coastal Commission requirements. The purpose of the LAHD Risk Management Plan is to provide siting criteria relative to vulnerable resources and the handling and storage of potentially hazardous cargo such as crude oil, petroleum products, and chemicals. Safety is to be achieved through the physical separation of hazardous sites and vulnerable resources, such as high-density populations and critical facilities; facility design factors; fire protection; and other risk-mitigation measures. The LAHD Risk Management Plan provides guidance for future development to minimize or eliminate hazards to vulnerable resources.

The project site would not be used for handling or storage of hazardous cargo, and proposed activities would be compatible with adjacent land uses, primarily as recreational marinas.

2.5.6 Water Quality Control Plan—Los Angeles River Basin

The Water Quality Control Plan for Region 4, the Los Angeles River Basin (Basin Plan), was adopted by the RWQCB in 1978 and updated in 1994. The Basin Plan designates beneficial uses of the basin's water resources and describes water quality objectives, implementation plans, and surveillance programs to protect or restore designated beneficial uses. The proposed project would be implemented in conformance with the objectives of the Basin Plan.

2.5.7 Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California

On March 2, 2000, the SWRCB adopted a water quality control policy that applies to discharges of toxic pollutants into inland surface waters, enclosed bays, and estuaries of California subject to regulation under the state's Porter-Cologne Water Quality Control Act and the federal Clean Water Act. Such regulation may occur through the issuance of NPDES permits, the issuance or waiver of waste discharge requirements, or other relevant regulatory approaches. The goal of the policy is to establish a standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters in a manner that promotes statewide consistency. The

Los Angeles Harbor is considered an enclosed bay under this policy. The LAHD would work closely with the RWQCB to obtain approvals and necessary permits for implementation of the proposed project.

2.5.8 Clean Water Act—National Pollutant Discharge Elimination Systems

In 1987, the federal Water Pollution Control Act (also referred to as the CWA) was amended to provide that the discharge of pollutants to waters of the United States from stormwater is effectively prohibited, unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the CWA added Section 402(p), which established a framework for regulating municipal, industrial, and construction stormwater discharges under the NPDES program. In California, these permits are issued through the SWRCB and the nine regional water quality control boards. On December 13, 2001, the RWQCB adopted Order No. 01–182. This order is the NPDES permit for municipal stormwater and urban runoff discharges within the County of Los Angeles (NPDES No. CAS004001). Order No. 01–182 covers 84 cities, including the city of Los Angeles and the unincorporated areas of Los Angeles County. Under this order, the Los Angeles County Flood Control District is designated as the principal permittee, and the County of Los Angeles along with the 84 incorporated cities are designated as permittees. The principal permittee coordinates and facilitates activities necessary to comply with the requirements of Order No. 01–182, but it is not responsible for ensuring compliance of any of the permittees. Activities within the Los Angeles Harbor are subject to NPDES requirements.

2.5.9 Air Quality Management Plans

The USEPA, under the provisions of the Clean Air Act, requires each state that has not attained National Ambient Air Quality Standards (NAAQS) to prepare a separate local plan detailing how these standards will be met in each local area. These plans will be prepared by local agencies designated by the governor of each state and will be incorporated into a state implementation plan. The Lewis Air Quality Act of 1976 established the four-county SCAQMD and mandated a planning process requiring preparation of an air quality management plan (AQMP).

In the South Coast Air Basin (SCAB), the local air agency is the South Coast Air Quality Management District (SCAQMD). The SCAQMD and Southern California Association of Governments (SCAG) have developed AQMPs that are designed to bring the region into attainment of the national and state ambient air quality standards. The *2007 AQMP* is the applicable air quality plan in the SCAB (SCAQMD and SCAG 2007). Through this attainment planning process, the SCAQMD develops the *SCAQMD Rules and Regulations* to regulate stationary sources of air pollution in the SCAB (SCAQMD 2011a). The SCAQMD also develops guidelines to evaluate air quality impacts for CEQA purposes (SCAQMD 2011b).

2.5.10 City of Los Angeles General Plan—Air Quality Element

The General Plan has an air quality element that contains general goals, objectives, and policies related to improving air quality in the region. Policy 5.1.1 relates directly to the LAHD and requires improvements in harbor operations and facilities in order to reduce emissions. The LAHD is actively planning for and pursuing such improvements.

2.5.11 City of Los Angeles Low Impact Development Ordinance

The Los Angeles City Council passed a Low Impact Development (LID) Ordinance that calls for development and redevelopment projects to mitigate runoff in a manner that captures rainwater at its source, while utilizing natural resources including rain barrels, permeable pavement, rainwater storage tanks, infiltration swales or curb bumpouts to contain water. LID practices are designed to address runoff and pollution at the source.

2.5.12 Tidelands Trust

The Tidelands Trust, which is incorporated into the Common Law Public Trust of the City of Los Angeles, was granted submerged tidelands within the LAHD. The LAHD's jurisdictional properties are held in trust by the City of Los Angeles and are administered by the LAHD to promote and develop maritime-related commerce, navigation, and fisheries. The State Tidelands Trust was amended in 2002 to allow for funds in the LAHD to be spent on education, recreation, culture, and tourism. This legislation allows the LAHD to expend funds on non-maritime uses, such as the proposed project.

2.5.13 Congestion Management Program

The congestion management program (CMP) is a state-mandated program intended as the analytical basis for transportation decisions made through the State Transportation Improvement Program process. As mandated by state Assembly Bill (AB) 471 (1989), and amended by state ABs 1791 (1990), 1435 (1992), and 3093 (1992), the Los Angeles County Metropolitan Transportation Authority has prepared a CMP for the county. The CMP was developed to link land use, transportation, and air quality decisions; develop a partnership among transportation decision-makers on devising appropriate transportation solutions that include all modes of travel; and propose transportation projects that are eligible to compete for state gas tax funds. The CMP includes a land use analysis program that requires local jurisdictions to analyze the impacts of land use decisions on the regional transportation system. Development projects required to prepare an IS based on local determination must incorporate a transportation impact analysis into the CEQA document. This IS/MND includes a transportation impact analysis (see Section 4.16 and Appendix E) and is therefore consistent with the CMP.

Section 3.0
Initial Study Checklist

1. Project Title: Wilmington Youth Sailing and Aquatic Center Project

2. Lead Agency: Los Angeles Harbor Department
425 South Palos Verdes Street
San Pedro, CA 90731

3. Contact Person/ Phone Number: Jan Green Rebstock, Environmental Project Manager
Port of Los Angeles
310.732.3949
jgreenrebstock@portla.org

4. Project Location: 1151 North Anchorage Road, Wilmington, CA

5. General Plan Designation: Port of Los Angeles (Commercial, Industrial/Non-Hazardous, General/Bulk Cargo)

6. Zoning: (Q)M3-1

7. Description of Project: The proposed project involves construction of a single-storied, steel framed, 6,650 square feet facility to provide classroom space, boat storage space, and administrative offices for a youth sailing program targeting at-risk youths from the Wilmington area. The facility would have a total occupancy of 100 persons. The proposed project would construct limited on-site parking and bus access. The 32,000 square feet property would be enclosed by a fence and a parking lot entrance secured by a lockable gate. The project would demolish portions of the existing boat dock and replace it with a new dock and launch ramp in the same location. The proposed project is anticipated to be fully operational in 2014.

8. Surrounding Land Uses/Setting: The project site is located at the intersection of Anchorage Road and Shore Road in Wilmington. The ARSSS soil/sediment storage site is located on the opposite side of Shore Street. There are other public marinas and private boat maintenance operations in the area, as well as a wetland area and oil and gas production operation on property owned by the Port of Long Beach. The marina where the WYSAC facility would be located is adjacent to the East Basin. The WWL terminal is located on the opposite side of the East Basin.

9. Other Public Agencies Whose Approval is Required: RWQCB permits including CWA Section 401 Water Quality Certification Permit and Waste Discharge Requirement, and remedial plans and site cleanup under Voluntary Cleanup Oversight Agreement.

- SCAQMD permits including AQMD Rule 1166,
- DOGGR,
- SWPPP approval,
- City of Los Angeles permits for disposal of materials and haul routes,
- City of Los Angeles, Department of Building and Safety Building Permit and Grading Permit, and
- Coastal Development Permit.

Environmental Factors Potentially Affected

This IS/MND evaluates the project's effects on the following resource areas:

- Aesthetics
- Air Quality
- Cultural Resources
- Greenhouse Gas Emissions
- Land Use & Planning
- Noise
- Public Services
- Transportation & Traffic
- Utilities & Service Systems
- Agriculture & Forestry Resources
- Biological Resources
- Geology/Soils
- Hazards & Hazardous Materials
- Hydrology & Water Quality
- Mineral Resources
- Population/Housing
- Recreation
- Mandatory Findings of Significance

Determination

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature Christopher Cannon FOR CHRISTOPHER CANNON Date: 7/30/12

Christopher Cannon, Director
Environmental Management Division, Los Angeles Harbor

Evaluation of Environmental Impacts

1. A brief explanation is required for all answers except "no impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "no impact" answer is adequately supported if the referenced information sources show that the impact does not apply to projects like the one involved. A "no impact" answer should be explained if it is based on project specific factors as well as general standards.
2. All answers must take account of the whole action involved, including off-site and on-site cumulative; project-level; indirect and direct; construction, and operational impacts. For the purposes of the analysis, a separate discussion on construction and operational phases was provided for only applicable resource areas to further identify and assess the impacts associated during those stages of project implementation.
3. Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially significant impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "potentially significant impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies when the incorporation of mitigation measures has reduced an effect from a "potentially significant impact" to a "less than significant impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
5. Earlier analyses may be used if, pursuant to tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (Section 15063[c][3][D]). In this case, a brief discussion should identify the following:
    a. Earlier analysis used. Identify and state where earlier analyses are available for review.
    b. Impacts adequately addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c. Mitigation Measures. For effects that are "less than significant with mitigation incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting information sources. A source list should be attached and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
    a. the significance criteria or threshold, if any, used to evaluate each question, and the mitigation measure identified, if any, to reduce the impact to a less than significant level.

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Section 4.0
Impacts and Mitigation Measures

4.1 Aesthetics

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AESTHETICS. Would the project:				
a. Have a substantial adverse effect on a scenic vista?	❑	❑	❑	■
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	❑	❑	❑	■
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	❑	❑	❑	■
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	❑	❑	■	❑
e. Create a new source of substantial shade or shadow that would adversely affect daytime views in the area?	❑	❑	❑	■

Would the Project:

a) Have a substantial adverse effect on a scenic vista?

No Impact. The proposed project site is located near the intersection of Shore Road and Anchorage Road in Wilmington, which is zoned for industrial uses and is completely within LAHD property. The project site currently consists of an unpaved and fenced boat storage area and associated docks and boat slips. The area is not part of a scenic vista.

The proposed project would construct an approximately 6,650 square feet building for classrooms, offices, and other support functions. The proposed project would be consistent with the industrial/commercial landscape of the area and would not block views of the Port available from public and private vantages. Because no protected scenic vistas are available from the project site, no impacts related to scenic vistas would occur. No mitigation is required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. The nearest, officially designated, state scenic highway is approximately 34 miles north of the proposed project (State Highway 2, from approximately 3 miles north of Interstate (I)-210 in La Cañada to the San Bernardino County Line) (California Scenic Highway Mapping System 2010). The nearest eligible state scenic highway is approximately 10 miles southeast of the project site (State Highway 1, from State Highway 19 near Long Beach to I-5 south of San Juan Capistrano) (California Scenic Highway Mapping System 2010). The project site is not visible from either of these locations.

In addition to Caltrans' officially designated and eligible state scenic highways, the City of Los Angeles has City designated scenic highways that are considered for local planning and development decisions (City of Los Angeles 1996). These include several streets in San Pedro that are in the vicinity of the project site. John S. Gibson Boulevard, Pacific Avenue, Front Street, and Harbor Boulevard are city-designated scenic highways because they afford views of the Port and the Vincent Thomas Bridge. The project site is not visible from City designated scenic highways. There are no other scenic resources, such as trees, rock outcroppings, or historic buildings within a scenic highway that could be impacted by the proposed project. Therefore, no impacts related to scenic resources within a state scenic highway would occur. No mitigation is required.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

No Impact. The project site is near the intersection of Shore Road and Anchorage Road in Wilmington, completely within LAHD property, and zoned for industrial uses ([Q]M3-1). The project site presently consists of an unpaved and fenced boat storage area and associated docks and boat slips. The proposed project would construct an approximately 6,650 square feet building for classrooms, offices, and other support functions. The area is not part of a scenic vista.

The proposed project would be consistent with the industrial/commercial landscape of the area and would not block views of the Port available from public and private vantages. Because no protected scenic vistas are available from the project site, no impacts related to visual character would occur. No mitigation is required.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Less than Significant Impact. The existing source of nighttime lighting is generally from 20 feet tall light fixtures located within the project area. In addition, the existing nearby commercial, institutional, and residential uses have security lighting and general nighttime lighting. The proposed project would install new nighttime lighting in the parking lot. However, lighting would be focused downward in a manner that would only illuminate the intended areas, and the fixtures would fully cut off the bulbs preventing light trespass and glare. New lighting along improved sidewalk areas may be installed. Any new street light fixtures would be installed in accordance with current streetlight standards per the City of Los Angeles Municipal Code (City of Los Angeles 2011). As such, impacts related to light and glare would be less than significant. No mitigation is required.

e) Create a new source of substantial shade or shadow that would adversely affect daytime views in the area?

No Impact. The proposed project would construct and operate a single story building on a site that is currently unpaved. While new boat slips would be constructed, they would be comparable to the existing slips and no substantial changes would occur that would create new sources of shade or shadow. No impacts related to the creation of shade and shadow would occur with implementation of the proposed project. No mitigation is required.

4.2 Agriculture and Forestry Resources

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
2. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, Lead Agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	❑	❑	❑	■
b. Conflict with existing zoning for agricultural use, or a Williamson act contract?	❑	❑	❑	■
c. Conflict with existing zoning for, or cause rezoning of, forest land, timberland,or timberland zoned timberland production?	❑	❑	❑	■
d. Result in the loss of forest land or conversion of forest land to non-forest use?	❑	❑	❑	■
e. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	❑	❑	❑	■

Would the Project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The California Department of Conservation's Farmland Mapping and Monitoring Program develops maps and statistical data to be used for analyzing impacts on California's agricultural resources (California Department of Conservation 2006). There are no designated farmlands in the vicinity of the proposed project. Because no farmland currently exists on the project site, none would be converted to accommodate the proposed project. No impacts would occur, and no mitigation is required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments, which are much lower than normal because they are based on farming and open space uses as opposed to full market value.

The project site is zoned for heavy industrial uses and there are no agricultural zoning designations or agricultural uses within the project limits or adjacent areas. Thus, the proposed project would not conflict with existing zoning for agricultural use, or a Williamson Act Contract. No impacts would occur, and no mitigation is required.

c) Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production?

No Impact. The project site does not contain any property designated as forest or timberland. Therefore, the proposed project would not conflict with existing zoning or cause rezoning of forest or timberland. No impacts would occur, and no mitigation is required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As discussed in Section 4.2(c), the project site does not contain any property designated as forest land. Therefore, the proposed project would not result in the loss of forest land, nor would it convert forest land to a non-forest use. No impacts would occur, and no mitigation is required.

e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

No Impact. As noted, the project site has no agricultural or forest land uses. Thus, development of the proposed project would not convert any farmland to non-agricultural uses. No impacts would occur, and no mitigation is required.

4.3 Air Quality

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	❑	❑	■	❑
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	❑	❑	■	❑
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	❑	❑	■	❑
d. Expose sensitive receptors to substantial pollutant concentrations?	❑	❑	■	❑
e. Create objectionable odors affecting a substantial number of people?	❑	❑	■	❑

Would the Project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact. The project site is located within the SCAB, which consists of the urbanized areas of Los Angeles, Riverside, San Bernardino, and Orange Counties. Due to the combined air pollution sources from over 15 million people and meteorological and geographical effects that limit the dispersion of these pollutants, the SCAB can experience high air pollutant concentrations. As a result, the region currently does not attain the national and state ambient air quality standards for ozone (O_3), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$).

Construction and operation of the proposed project would produce emissions of nonattainment pollutants, primarily from diesel-powered construction equipment and on-road user vehicles during operations. The *2007 AQMP* proposes emission reduction measures that are designed to bring the SCAB into attainment of the National and California ambient air quality standards (NAAQS, CAAQS). These attainment strategies include emission control measures and clean fuel programs that are enforced at the federal and state level on engine manufacturers and petroleum refiners and retailers. The SCAQMD also adopts AQMP control measures into the SCAQMD rules and regulations, which are then used to regulate sources of air pollution in the SCAB. The proposed project would comply with these regulatory requirements, including SCAQMD Rules 403 (Fugitive Dust) and 1166 (Volatile Organic Compound Emissions from Decontamination of Soil). Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality plan. Impacts would be less than significant. No mitigation is required.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less than Significant Impact. Air quality impacts from proposed construction activities would occur from (1) combustive emissions due to the use of fossil fuel-powered, off-road equipment and on-road trucks and (2) fugitive dust emissions (PM_{10} and $PM_{2.5}$) due to the excavation and grading of exposed soils. Air quality impacts from proposed operational activities mainly would occur from emissions due to (1) on-road vehicles that access the project site and (2) landscaping and yard maintenance equipment. Due to the nominal amount of emissions that would occur from proposed operations (see Table 2 below), the proposed project ambient impact analysis focused on emissions from proposed construction activities. The types and numbers of construction equipment anticipated are provided in Appendix B.

The USEPA and California Air Resources Board (ARB) have developed the NAAQS and CAAQS, respectively, for the following pollutants: O_3, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead (Pb). The SCAQMD has developed the Localized Significance Threshold (LST) methodology to assist CEQA lead agencies in analyzing localized air quality impacts from proposed projects (SCAQMD 2008). The LST methodology allows users to determine, in lieu of conducting a dispersion modeling analysis, if a project would cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard for each source receptor area (SRA). This methodology is based on maximum daily allowable emissions, the total area of the emissions source (less than or equal to five acres), the ambient air quality in each SRA in which the emission source is located, and the distance to the nearest exposed individual. The LSTs are only for emissions of nitrogen oxides (NO_x), CO, PM_{10}, and $PM_{2.5}$. If proposed construction emissions are below the LST emission levels and no potentially significant impacts are found to be associated with other environmental issues, then the proposed activity is not significant for air quality.

The LST methodology was employed to evaluate ambient air quality impacts from proposed project construction. Air emissions from proposed construction activities mainly would occur from mobile equipment and fugitive dust within the approximate one acre project site, and to a much lesser extent, construction worker commuter vehicles and trucks that operate within adjacent local and regional roadways. Therefore, the analysis focused on the proposed project site, where project construction would generate the densest amount of emissions within the project region. The results of this analysis are as follows.

1. The SRA for the project site is the South Coastal Los Angeles County (#4).
2. The distance to the nearest exposed individual (liveaboard) would be approximately 250 feet except during installation of new dock pilings when liveaboards in the immediate project vicinity may temporarily relocate to avoid noise impacts (see Section 4.12, Noise).
3. The allowable daily emissions for a one acre construction site and a receptor distance of 100 meters is (a) 1,180 pounds of CO, (b) 68 pounds of NO_x, (c) 29 pounds of PM_{10}, and (d) 10 pounds of $PM_{2.5}$ (SCAQMD 2009).

Table 2 below shows that the peak daily emissions generated by project construction would not exceed any of the LST daily allowable emissions for SRA #4. Therefore, the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Impacts would be less than significant. No mitigation is required.

Table 2. Daily Emissions from Construction of the Proposed Project

Construction Activity	*Emissions (Pounds per day)*					
	VOC	**CO**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Site Preparation	2.0	8.7	28.1	0.0	23.6	3.8
Construct Sailing Center Building	24.8	7.5	10.9	0.0	9.2	1.6
Construct Storage/Workshop	1.2	4.8	6.0	0.0	0.8	0.5
Construct Boat Storage	1.3	5.2	6.8	0.0	1.2	0.5
Install Utilities	1.6	6.7	13.5	0.0	4.6	1.3
Pave Parking Lot	1.6	7.0	22.2	0.0	8.9	2.0
Landscaping	0.4	1.8	5.1	0.0	0.4	0.3
Demolish Docks/Construct New Docks/Launch Ramp	2.0	9.6	16.4	0.0	1.1	1.0
Peak Daily Emissions (1)	**28.9**	**24.2**	**37.2**	**0.1**	**23.6**	**3.8**
SCAQMD Daily Significance Thresholds	**75**	**550**	**100**	**150**	**150**	**55**

Note: Peak daily emissions of VOC, CO, NOx, and SOx would occur during simultaneous activities: construct sailing center building, construct storage/workshop, construct boat storage, and install utilities. Peak daily emissions of PM_{10} and $PM_{2.5}$ would occur during site preparation.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less than Significant Impact. The SCAQMD has developed daily emission thresholds for nonattainment pollutants for purposes of evaluating air quality impacts from proposed projects under CEQA (SCAQMD 2011b). If proposed emissions remain below the following thresholds, they would be expected to produce less than significant air quality impacts under criterion (c):

1. For construction activities, (1) 75 pounds of volatile organic compounds (VOC), (2) 550 pounds of CO, (3) 100 pounds of NOx, (4) 150 pounds of sulfur oxides (SOx) or PM10, and (5) 55 pounds of PM2.5; and
2. For operational activities, (1) 55 pounds of VOCs; NOx, or PM2.5, (2) 550 pounds of CO, or (3) 150 pounds of SOx or PM10.

Construction equipment usages and scheduling data were developed to calculate emissions from proposed construction activities and to identify a scenario of peak daily emissions (Appendix B). Emission factors used to estimate proposed construction emissions were obtained from the (1) ARB 2011 Inventory Model for Off-Road Diesel Equipment, (2) ARB EMFAC 2011 model for on-road trucks, and (3) special studies on fugitive dust (USEPA 1995). The proposed project fugitive dust emission calculations assume that proposed construction activities would comply with the requirements of SCAQMD Rule 403, Fugitive Dust, and, therefore, would reduce PM emissions from this source by 68 percent from uncontrolled levels (SCAQMD 2005). Proposed project construction also would comply with SCAQMD Rule 1166 to control VOC emissions from VOC-contaminated soils if any are encountered during proposed excavation or grading activities.

Proposed project operational emissions due to (1) on-road vehicles that access the project site, (2) natural gas-fired space and water heaters, and (3) landscaping and architectural coatings activities were estimated with the use of the *California Emissions Estimator Model* (SCAQMD 2011c).

Table 2 presents daily emission estimates for each proposed project construction activity and peak daily emissions due to the simultaneous occurrence of these activities, as determined from the proposed project construction schedule. Peak daily emissions of VOC, CO, NOx, and SOx would occur during the following simultaneous activities: construct sailing center building, construct storage/workshop, construct

boat storage, and install utilities. Peak daily emissions of PM_{10} and $PM_{2.5}$ would occur during site preparation. Table 3 presents the daily emission estimates for proposed project operations. The data in Tables 2 and 3 show that proposed project emissions would not exceed any SCAQMD daily emission significance threshold. As a result, construction and operational activities would not result in a cumulatively considerable net increase of a nonattainment pollutant. Impacts would be less than significant. No mitigation is required.

Table 3. Daily Emissions from Operation of the Proposed Project

Source	*Emissions (Pounds per day)*					
	VOC	**CO**	**NO_x**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
On-Road Vehicles	1.4	14.0	3.3	0.0	2.6	0.1
Natural Gas-Fired Space/Water Heaters	0.0	0.0	0.0	0.0	0.0	0.0
Architectural Coatings	0.0	0.0	0.0	0.0	0.0	0.0
Consumer Products	0.1	0.0	0.0	0.0	0.0	0.0
Landscaping	0.0	0.0	0.0	0.0	0.0	0.0
Peak Daily Emissions	**1.5**	**14.0**	**3.3**	0.0	**2.6**	**0.1**
SCAQMD Daily Significance Thresholds	**55**	**550**	**55**	**150**	**150**	**55**

Although proposed project construction would produce less than significant impacts under criterion (c), the proposed project construction contractor would be subject to the requirements of the *Los Angeles Harbor Department Sustainable Construction Guidelines for Reducing Air Emissions* (LAHD 2009). These guidelines include measures to reduce construction emissions from off-road equipment, on-road trucks, and fugitive dust. The LAHD would determine the applicable BMPs once the contractor identifies and secures a final equipment list and project scope.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. Some members of the population are especially sensitive to air pollutant emissions and should be given special consideration when evaluating air quality impacts from projects. These members of the population include children, older adults, persons with preexisting respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Structures that house these persons or places where they gather are defined as sensitive receptors by the SCAQMD. According to SCAQMD, sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

Residential areas are considered sensitive to air pollution because people (including children and older adults) typically reside at home for extended periods of time and, therefore, have the potential to experience sustained exposures to these pollutants. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent for the majority of the workers who tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

People who reside on boats (liveaboards) within the East Basin marinas represent sensitive receptors who are the closest to the project site. The distance between the nearest liveaboard and the project site boundary is approximately 250 feet (see Section 4.12, Noise). No other sensitive receptors occur in proximity to the project site.

Construction of the proposed project would not exceed the SCAQMD significance thresholds evaluated under criteria 4.3(b) and 4.3(c) above and, therefore, by definition, would not expose nearby sensitive receptors to substantial criteria pollutant concentrations. The greatest potential for public exposure to project toxic air contaminants (TACs) would occur from emissions of diesel particulate matter (DPM) generated by the operation of heavy equipment during proposed grading and excavation activities. Health effects from DPM are evaluated on the basis of (1) annual non-cancer effects and (2) 70 year or lifetime cancer risks. Given that proposed construction would generate only a nominal amount of DPM over a period of nine months, proposed project construction would not expose the public to substantial health effects. Operation of the proposed project would produce only a nominal amount of criteria pollutants and TACs. Therefore, project operations would not expose sensitive receptors to substantial pollutant concentrations or health effects. Impact would be less than significant. No mitigation is required.

The ARSSS is located across Shore Road from the project site. As highlighted in the Phase I/Limited Phase II Environmental Site Assessment (ESA) (Locus 2010), previous surveys recommended management of soil particulates and dust control at all times from the ARSSS. Specifically, the LAHD will implement a soil particulate management and dust control program following closure of the ARSSS in late 2011. While the proposed project would introduce sensitive receptors (youths) to a location adjacent to the ARSSS, operation of the proposed project would not occur until this soil particulate and dust control program at ARSSS is in place.

As discussed in Section 2.2.2, the LAHD conducted an HRA for the ARSSS that included collection and analyses of ambient air samples at six locations near the site and evaluated the potential for TACs to impact nearby sensitive receptors (Tetra Tech 2006, 2008). Due to the presence of liveaboards in the nearby marina, the HRA was based on residential exposures. The HRA indicated that the maximum individual cancer risks were less than one in one million and the acute and chronic hazard indices were less than the threshold limit of 1. The HRA concluded that TACs generated from the ARSSS were not likely to cause adverse impacts to the surrounding receptors, which would include the location of the proposed project site. However, as mentioned above, the report recommended that the LAHD implement more effective dust control measures at the ARSSS.

e) Create objectionable odors affecting a substantial number of people?

Less than Significant Impact. The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies.

Proposed construction activities would produce odorous emissions due to the combustion of diesel fuel in heavy equipment. Some individuals may find diesel combustion emissions to be objectionable in nature, although quantifying the odorous impacts of these emissions to the public is difficult. However, it is expected that the mobile and intermittent nature of most project diesel-powered sources and the distance between these sources and the nearest sensitive receptors (about 250 feet) would adequately disperse combustive emissions to below objectionable odor levels prior to contact with the public. Construction may require treatment and disposal of soils contaminated with VOC compounds. This activity would comply with the requirements of SCAQMD Rule 1166 and would minimize potential odors to acceptable levels. Operation of the proposed project would produce only a nominal amount of air pollutants and resulting odorous emissions. As a result, proposed construction and operations would not create objectionable odors affecting a substantial number of people. The impact would be less than significant. No mitigation is required.

4.4 Biological Resources

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
4. BIOLOGICAL RESOURCES. Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	❑	■	❑	❑
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	❑	❑	❑	■
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	❑	❑	❑	■
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	❑	❑	❑	■
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	❑	❑	❑	■
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	❑	❑	❑	■

Would the Project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less than Significant Impact with Mitigation Incorporated. The project site consists of a small (less than one acre), unpaved lot that is currently used as a storage facility for boats and vehicles and the adjacent marina. The project site is zoned for industrial uses ([Q]M3-1), and it does not provide suitable habitat for any sensitive or special status species. LAHD conducted biological baseline surveys of the Port area in 1988, 2000, and 2008 (MEC 1988, MEC 2002, SAIC 2010). These surveys evaluated the distribution and abundances of adult and juvenile fish; ichthyoplankton; benthic invertebrates; riprap associated organisms; kelp and macroalgae surface canopy; eelgrass; birds; and various exotic species. Several candidate, sensitive, or special status species have been identified in the Port area. However, none of these occur in the vicinity of the project site. A search of the California Natural Diversity Database was conducted, and none of the candidate, sensitive, or special status species likely occur at the project site or use the site as habitat. Therefore, the proposed project would not cause impacts to candidate, sensitive, or special status species or the habitat of these species.

As discussed in Section 4.12 (Noise), use of a vibratory hammer for installation of new dock pilings is expected to result in temporary increases in underwater noise levels with the potential to adversely affect marine organisms in the immediate vicinity of the in-water activities. However, these risks would be mitigated by implementing mitigation measure MM BIO-1 listed below.

Mitigation Measure

MM BIO-1: Monitoring In-Water Noise Impacts to Biological Resources. A qualified biologist shall monitor the marina area in the vicinity of pile driving activities for any fish kills during pile driving. If there is evidence of fish kills, pile driving shall be halted and the USACE and NMFS shall be notified via the Port's Environmental Management Division. The biological monitor shall also note (surface scan only) whether marine mammals are present within 300 feet of the pile driving and, if any are observed, temporarily halt pile driving until the mammal(s) moves beyond this distance. At the initiation of each pile driving event, the pile driving shall also employ a "soft-start" in which the hammer is operated at less than full capacity (i.e., approximately 40–60 percent energy levels) with no less than a 1-minute interval between each strike for a 5-minute period.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?

No Impact. The project site does not support riparian habitat or other sensitive natural communities. There are no eelgrass or kelp beds within the marina or portions of East Basin where sailing exercises would be conducted (SAIC 2010). As such, no impacts to riparian habitat or sensitive natural communities would occur as a result of the proposed project. No mitigation is required.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The project sits does not contain federally protected wetlands as defined by CWA Section 404. The closest wetland is a small, approximately 1.5 acre area adjacent to the northern boundary of the ARSSS (LAHD 2009). Proposed construction activities would be confined to the immediate project site. Proposed project operations, including sailing exercises, would be conducted in the immediate area of the marina and adjacent portions of East Basin, and no activities would occur within or near wetlands. The proposed project would replace an existing boat dock, and construct a new boat launch ramp, but it would not place fill or otherwise cause changes to hydrological patterns in the harbor. Thus, the proposed project would not affect this or any other federally protected wetlands as defined by Section 404 of the CWA. No mitigation is required.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact. Los Angeles and Long Beach Harbors provide habitat for foraging, resting, and breeding by numerous bird species. The recent baseline surveys documented a total of 96 species representing 30 families within the Ports during 2008 (SAIC 2010). Of these, 68 species are dependent on marine habitats. Species numbers varied seasonally, with a greater variety of birds present in fall and winter and fewer species during summer, consistent with large-scale migratory patterns. Bird abundance was more variable and was attributed to differences in bird migratory patterns and nesting activities. Bird abundance along the southern California coast typically follows a seasonal pattern, with the greatest numbers of individuals and species occurring during fall and winter. During the baseline surveys, the highest numbers of birds occurred in the Long Beach West Basin and main shipping channel of Los

Angeles Harbor, whereas bird counts were approximately an order of magnitude lower at small basin and channel zones at inner harbor locations. The Inner Harbor is not considered important foraging habitat for California Least Tern (*Sternula antillarum browni*).

The project site currently is unpaved, but it does not support any vegetation or contain habitat suitable for wildlife species and it is not used by native resident or migratory species for movement or nursery purposes. The proposed project would not construct any structures that would interfere with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. As such, no impacts related to the movement of wildlife species or the use of wildlife nursery sites would occur from implementation of the proposed project. No mitigation is required.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The City Los Angeles protects certain tree species by requiring a permit for removal or relocations (City of Los Angeles 2011). The protected trees are: Oak trees including Valley Oak (*Quercus lobata*) and California Live Oak (*Quercus agrifolia*), or any other tree of the oak genus indigenous to California but excluding the Scrub Oak (*Quercus dumosa*), Southern California Black Walnut (*Juglans californica* var. *californica*), Western Sycamore (*Platanus racemosa*) and California Bay (*Umbellularia californica*). The project site is located in an industrialized region of the City of Wilmington. Minimal vegetation presently occurs at the project site, and vegetation in surrounding area consists mainly of common weedy, ruderal species growing out through cracks in the asphalt and/or introduced landscaping species. The project site does not contain any species listed in the tree preservation policy or ordinance. As such, the proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. No mitigation is required.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The County of Los Angeles has established Significant Ecological Areas (SEAs) to preserve a variety of biological communities for public education, research, and other non-disruptive outdoor uses. The only designated SEA in Los Angeles Harbor is Pier 400, Terminal Island for the California least tern nesting site (County of Los Angeles 2011). Construction and operation of the proposed project would not interfere with tern nesting sites at Pier 400.

Habitat Conservation Plans (HCPs) are designed to conserve and protect federally listed and unlisted species while allowing for development activities. They are developed by any non-Federal landowner in cooperation with the United States Fish and Wildlife Service when certain project activities may result in the take of a listed species. There are no HCPs currently in place at the project location (USFWS 2010).

The Natural Community Conservation Planning (NCCP) program of the California Department of Fish and Game takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. An NCCP identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. The nearest NCCP to the project site is the Palos Verdes Peninsula Sub-Regional Plan. This plan intends to protect coastal sage scrub and does not include Port lands.

Further, the proposed project would not conflict with the provisions of an adopted HCP or other approved local, regional, or state HCP. Neither the project site nor any adjacent areas are included as part of an NCCP. There are no marine protected areas or areas of special biological significance in the project vicinity. As such, no impacts related to natural community conservation plans would occur. No mitigation is required.

4.5 Cultural Resources

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES. Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?	❑	❑	❑	■
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	❑	■	❑	❑
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	❑	■	❑	❑
d. Disturb any human remains, including those interred outside of formal cemeteries?	❑	❑	❑	■

No formal cultural resources field survey was conducted as part of the proposed project evaluation. Instead, photographs of the project site were examined. A review of 1928 aerial photographs compared to later photographs indicate that the project site is located on artificial fill, which limits the potential for any cultural, historical, archeological, or paleontological resources. The project site currently is an unpaved lot with a soil and gravel surface. There are no existing structures of historic age on-site or adjacent to the project site.

Would the Project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

No Impact. There are no existing structures of historic age on-site or adjacent to the project site. As there are no historic-age structures on the site, the proposed project would not have an impact to any known historic or historic-aged structures. No mitigation is required.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant Impact with Mitigation Implemented. The land portion of the project site consists of artificial fill. No native soils are expected to be present. Therefore, no archaeological resources are likely to be present on the site or in context and the proposed project would not have an impact to any known archaeological resources.

While no impacts are expected, there is a remote possibility of encountering cultural resources during site grading and excavation for utilities. Implementation of mitigation measure MM CUL-1, listed below, would require that should any evidence of cultural resources be observed during grading or excavation, the construction contractor would immediately cease work in the location of the observation, redirect work to another location, and ensure that the mitigation measure is implemented. With the implementation of mitigation measure MM CUL-1, the proposed project would have a less than significant impact on archaeological resources.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact with Mitigation Implemented. The project site is composed of artificial fill. No fossil bearing formations are expected to be present, unless they were present as part of the dredged material used to create the fill. Therefore, no paleontological resources are likely to be present on the site, and the proposed project would not impact any known paleontological resources.

While no impacts are expected, there is a remote possibility of encountering paleontological resources during site grading and excavation for utilities. Implementation of mitigation measure MM CUL-2, listed below, would require that should any evidence of paleontological resources be observed during grading or excavation, the construction contractor would immediately cease work in the location of the observation, redirect work to another location, and ensure that the mitigation measure is implemented. With the implementation of mitigation measure MM CUL-2, the proposed project would have a less than significant impact on archaeological resources.

d) Disturb any human remains, including those interred outside of formal cemeteries?

No impact. No formal cemeteries or other places of human internment are known to exist in the project site. The project site consists of artificial fill. Therefore, no human remains are expected to be present on the project site, and the proposed project would not impact any known human remains. No impacts would occur and no mitigation is required.

Mitigation Measures

MM CUL-1: If evidence of cultural resources is encountered during construction, an archaeological monitor shall be required for all subsequent ground-disturbing activities in the vicinity of the observation, and in the event any cultural resources are encountered during earthmoving activities, the construction contractor shall cease activity in the affected area until the discovery can be evaluated by the cultural resources specialist in accordance with the provisions of CEQA §15064.5. The archaeologist shall complete any requirements for the mitigation of adverse effects on any resources determined to be significant and implement appropriate treatment measures. A report and inventory would be submitted to Environmental Management Division of LAHD along with confirmation of the curation of recovered specimens into an established, accredited museum repository

MM CUL-2: If evidence of paleontological resources is encountered during construction, paleontological monitoring shall be required during all subsequent ground disturbing activities in the vicinity of the observation and, in the event any paleontological resources are encountered during earthmoving activities, the construction contractor shall cease activity in the affected area until the discovery can be evaluated by the qualified paleontological resources specialist in accordance with the provisions of CEQA §15064.5.

- Monitoring shall include the inspection of exposed surfaces and microscopic examination of matrix in potential fossil bearing formations. In the event microfossils are discovered, the monitor shall collect the matrix for processing.
- Paleontologic monitors shall be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. If potentially important paleontological resources are discovered, the construction activity within 100 feet of the find shall be diverted and the discovery reported to the construction contractor, the LAHD Inspector, and Environmental Management Division. Monitoring may be reduced if some of the potentially fossiliferous units are determined upon exposure and examination by qualified paleontologic

personnel to have low potential to contain fossil resources or if excavation is determined to be within disturbed or fill sediments.

- In the event paleontological resources are encountered during earthmoving activities, recovered specimens shall be prepared by the paleontologist to a point of identification and permanent preservation.
- Recovered specimens shall be identified and curated into an established, accredited, professional museum repository with permanent retrievable paleontological storage.
- Preparation of a report of findings with an appended itemized inventory of specimens shall be submitted to Environmental Management Division along with confirmation of the curation of recovered specimens into an established, accredited museum repository.

4.6 Geology and Soils

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
6. GEOLOGY AND SOILS. Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	❑	❑	■	❑
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				
ii) Strong seismic ground shaking?				
iii) Seismic-related ground failure, including liquefaction?				
iv) Landslides?				
b. Result in substantial soil erosion, loss of topsoil, or changes in topography or unstable soil conditions from excavation, grading, or fill?	❑	❑	■	❑
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	❑	❑	■	❑
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	❑	❑	■	❑
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	❑	❑	❑	■

Would the Project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. The project site is located within the Los Angeles Coastal Plain of the Peninsular Ranges geomorphic province of southern California, which is a seismically active region. The distance to the nearest fault, identified in the Parcel Profile Report (Appendix A), is 0.5 mile. The Safety Element of the City of Los Angeles General Plan (City of Los Angeles 1996) does not identify the project site as located within an Alquist-Priolo Earthquake Fault Zone or in a Fault Rupture Study Area (Figure 9). Therefore, no impacts would occur related to the risk of surface rupture due to faulting. No mitigation is required.

Figure 9. Location of the Fault Rupture Study Area (from the City of Los Angeles Safety Element)

ii) Strong seismic ground shaking?

Less than Significant Impact. As noted in Section 4.6a(i), several earthquake faults are located within the boundaries of the Port, although none of these faults are designated as a Special Study Zone under the Alquist-Priolo Earthquake Zoning Act (City of Los Angeles 1994). Regardless, the proposed project could experience effects of ground shaking resulting from activity on southern California fault systems.

The seismic hazards common to the area and characteristic of baseline conditions would not be increased by construction or operation of the proposed project. However, because strands of active faults are located near the project area, and the area is mapped within an area of historic liquefaction, there is a potential for substantial risk of seismic impacts. Incorporation of modern construction engineering and safety standards and compliance with building codes adopted by the local regulatory bodies would minimize impacts due to seismically induced ground shaking. The probability of an earthquake large enough to damage structures occurring during the construction phase is considered to be low.

During operations, the modern construction of buildings and other structures would reduce the risk of injury to on-site personnel in the event of an earthquake. Emergency planning and coordination also would contribute to reducing injuries during a seismic event. With incorporation of emergency planning and compliance with current building regulations, impacts due to seismically-induced ground failure would be less than significant. No mitigation is required.

iii) Seismic-related ground failure, including liquefaction?

Less than Significant Impact. Liquefaction is the process in which saturated silty to cohesionless soils below the groundwater table temporarily lose strength during strong ground shaking as a consequence of increased pore pressure during conditions such as those caused by an earthquake. Earthquake waves cause water pressures to increase in the sediment and the sand grains to lose contact with each other, leading the sediment to lose strength and behave like a liquid.

As stated previously, seismic activity along mapped local and regional faults could potentially produce ground shaking, liquefaction, or other seismically induced ground failure. Specifically, the Safety element of the City of Los Angeles General Plan identifies the proposed project site as an area susceptible to liquefaction in (City of Los Angles 1996) (Figure 10). The project site was constructed from fill materials between 1928 and 1947 (Locus 2010). The land portion of the project site is at an elevation of approximately 5 feet above mean sea level (Locus 2010). Due to its proximity to the harbor, groundwater levels are expected to be at or near sea level and tidally influenced. The County of Los Angeles also maintains a series of water injection wells and monitoring wells to the north of the project site as part of its sea water intrusion barrier (Locus 2010).

All new structures are subject to City building and safety guidelines, restrictions, and permit regulations. These regulations and guidelines include requirements for structure design that address safety and stability on sites potentially at risk of liquefaction. Adherence to these requirements would result in less than significant impacts related to liquefaction. No mitigation is required.

iv) Landslides?

No Impact. Landslides occur when masses of rock, earth, or debris move down a slope. Landslides are caused by disturbances in the natural stability of a slope. They can accompany heavy rains or follow droughts or earthquakes. Construction activities such as grading can accelerate landslide activity.

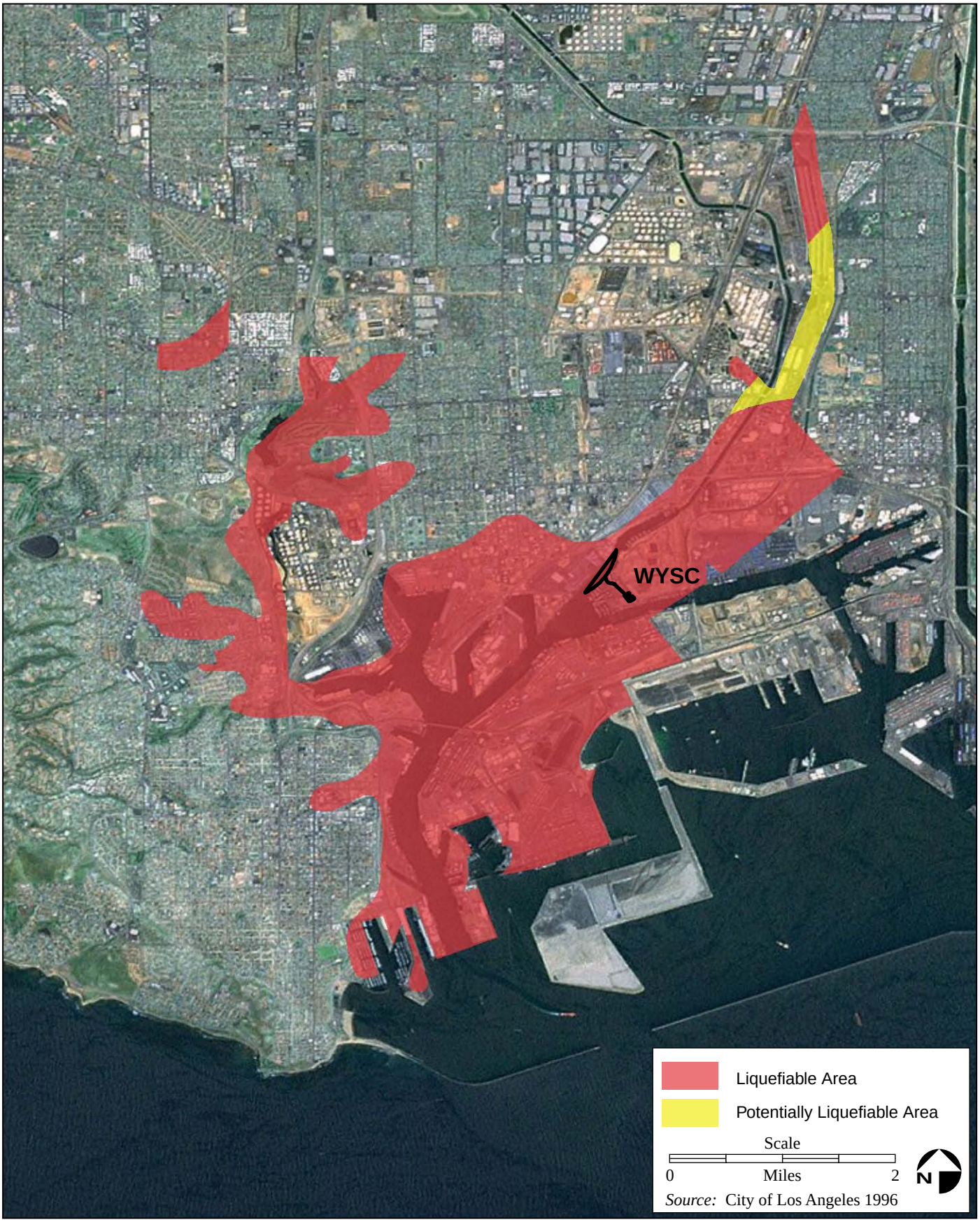

Figure 10. Areas Susceptible to Liquifaction (from the City of Los Angeles Safety Element)

The project site is relatively flat with no significant natural or graded slopes. According to the City of Los Angeles Safety Element (City of Los Angles 1996), the project site is not located within an area susceptible to landslides (Figure 11). Accordingly, the potential for seismically induced landslides in the proposed project site is considered remote. As such, no impacts would occur and no mitigation is required.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact.

Construction

Construction of the proposed project would result in ground surface disturbance during excavation and grading that could temporarily increase the potential for erosion to occur. The proposed project would not be subject to the requirements of the General Permit for Discharges of Stormwater Associated with Construction Activity, General Construction Permit 2009-0009-DWQ (USEPA 2005, SWRCB 2010) because the land portion of the project is less than one acre. The General Construction Permit outlines a set of provisions that would comply with the requirements of the NPDES stormwater regulations. This also requires the development and implementation of a SWPPP, which specifies BMPs aimed at controlling construction-related pollutants that originate from the site as a result of construction-related activities. These BMPs include measures for temporary soil stabilization (e.g. hydroseeding and slope drains); temporary sediment control (e.g. silt fence; storm drain protection; and wind erosion control); and tracking control (e.g. stabilized construction entrance/exit) (SWRCB2010).

Although the proposed project would not be subject to the requirements of the General Permit, the construction contractor would be expected to implement appropriate BMPs to prevent erosion or offsite transport of soils from the project site per Port construction specifications. Further, the construction phase for which site soils would be subject to erosion is expected to be temporary (approximately one month) and occur in later summer (September), when typical rainfall amounts are minimal. These conditions would result in a less than significant impact. No mitigation is required.

Operation

Long-term operation of the proposed project would not result in substantial soil erosion or loss of topsoil because, with the exception of some landscaping, the project site would be mostly developed with structures and/or covered by pavement. Implementation of appropriate BMPs, and compliance with the requirements of the NPDES Stormwater Program, City of Los Angeles Municipal Code, and all other applicable federal, state, and local regulations prior to proposed project approval would result in a less than significant impact. No mitigation is required.

c) Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less than Significant Impact. As discussed in Section 4.6(a)(iv) above, the project site is not located within an area susceptible to landslides, although it is in an area that is susceptible to liquefaction (City of Los Angles 1996). All new structures would be subject to City building and safety guidelines, restrictions, and permit regulations. Adherence to these requirements would result in less than significant impacts related to unstable geologic units or soils. No mitigation is required.

Figure 11. Areas Susceptible to Landslides (from the City of Los Angeles Safety Element)

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less than Significant Impact. Expansive soils are clay-based soils that tend to expand (increase in volume) as they absorb water and shrink (lessen in volume) as water is drawn away. Expansive soils can occur in any climate; however, arid and semi-arid regions are subject to more extreme cycles of expansion and contraction than more consistently moist areas. The hazard associated with expansive soils lie in the structural damage that may occur when buildings are placed on these soils. Expansive soils are often present in liquefaction zones due to the high level of groundwater typically associated with liquefiable soils.

The soil at the project site consists primarily of sand and silty sand (Locus 2010). As part of the design phase, a qualified geotechnical engineer would evaluate the expansion potential associated with on-site soils. The recommendations of the engineer would be incorporated into the design specifications for the proposed project, consistent with City design guidelines, including Sections 91.000 through 91.7016 of the City of Los Angeles Municipal Code.

All new structures are subject to City building and safety guidelines, restrictions, and permit regulations. Compliance with the existing regulations and utilization of a site-specific geotechnical investigation during the design phase would minimize risk relating to expansive soil. Impacts would be less than significant. No mitigation is required.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The proposed project would connect with the existing sewer system for the disposal of wastewater, and the use of septic tanks or other alternative wastewater disposal systems would not be necessary. The proposed project would install a new stormwater outfall that would be used to discharge runoff to the marina. Therefore, no impacts associated with use of wastewater disposal systems would occur. No mitigation is required.

4.7 Greenhouse Gas Emissions

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
7. GREENHOUSE GAS EMISSIONS: Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	❑	❑	■	❑
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	❑	❑	■	❑

Certain gases in the earth's atmosphere, classified as greenhouse gases (GHG), play a critical role in determining the earth's surface temperature. A portion of the solar radiation that enters the atmosphere is absorbed by the surface of the earth and a portion of this energy is reflected back towards space as infrared radiation. This infrared radiation released from the earth that otherwise would escape back into space is instead absorbed or "trapped" by GHGs, resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on Earth.

Greenhouse gases occur in the atmosphere due to natural and human sources or form by secondary reactions in the atmosphere. The most common GHGs emitted from natural processes and human activities include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Examples of GHGs created and emitted primarily through human activities include fluorinated gases (hydrofluorocarbons and perfluorocarbons) and sulfur hexafluoride. Each GHG is assigned a global warming potential (GWP), which is the ability of a gas or aerosol to trap heat in the atmosphere. The GWP rating system is standardized to CO_2, which has a value of one. For example, CH_4 has a GWP of 21, which means that it has a global warming effect 21 times greater than CO_2 on an equal-mass basis. Total GHG emissions from a source are often reported as a CO_2 equivalent (CO_{2e}). The CO_{2e} is calculated by multiplying the emission of each GHG by its GWP and adding the results together to produce a single, combined emission rate representing all GHGs.

Scientific evidence indicates a trend of increasing global temperature over the past century due to an increase in GHG emissions from human activities. The climate change associated with this global warming is predicted to produce negative economic and social consequences across the globe. Recent observed changes due to global warming include shrinking glaciers, thawing permafrost, a lengthened growing season, and shifts in plant and animal ranges (IPCC 2007). Other, longer-term, environmental impacts of global warming include sea level rise, changing weather patterns with increases in the severity of storms and droughts, changes to local and regional ecosystems including the potential loss of species, and a significant reduction in winter snow pack (for example, estimates include a 30 to 90 percent reduction in snowpack in the Sierra Mountains). Current data suggest that in the next 25 years, in every season of the year, California would experience unprecedented heat, longer and more extreme heat waves, greater intensity and frequency of heat waves, and longer dry periods. More specifically, Cayan et al (2009) predicted that California could witness the following events:

- Temperature rises between 3-10.5°F;
- 6 to 20 inches or more of sea level rise;

- 2 to 4 times as many heat wave days in major urban centers;
- 2 to 6 times as many heat related deaths in major urban centers;
- 1 to 1.5 times more critically dry years; and
- 10 to 55 percent increase in the expected risk of wildfires.

Would the Project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact. Proposed project activities would generate GHGs from the same fossil fuel-powered sources as those evaluated for criteria pollutants in Section 4.3, including (1) construction sources of heavy equipment, haul trucks, and worker vehicles and (2) operational sources of on-road vehicles that access the project site and landscaping activities. The GWP produced from proposed project sources would occur primarily in the form of CO_2. While proposed project activities also would emit CH_4 and N_2O, which have larger GWPs in comparison to CO_2, their proposed emission levels are too low to contribute more than a few percent to the total proposed project CO_2e.

Emission factors used to estimate GHG emissions were obtained from the ARB 2011 Inventory Model for Off-Road Diesel Equipment, EMFAC 2011 model for on-road trucks, and CalEEMod. Appendix B documents the methods used to estimate GHGs from proposed construction and operational activities.

To date, the City of Los Angeles has not established a threshold to determine whether project-specific emissions of GHGs would have a significant impact on the environment. The SCAQMD has adopted an interim CEQA significance threshold of 10,000 metric tons per year of CO_2e for industrial projects where SCAQMD is the lead agency (SCAQMD 2008). The SCAQMD also is in the process of participating in statewide efforts and working with stakeholders to develop GHG CEQA significance thresholds for the evaluation of residential and commercial projects. Therefore, for purposes of this IS/MND, this analysis used the SCAQMD GHG threshold identified above to evaluate proposed project GHG emissions under CEQA (SCAQMD 2011b). Consistent with SCAQMD guidelines, construction emissions for the proposed project are amortized over the life of the project (defined as 30 years), added to operational annual emissions, and then compared to this threshold (SCAQMD 2008). If estimated GHG emissions remain below this threshold, they would be expected to produce less than significant impacts to GHG levels.

Table 4 presents an estimate of annual GHG emissions that would occur from proposed project construction and operation activities. The values represent total construction GHG emissions amortized over 30 years. Table 4 shows that annual GHG emissions generated by the proposed project would not exceed 10,000 metric tons per year of CO_2e. Therefore, GHG emissions from proposed construction and operations would not have a significant impact on the environment. No mitigation is required.

Table 4. Annual GHG Emissions – WYSAC Project

Activity	*Metric Tons per Year* CO_2e
Total Construction GHGs (30 Year Amortized)	1.9
Annual Operational GHGs	306.9
Combined Project GHGs	**308.8**
SCAQMD Annual Significance Threshold	**10,000**
Note: CO_2e = (CO_2 * 1) + (CH4* 21) + (N2O * 310)	

In addition to estimating whether the proposed project would impact climate change, the following considers how climate change could impact the proposed project and what adaptation strategies, if any, would be required to respond to these future conditions. For LAHD projects, the main effect of climate change to consider is sea level rise. The potential effects of sea level rise are discussed in Section 4.9 (Hydrology and Water Quality).

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases?

Less than Significant Impact. In September 2006, Governor Schwarzenegger signed AB 32, the California Global Warming Solutions Act of 2006. AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and it establishes a cap on statewide GHG emissions. It requires that statewide GHG emissions be reduced to 1990 levels by 2020. In October 2008, ARB published its *Climate Change AB 32 Scoping Plan*, which is the State's plan to achieve the GHG reductions required by AB 32. The Scoping Plan was approved by ARB on December 11, 2008.

In addition to reducing statewide GHG emissions to 1990 levels by 2020, AB 32 directed ARB to develop a Scoping Plan and identify a list of early action GHG reduction measures. In June 2007, ARB approved a list of 37 early action measures, including three discrete early action measures (Low Carbon Fuel Standard, Restrictions on High Global Warming Potential Refrigerants, and Landfill Methane Capture). Discrete early action measures are required to be adopted as regulations and made effective no later than January 1, 2010, the date established by Health and Safety Code (HSC) Section 38560.5. The early action items focus on industrial production processes, agriculture, and transportation sectors. Early action items are either not specifically applicable to the proposed project or would not result in a reduction of GHG emissions associated with the proposed project.

The *Climate Change AB 32 Scoping Plan* includes measures that would indirectly address GHG emission levels associated with the proposed project construction and operations, such as the phasing-in of cleaner technologies for diesel engine fleets (including construction equipment) and the development of a Low Carbon Fuel Standard. Policies formulated under the mandate of AB 32 that are applicable to the proposed project, either directly or indirectly, are assumed to be implemented by the beginning of proposed construction. Therefore, it is assumed that the proposed project would not conflict with the *Scoping Plan*.

In May 2007, the City of Los Angeles Mayor's Office released the Green LA Plan, which is an action plan to lead the nation in fighting global warming. The Green LA Plan presents a citywide framework for confronting global climate change to create a cleaner, greener, sustainable Los Angeles. The Green LA Plan directs the Port to develop an individual Climate Action Plan, consistent with the goals of Green LA, to examine opportunities to reduce GHG emissions from Port operations. In accordance with this directive, the LAHD prepared a Harbor Department Climate Action Plan (December 2007) that details GHG emissions related to municipally-controlled Port activities (such as Port buildings and Port workforce operations) and outlines current and proposed actions to reduce GHGs from these operations. The Port is a founding member of The Climate Registry (TCR). The LAHD completed annual GHG emissions inventories for LAHD-controlled operations beginning in 2006, and they submitted annual GHG inventories for trucks, ships, and rail to TCR (formerly the California Climate Action Registry) beginning in 2008 for year 2006. The LAHD is developing a Sustainability Plan in accordance with the Mayor's Office Directive that will incorporate Port environmental programs and reports, including the Port's Climate Action Plan.

The proposed project building construction would achieve a LEED sliver certification and would incorporate measures that increase energy efficiency and conserve water resources, consistent with the goals of the *Scoping Plan*. The proposed project would not conflict with the General Plan, the *AB 32 Scoping Plan*, or any other plans, policies or regulations for the purpose of reducing GHG emissions. Neither the County nor any other agency with jurisdiction over the proposed project has adopted climate change or GHG reduction measures with which the proposed project would conflict. The impact would be less than significant, and no mitigation is required.

4.8 Hazards and Hazardous Materials

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
8. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	❑	❑	■	❑
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	❑	❑	■	❑
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	❑	❑	■	❑
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	❑	❑	❑	■
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	❑	❑	❑	■
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	❑	❑	❑	■
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	❑	❑	■	❑
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	❑	❑	❑	■

Would the Project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact.

Construction

Construction activities for the proposed project would not involve or require routine transport, use, or disposal of hazardous materials or substances. Requirements for the on-site fueling/servicing of construction equipment, and the transport of fuels, lubricating fluids, and solvents would be temporary and minimal. These types of materials are not acutely hazardous, and all storage, handling, and disposal

are regulated by the DTSC, USEPA, the Occupational Safety & Health Administration (OSHA), the Los Angeles Fire Department (LAFD), and the Los Angeles County Health Department. Transport, use, and disposal of construction-related hazardous materials or substances would conform with all applicable local, federal, state, and local regulations governing such activities.

A Phase I/Limited Phase II ESA (Locus 2010) of the project site was prepared in 2010. The purpose of the Phase I ESA was to identify recognized environmental conditions (REC) associated with historical uses of the property. A REC is defined as "…the presence or likely presence of any hazardous substances or petroleum products on a property that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property." This definition does not include "*de minimis* conditions that generally do not pose a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate government agencies" (ASTM 2005).

The Phase I ESA determined that two wells and an aboveground storage tank were present historically at the project site. Both wells have been plugged (Locus 2010). A review of public records determined that the project site is not listed in any government environmental databases, such as EnviroStor and GeoTracker, and it is not located within 1,000 feet of any site identified in the Environmental Data Resources (EDR) Report. The project site is within the City of Los Angeles-designated Methane Zone, which is an area identified as a potential methane hazard site due to its proximity to methane gas sources, such as oil wells and oil fields. The project site is approximately 0.5 mile south of the Consolidated Slip, which has contaminated sediments that are impacted by historical operations at the Montrose NPL site and loadings from the Dominguez Channel and associated watershed.

The Limited Phase II ESA determined that soils deeper than 1 foot bgs at the project site are likely to be contaminated with TPH in the diesel and motor oil ranges. During the Limited Phase II ESA (Locus 2010), TPH as motor oil (TPH-MO) was present at concentrations from 25 to 230 mg/kg in soils from depths of 1 foot bgs at three of five locations, and at concentrations from 760 to 2,000 mg/kg in soils from 5 feet bgs at three locations. TPH as diesel (TPH-d) also was detected in soils from three locations on the project site; similar to TPH-MO, concentrations of TPH-d in soils 5 feet bgs (330 to 1,700 mg/kg) were higher than in soils from 1 foot bgs (nondetect to 27 mg/kg). The concentrations of TPH-MO and TPH-d in site soils are below the maximum soil screening levels (for non-drinking water aquifers) in the LARWQCB Interim site Assessment and Cleanup Guidelines. TPH as gasoline and BTEX were not detected in site soils. Acetone and carbon disulfide were detected at low levels in soils from two locations, but were not detected in soil gas samples. However, acetone levels were above the POLA soil import standard, and this should be considered if soil is to be re-used. No other VOCs were detected in soil samples (Locus 2010). Previous surveys (CH2M Hill 2002) demonstrated that the project site soils do not contain PCBs. Concentrations of Title 22 metals in site soils were below hazardous thresholds for disposal purposes and below POLA import/reuse standards, and all metals except arsenic were below the California Human Health Screening Levels (CHHSLs; CalEPA 2005). Natural background concentrations of arsenic in California are often well above the health-based, direct-exposure goals in soil of 0.07 mg/kg for residential land use and 0.24 mg/kg for commercial/industrial land use (e.g., Bradford et al. 1996).

The Phase I ESA soil gas testing confirmed that methane gas is present at the site. Specifically, methane was present in soil gas from two locations at concentrations of 15 percent LEL and 4 percent LEL. At these levels, methane gas mitigation systems must be incorporated into the design of any paved area or inhabited structure on the site as required by City of Los Angeles Municipal Code, Section 91.106.4.1 and Division 71 of Article 1, Chapter IX (Locus 2010). Carbon monoxide was present at concentrations from 31 to 263 parts per million (ppm). Total petroleum hydrocarbons-gas range organics were detected in two

soil gas samples at concentrations of 10 µg/L and 9.6 µg/L, but these levels do not appear to be a significant environmental concern. No hydrogen sulfide or VOCs were detected in soil gas, indicating that VOCs in soil gas are not a significant concern at the site (Locus 2010).

During construction of the proposed project, site preparation would require scraping and grading the upland portion of the site, which would expose buried soils. Based on results from the ESA, grading and excavations for the building foundation and installation of utilities would be expected to encounter some residual petroleum-related contamination, and the magnitude of contamination is expected to be comparatively greater in the deeper layers than in the near-surface layers. The results of soil sampling conducted during the Limited Phase II ESA will be used to identify areas where suspected contaminated soil may be encountered during construction. Additionally, soils encountered during grading or trenching that appear to be stained or discolored, or determined by on-site monitoring devices to have organic contaminants, would be stockpiled, tested for contaminants, and, if contaminant levels preclude reuse on-site, disposed of at a permitted facility (which would depend on the magnitude of contamination). Therefore, it is possible that some transport of contaminated soils from the site to a permitted disposal facility would be required. However, comparisons of the maximum detected values for individual analytes reported in the ESA to the corresponding screening levels and preliminary remediation goals (PRGs) indicate that soil contaminant levels do not exceed the screening level values for health risks or for hazardous waste thresholds. Also, as discussed in Section 4.3(a), the proposed project would comply with SCAQMD Rules 403 (Fugitive Dust) and 1166 (Volatile Organic Compound Emissions from Decontamination of Soil). Therefore, the proposed project would not increase risks to human health.

Based on results from the ESA, TPH-MO and TPH-d, as well as BTEX, acetone, and carbon disulfide, occur in the groundwater. None of the VOC or BTEX concentrations exceeded the PRG screening values for the potential to migrate to groundwater (based on a 20 times dilution factor). However, if dewatering of the site is required for construction, the extracted groundwater should not be discharged to surface waters or to land without proper profiling and an NPDES permit from the RWQCB, and ingestion or dermal conduct by construction personnel with the groundwater should be avoided (Locus 2010).

The ESA also noted that docks and pilings for the existing boat dock should be assessed for lead-based paint (LBP) and wood preservatives prior to demolition to ensure that the materials are properly handled and disposed of (Locus 2010). Removal and replacement of dock pilings would disturb bottom sediments in the marina. Sediments in adjacent portions of the harbor, notably the Consolidated Slip, to the northeast of the project site, are contaminated with pesticides, including DDT, and other organic and inorganic contaminants. Existing sediment data indicate that sediments just west of the project site also have been impacted by those chemicals. Figure 12 illustrates the locations within the harbor and near the project site that have contaminated sediments.

While sediments in Consolidated Slip, and those adjacent to the project site contain elevated contaminant levels, the sediments are not considered hazardous, and minor disturbances of the sediments during removal and installation of pilings would not result in release of hazardous materials to the environment.

Therefore, short-term construction impacts related to site soils and groundwater, harbor sediments, and docks and pilings would be less than significant when construction activities are conducted in accordance with DTSC, RWQCB, and City requirements. No mitigation is required.

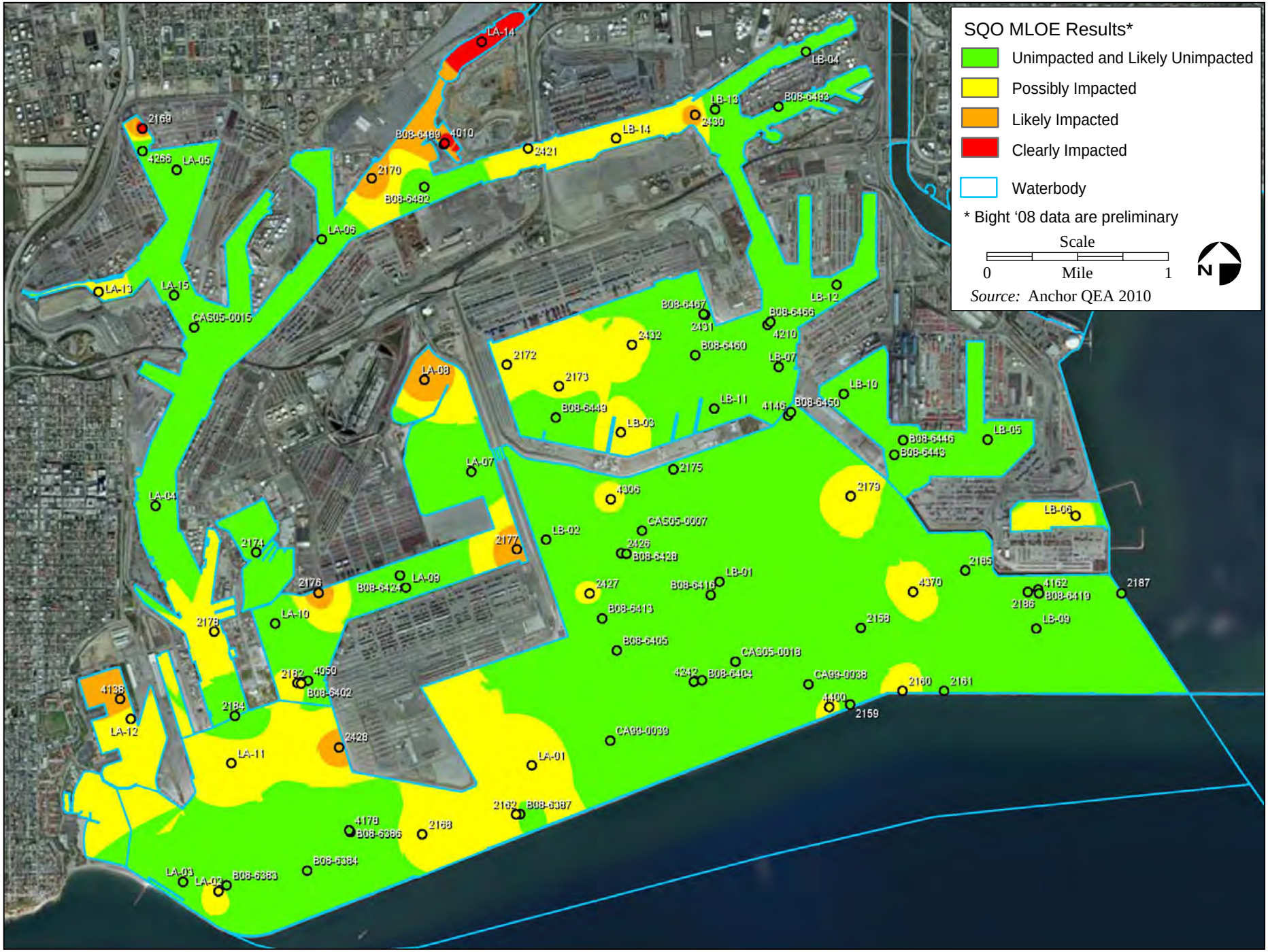

Figure 12. Sediment Quality in the Harbor
Note that sediments in the vicinity of the proposed project are characterized as likely impacted or clearly impacted (from Anchor/QEA 2010)

Operation

Long-term operation of the proposed project would not involve transport, storage, use, or disposal of hazardous materials. The proposed project would operate as a youth sailing center with only small volumes of normal household cleaners, paints, lubricants, and solvents stored on site. These materials would be stored in appropriate and labeled containers in a secure, covered storage facility, used in accordance with manufacturers' instructions, and handled in compliance with applicable standards and regulations. Proposed operations would not generate regulated quantities of hazardous waste, nor would any be hazardous waste be treated onsite. Thus, proposed project operations would not pose a significant hazard to the public or the environment, and impacts would be less than significant. No mitigation is required.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact.

Construction

The proposed project site has REC related to the existing and former operations that occurred on site. As discussed in Section 4.8(a), construction activities would involve limited transport, storage, use, and disposal of hazardous materials, which could include on-site fueling/servicing of construction equipment and the transport of fuels, lubricating fluids, and solvents. However, these activities would be temporary and subject to applicable federal, state, and local health and safety requirements. Construction of the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous material into the environment.

Construction activities would involve the use of equipment that contains oil, gas, or hydraulic fluids that could be spilled during normal usage or during refueling. Construction and demolition activities would be conducted in accordance with standard practices and BMPs in accordance with the Los Angeles Municipal Code (Chapter 5, Section 57, Division 4 and 5; Chapter 6, Article 4). The contractor would develop a hazardous materials management plan if the quantities of hazardous materials handled on-site exceeded the thresholds provided in Chapter 6.95 of the California Health and Safety Code. In this case, hazardous materials would be subject to a release response plan and a hazardous materials inventory**.** Construction activities would also be subject to the LAHD Risk Management Plan, which provides guidance for minimizing or eliminating hazards to vulnerable resources (see Section 2.5.5). Implementation of increased inventory accountability and spill prevention controls associated with this plan and inventory, such as limiting the types of materials stored and size of packages containing hazardous materials, would limit both the frequency and severity of potential releases of hazardous materials, thus minimizing potential health hazards and/or contamination of soil during construction/demolition activities. These measures would reduce the frequency and consequences of spills by requiring proper packaging for the material being shipped, limits on package size, and thus potential spill size, as well as proper response measures for the materials being handled.

As determined by the Phase I and Limited Phase II ESA (Locus 2010), construction activities likely would encounter some soil and groundwater contamination. Soil contaminant concentrations documented in the previous investigation reports are identified as being below hazardous waste thresholds. Regardless, any soils encountered during excavation activities that are discolored, odoriferous, determined by on-site monitoring devices to potentially contain organic contaminants, or that

appear to be of a different composition than typical site soils, would be separately stockpiled, covered, and evaluated by soil sampling and analyses to properly characterize the soil for treatment and/or disposal at a State-permitted, or POLA-approved facility, if needed. Subsurface excavations would be limited to creating foundational supports for buildings and other weight-bearing components of the proposed project, thereby minimizing the chance that construction personnel would be exposed to on-site soil contamination. Disturbances to soils greater than 5 feet bgs only would occur if, based on the findings of the geotechnical evaluation, a pile-supported foundation was used. Also, comparisons of the maximum detected values for individual analytes reported in the ESA to the corresponding screening levels and PRGs indicated that soil contaminant levels do not exceed the screening level values for health risks or for hazardous waste thresholds (Locus 2010). Therefore, construction activities would not release hazardous materials or substances into the environment and impacts would be less than significant. No mitigation is required.

All contaminated soil encountered during construction of the proposed project would be handled, transported, and/or disposed of in accordance with all applicable federal, state, and local laws and regulations and in accordance with the following conditions under LAHD leasing requirements:

Contamination Contingency Plan Lease Requirement. The following contingency plan shall be implemented to address contamination discovered during any future demolition, grading, and construction, conducted by the new Leasee.

a) All trench excavation and filling operations shall be observed for the presence of free petroleum products, chemicals, or contaminated soil. Soil suspected of contamination shall be segregated from other soil. In the event soil suspected of contamination is encountered during construction, the contractor shall notify the LAHD's environmental representative. The LAHD shall confirm the presence of the suspect material and direct the contractor to remove, stockpile or contain, and characterize the suspect material. Continued work at a contaminated site shall require the approval of the LAHD Project Engineer.

b) Excavation of VOC-impacted soil may require obtaining and complying with a SCAQMD Rule 1166 permit.

c) How contaminated media (soil or groundwater) are addressed shall be dependent upon a suite of criteria (including but not limited to the media affected, types of chemical constituents, concentration of the chemicals, health and safety issues, time constraints, cost, etc.) and shall be determined on a site-specific basis.

d) The extent of removal (if necessary) of identified contaminated media shall be determined on a site-specific basis. At a minimum, the impacted area(s) within the confines of the construction area shall be removed to the satisfaction of the LAHD and/or the lead state or local oversight agency for the site, if necessary. The Port Project Manager overseeing removal actions shall inform the contractor when the removal action is complete.

e) Copies of hazardous waste manifests or other documents indicating the amount, nature, and disposition of such materials shall be submitted to the Port Project Manager within 60 days of project completion.

f) In the event that contaminated soil is encountered, all on-site personnel handling or working in the vicinity of the contaminated material must be trained in accordance with USEPA and OSHA regulations for hazardous waste operations or demonstrate they have completed the appropriate training. Training must provide protective measures and practices to reduce or eliminate hazardous materials/waste hazards at the work place.

g) When impacted soil must be excavated, air monitoring shall be conducted as appropriate for related emissions adjacent to the excavation.

h) All excavations shall be backfilled with structurally suitable fill material that is free from contamination.

Site groundwater also is contaminated with petroleum hydrocarbons, volatile organics, and acetone (Locus 2010). Any discharge of groundwater to land or surface harbor water must be under an appropriate NPDES permit. If disposed or treated, the groundwater must be sent to a State-permitted disposal/recycling facility. Permit conditions related to construction activities should address these issues.

Demolition activities could also expose workers to LBP, and/or other hazardous materials (e.g., creosote-treated piles), which could involve potential health hazards. Demolition activities would be carried out in accordance with federal, state, and local regulations regarding management of hazardous wastes, including SCAQMD Rule 1403, Title 40, Code of Federal Regulations (CFR), Title 49, CFR, and California HSC Division 20, Chapter 6.5 (see Section 3.7.3), which govern the removal, transport, and disposal of hazardous wastes to minimize health and environmental impacts.

The project site is too far away from populated areas for the public to be exposed to health hazards as a result of contaminated soil and building materials, but on-site workers construction workers could be exposed. Standard procedures exist for protecting workers from exposure to chemicals of potential concern. For example, OSHA and local regulatory agencies (e.g., SCAQMD and fire departments) mandate controls to limit exposure to workers and the public, including:

- Use of warning signs and containment areas;
- Worker training;
- Implementation of work plans and health and safety plans;
- Reduction of dust emissions through the use of wet methods; and
- Use of personal protective equipment by workers.

Since construction of the proposed project would comply with applicable regulations and would not expose the public or environment to substantial risk resulting from the release of hazardous materials or substances or exposure to health hazards in excess of regulatory standards, impacts of the proposed project would be less than significant. No mitigation is required.

Operation

Long-term operation of the proposed project would not involve transport, storage, use, or disposal of hazardous materials. The proposed project would operate as a youth sailing center with only small volumes of normal household cleaners, paints, lubricants, and solvents stored on site. These materials would be stored in appropriate and labeled containers in a secure, covered storage facility, used in accordance with manufacturers' instructions, and handled in compliance with applicable standards and regulations. Proposed project operations would not generate regulated quantities of hazardous waste, nor would hazardous waste be treated on-site.

Due to high soil methane gas concentrations, V-level building design requirements would apply. The Level V design is the most stringent and protects against methane concentrations greater than 12,500 ppmv. The proposed building would be designed for all methane pressures, with both a passive methane gas protection system (sub-slab vent system and impervious membrane) and an active methane gas

protection system (sub-slab system and lowest occupied space system, including control panel) (see Section 2.2.2). A trench dam, conduit or cable seal fitting and additional vent risers also would be required. Final design elements would be determined by the Port Engineering Division and approved by the City of Los Angeles Department of Building and Safety. Site monitoring is not required for buildings designed to the requirements of the Site Level V. Methane *per se* does not appear to have any health effects other than as an asphyxiant by displacement of air and the potential for injuries resulting from explosion. No data were found on either short- or long-term methane toxicity or any current related toxicological studies.

On-water sailing exercises would not generate or cause a release of hazardous materials into the environment. There is a potential for students to tip their boats during sailing exercises and allow the masts to contact the bottom, thereby disturbing bottom sediments. However, intentional flipping of the boats during sailing exercises would be prohibited, as sailing would be restricted to an area of the East Basin where water depths typically exceed the height of the boat masts, thereby minimizing the potential for sailing exercises to disturb harbor sediments. These potential risks are addressed by mitigation measures MM REC-3 and MM REC-4 (see Section 4.15, Recreation). Further, as discussed in Appendix C, minor and infrequent disturbances of bottom sediments within the East Basin are not expected to represent a health risk to the students for several reasons. The amount of bottom sediments that would be resuspended by a boat mast would be small, resuspended sediments likely would remain in the lower portion of the water column and not mix to the surface where exposure would occur, and contaminants would largely remain associated with the resuspended sediments due to the strong affinity of most contaminants for particles. Further, the exposure route would be via ingestion of minor amounts of seawater containing suspended particles. Consequently, an exposure of students to sediment contaminants would be small and episodic, and estimated cancer risks and noncancer hazards are below levels of concern.

Thus, proposed operations would not pose a significant hazard to the public or the environment, and impacts would be less than significant. No mitigation is required.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant Impact. The project site is not located within one-quarter mile of an existing or proposed school. The nearest schools are Banning Elementary School and Hawaiian Avenue Elementary School, which are more than one mile from the project site. Construction activities associated with the proposed project would involve the handling of small amounts of hazardous materials (fuels, lubricants, and oils). However, the handling of minor amounts of hazardous materials, as previously discussed, would be in compliance with applicable regulations. Additionally, construction activities would be temporary in nature, and would involve the limited transport, storage, use, and disposal of hazardous materials. As determined by the Phase I and Limited Phase II ESA (Locus 2010), it is possible that soil and groundwater contamination may be encountered during construction activities. Any soils encountered during construction activities that are discolored, odiferous, determined by on-site monitoring devices to potentially contain organic contaminants, or that appear to be of a different composition than typical site soils, would require additional screening prior to disposal. Additionally, any groundwater effluent generated during construction activities would need to be addressed in accordance with NPDES permit requirements.

Operation of the proposed project would not involve transport, storage, or generation of regulated quantities of hazardous wastes or toxic (acutely hazardous), and currently there are no schools within one-quarter mile of the project site. Thus, impacts of the proposed project related to the emission and handling of hazardous materials within one-quarter mile of a school would be less than significant. No mitigation is required.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. California Government Code Section 65962.5 requires various state agencies to compile lists of hazardous waste disposal facilities, unauthorized release from underground storage tanks, contaminated drinking water wells, and solid waste facilities from which there is known migration of hazardous waste and submit such information to the Secretary for Environmental Protection on at least an annual basis. This question would apply only if the project site is included on any of the lists referenced above and, therefore, would pose an environmental hazard to surrounding sensitive uses. The project site is not identified on the Cortese list (Government Code Section 65962.5) (Cal EPA 2010). Thus, no impact would occur and no mitigation is required.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The project site is not located within 2 miles of a public airport, nor is it located within an airport land use plan. The Long Beach Airport and Los Angeles Airport are 15 miles and 20 miles, respectively, from the Port. The nearest airport facilities are helicopter landing pads at Berth 95 and at 1175 Queens Highway, in Long Beach. Only small helicopters operate from these locations and transit primarily is via the Main Channel of the Port. Given the distance of the heliport, persons at the project site would not be exposed to safety hazards associated with aircraft. No impact related to public airport uses would occur. No mitigation is required.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The project site is not located in the vicinity of a private airstrip. The nearest airport facilities are helicopter landing pads at Berth 95 and at 1175 Queens Highway, in Long Beach. Therefore, no impact related to private airstrip uses would occur. No mitigation is required.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. The proposed project would not affect implementation of or interfere with an adopted emergency response or evacuation plan. Further, the project applicant would coordinate with both the LAFD and Los Angeles Police Department prior to commencement of construction activities to ensure that emergency response vehicles are able to access and/or traverse the project site. As such, impacts to any adopted emergency response plan or emergency evacuation plan would be less than significant. No mitigation is required.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The project site is not located in an area designated as Very High Fire Hazard Severity Zone per the City of Fire Department pursuant to Government Code 51178 (City of Los Angeles Municipal Code 2011). Neither construction nor operation of the proposed project would create the potential for wildland fires to occur within the vicinity. Further, global warming is not expected to increase the potential risk for wildland fires at the project site because the project region is not adjacent to or intermixed with wild lands. Therefore, no impacts related to wildland fires would occur and no further analysis is required. No mitigation is required.

4.9 Hydrology and Water Quality

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
9. HYDROLOGY AND WATER QUALITY. Would the project:				
a. Violate any water quality standards or waste discharge requirements?	❑	❑	■	❑
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	❑	❑	❑	■
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	❑	❑	■	❑
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	❑	❑	■	❑
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	❑	❑	■	❑
f. Otherwise substantially degrade water quality?	❑	❑	■	❑
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	❑	❑	❑	■
h. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	❑	❑	❑	■
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	❑	❑	■	❑
j. Inundation by seiche, tsunami, or mudflow?	❑	❑	■	❑

Would the Project:

a) Violate any water quality standards or waste discharge requirements?

Less than Significant Impact.

Construction

Construction activities associated with the proposed project would not result in the discharge of any wastes to surface waters. However, site preparation would include scraping and grading of surface soils,

as well as temporary soil stockpiling, that would expose site soils for a limited time and allow for the possible erosion of soils into surface runoff and drainage from the site. Construction of the proposed project could result in the discharge of some runoff, potentially transporting eroded soils, from the upland portion of the project site into the marina and eventually to the East Basin portion of the harbor. Note that there are no numeric effluent limits for stormwater discharges in the permits currently regulating stormwater discharges in Los Angeles Harbor. Receiving waters in the harbor must meet the California Toxics Rule (CTR) criteria, but the discharges do not. Thus, it is the effect of the discharges on harbor water quality that is critical, not the quality of the discharges themselves (POLA and POLB 2009).

The land side portion of the project site is less than one acre and would not be subject to the requirements of the NPDES Stormwater Program or require coverage under the General Construction Activities Stormwater Permit. Site activities disturbing less than one acre are regulated as a small construction activity if they are part of a larger common plan of development or sale with a planned disturbance of equal to or greater than one acre and less than five acres, or if they are designated by the NPDES permitting authority. The NPDES permitting authority or USEPA may designate construction activities disturbing less than one acre based on the potential for the activities to contribute to a violation of a water quality standard or for a significant contribution of pollutants to waters of the United States. Nevertheless, due to the small project site area and relatively short period (one month; see Section 2.4.1) required for preparation of the site, there would be limited potential for surface runoff to affect water quality.

Receiving water quality typically is characterized on the basis of both a suite of conventional parameters, such as dissolved oxygen (DO) concentrations and water clarity, and specific pollutants of concern, such as certain metals, organic compounds, bacteria, and trash. As discussed in Section 2.2.2, the Consolidated Slip area of the harbor, which is adjacent to East Basin, is identified on the current 303(d) list of water quality limited segments requiring TMDLs. This listing is based on impairments due to a number of sediment contaminants (cadmium, copper, chromium, lead, zinc, mercury, chlordane, total DDT, total PCBs, benzo[a]pyrene, 2-methyl-napthalene, phenanthrene, benzo[a]anthracene, chrysene, and pyrene), tissue contaminants (chlordane, dieldrin, DDT, PCBs, and toxaphene), sediment toxicity, and benthic community effects. Sediment pollution in the Consolidated Slip is attributable in part to "legacy contamination" left over from past activities, although current activities also contribute pollutants to Consolidated Slip sediments. In particular, stormwater runoff from upstream portions of the watershed, municipal storm drains, Dominguez Channel, and industrial outfalls are primary sources of contaminants in harbor sediments, as well as runoff from port lands, commercial vessels (ocean going vessels and harbor craft), recreational vessels, and aerial deposition, (POLA and POLB 2009).

POLA monitors water quality at locations throughout the harbor (shown in Figure 13). The Enhanced Water Quality Monitoring Program has measured a wide range of water quality indicators, including metals, PAHs, chlorinated pesticides and PCBs, phenols, phthalates, pyrethroids, VOCs, organotins, and fecal indicator bacteria. Results of water quality surveys for selected water quality parameters and locations are presented in Table 5. Overall, the results of recent monitoring indicate that dissolved metal concentrations are lower than the State standards, which are based on levels at which negative impacts on marine life would be expected to occur. Organic pollutants of concern in industrial harbors typically include chemicals such as tributyltin (TBT), chlorinated pesticides, PCBs, PAHs, phenols, and phthalates. Most organic compounds of concern are not very soluble, so they typically occur at very low concentrations in water. The concentrations of organic chemicals in harbor waters are always very low, generally below detection. With one exception, detected concentrations generally are several orders of magnitude below relevant California salt water aquatic life standards for chronic exposure. The exception is TBT, for which no California standards, including CTR, exist. However, the majority of organic pollutants were not detected using sensitive analytical methods in the samples tested (225 out of 234).

Figure 13. Water Quality Sampling Locations in the Harbor

DDE was the only chlorinated pesticide detected, and only in one of the more than 100 water samples analyzed. There were only three instances in which PCBs were detected: one in Los Angeles Harbor Main Channel and two in Long Beach Harbor Channel. All three samples were only slightly above the analytical detection level (0.001 μg/L) and well below the CTR criterion continuous concentration (CCC) aquatic life criterion (0.03 μg/L). While PAHs are detected in most samples, concentrations are only slightly above the part-per-trillion detection limit. There are no CTR ambient water criteria for PAHs for aquatic life effects, although a number of PAHs have human health criteria. Low concentrations of phthalates, which are common ingredients of plastics, were found at stations throughout the harbor, typically after rain storms. There are no aquatic life CTR criteria for phthalates in surface waters (POLA and POLB 2009).

The Ports of Los Angeles and Long Beach also monitor indicator bacteria levels to determine whether harbor waters are safe for human contact. People who swim in runoff-contaminated waters are more likely to be exposed to pathogens that could result in illness. Bacteria tests in Los Angeles Harbor have been conducted concurrently with each of the enhanced monthly port-wide water quality sampling events. A special study of waterborne bacteria in the East Basin/Consolidated Slip area also was performed in conjunction with the WYSAC siting study. Water sampling occurred during dry and wet seasons as well as immediately following storm events. Samples collected during the dry weather events typically have non-detectable levels of indicator bacteria (see Table 5), whereas the majority of the AB 411 and Basin Plan exceedances are observed following storm events. Also, the Inner Harbor is more susceptible to elevated bacteria levels compared to the Outer Harbor, indicating that the Dominguez Channel and other storm drains in the vicinity are the primary source of the observed bacteria (POLA and POLB 2009).

In general, construction activities throughout POLA have the potential for adversely affecting harbor water quality if the construction site is not appropriately managed for erosion, dust, and runoff. Construction contractors are required to implement BMPs such as: general site management, construction and waste materials management, erosion control, and sediment control. LAHD also may require the development and implementation of a SWPPP which specifies BMPs aimed at controlling construction-related pollutants that originate from the site as a result of construction-related activities. Construction projects are inspected by Port construction inspectors to ensure that BMPs are in place and that construction SWPPPs are updated and adequate.

Based on results of sampling during the limited Phase II ESA (Locus 2010), soils and groundwater at the project site do not contain metal concentrations that exceed hazardous levels and concentrations are below POLA import/reuse standards. However, soils and groundwaters contain petroleum hydrocarbons that could contribute to existing PAH levels in harbor water and sediments. However, the volumes of any soil or groundwater released from the project site to the marina are expected to be minimal because the site preparation phase is expected to last for only one month. Given the short period of time in which site soils would be exposed, the low probability of a rainfall event with the potential to erode exposed soils, and implementation of BMPs, discharges of small runoff volumes from the project site are not expected to cause violations of water quality standards in harbor receiving waters.

As discussed above, water quality impairments and listing under Section 303(d) of the CWA for the Consolidated Slip are not based on concentrations of dissolved pollutants in site waters, but rather on localized areas of sediment contamination, sediment toxicity, benthic community effects, and elevated concentrations of pollutants in fish tissue. Although construction of the proposed project would not directly discharge wastes to the harbor or violate water quality standards, an important issue is whether and to what extent the proposed project would contribute to or exacerbate the existing contaminant loading to Consolidated Slip. For reasons discussed above, contaminant releases during construction at the project site would be minimal, and the resultant contributions to contaminant loading in the Consolidated Slip is expected to be negligible.

Thus, the proposed project would not violate any water quality standards or waste discharge requirements, and contributions, if any, to contaminant loading in impaired water segments (e.g., Consolidated Slip) would be negligible. Implementation of appropriate BMPs and compliance with the requirements of the NPDES Stormwater Program, City of Los Angeles Municipal Code, and all other applicable federal, state, and local regulations prior to proposed project approval would result in a less than significant impact to water quality. No mitigation is required.

Operation

The operation of the proposed project would not involve direct discharges of any wastes, other than stormwater runoff, to the harbor. The proposed project would install and operate a new storm drain outfall that would discharge stormwater to the marina. A large portion of the project site would be paved or covered by facilities, although some portion would be landscaped. Compared with existing conditions, the portions of the project site covered with an impervious surface would result in slightly higher runoff volumes. However, the potential for erosion of site soils would be reduced because a large portion of the site would be covered.

In most areas of the Port, housekeeping BMPs are the principal means of preventing or minimizing discharges of contaminated stormwater. Contained and covered storage, regular sweeping, appropriate waste management, storage, and handling procedures (e.g., spill and drip prevention, oily rag and solvent storage, use of containment structures for toxic chemicals, lubricants and solvents, fertilizers, and paint and cleaning wastes), and personnel training are key measures for preventing contaminated runoff. Implementing appropriate BMPs and compliance with the requirements of the NPDES Stormwater Program, City of Los Angeles Municipal Code, and all other applicable federal, state, and local regulations prior to project approval would be required for the proposed project.

Sailing instruction and exercises conducted as part of the proposed project also would have minimal impacts on water quality. The sailing exercises primarily would use small sailboats without outboard engines that would be stored out of the water. Under these conditions, the boats would not require anti-fouling bottom paints or cathodic protection. Therefore, boats would not leach biocides or metals into the harbor. The sailing instructors would likely use small, motorized boat tenders, which represent a minor potential for fuel spills to the harbor. Prohibitions regarding trash disposal to the harbor would be included as part of the curriculum for the safe boating classes.

POLA has developed the Clean Marinas Program to help protect water and sediment quality in the harbor. The program advocates that marina operators and boaters use BMPs as alternative ways to perform some common boating activities that may cause pollution or contaminate the environment. The Clean Marinas Program features both voluntary components and measures required through leases, CEQA mitigation requirements, and established federal, state, and local regulations. The proposed project would implement practices recommended by the Clean Marinas Program. As a result, the proposed project would not violate any water quality standards and impacts to hydrology and water quality would be less than significant. No mitigation is required.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

No Impact. Groundwater in the harbor area generally is impacted by saltwater intrusion (salinity) and is, therefore, unsuitable for use as drinking water. There are no public water supply groundwater wells within 0.25 mile of the project site. Additionally, groundwater at the project site is contaminated with

petroleum hydrocarbons (Locus 2010). The project site currently is unpaved, but surface recharge of groundwater likely is negligible and does not support beneficial uses of groundwater. The proposed project would cover a large portion of the landside parcel with impermeable surfaces, although approximately five percent of the surface area would be landscaped and the pavement would be permeable. Operation of the proposed project would not extract groundwater and, therefore, would have no effect on existing groundwater supplies. Consequently, the proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. No impacts would occur and no mitigation is required.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Less than Significant Impact. Development of the proposed sailing center facility would entail grading and covering a portion of the existing site, primarily with permeable pavement. The use of permeable pavement would be expected to maximize infiltration and minimize runoff. Also, the time required to prepare the site would be approximately one month, and site preparation activities would not result in substantial erosion or siltation. The proposed project is not within the course of a stream or a river. As such, construction and operation of the proposed project would not alter the course of a stream or river. The configuration of the replacement boat dock and slips would be comparable to that of the existing boat dock, and construction and operation of the replacement dock would not cause substantial erosion or siltation in the marina.

Implementation of appropriate BMPs and compliance with the requirements of the NPDES Stormwater Program, City of Los Angeles Municipal Code, and all other applicable federal, state, and local regulations prior to proposed project approval would result in a less than significant impact. No mitigation is required.

d) Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less than Significant Impact. Please see the response for Criterion 4.9(c).

e) Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less than Significant Impact.

Construction

The proposed project would cover a substantial portion of the upland parcel of the project site with an permeable surface, which will drain to biofiltration BMPs in accordance with City of Los Angeles LID Ordinance. Some portion of the site would remain unpaved and would be landscaped. Compared to the present unpaved surface, a smaller portion of the rainfall would infiltrate at the site, and runoff volumes could be slightly greater than current conditions. However, because the area of the site is small (less than one acre) and portions of the site would be landscaped and covered with permeable surfaces, the difference in runoff volume would be negligible. The proposed project would install a new stormwater drain that would be sized to handle the volume of runoff expected for the project site. The potential for the proposed project to contribute to contaminant loading to the harbor is discussed in Section 4.9(a). Thus, construction of the proposed project would have a less than significant impact on runoff volumes, and no mitigation is required.

Operation

The proposed project would construct a storm drain system and install a new outfall that would discharge stormwater to the marina. However, as discussed above, the proposed project would not substantially increase the runoff volume from the site, and the new storm drain system would be appropriately sized to provide expected runoff volumes. Additionally, proposed project operations would not generate or store wastes on-site such that operations would provide substantial additional sources of polluted runoff. Therefore, the proposed project would result in a less than significant impact. No mitigation is required.

f) Otherwise substantially degrade water quality?

Less than Significant Impact.

Construction

Dredging and/or placement of fill would not be required for the proposed project. However, demolition of the existing boat dock and construction of a new dock and boat slips represent a potential source for releases of materials that could affect water quality in the marina. In particular, replacement of the existing boat dock could result in accidental releases of wood debris, metal (nails, screws, brackets etc), and paint chips into the harbor. Removal of old dock pilings could result in releases of creosote into the water. Similarly, installation of new pilings could disturb bottom sediments, resulting in releases of chemical contaminants into the water. Construction contractors would be required to implement BMPs such as: general site management; construction and waste materials management; erosion control; and sediment control. LAHD also may require the development and implementation of a SWPPP that specifies BMPs aimed at controlling construction-related pollutants originating from the site as a result of construction-related activities. Construction projects would be inspected by Port construction inspectors to ensure that BMPs are in place and that construction SWPPPs are updated and adequate.

Replacement of creosote-treated pilings with inert or non-treated pilings is consistent with measures identified in the WRAP (POLA and POLB 2009) and with the LAHD's Pile Program that is evaluating strategies to minimize or eliminate the use of treated piles in the harbor and, thereby, reduce impacts to harbor water quality. As part of this program, LAHD is establishing BMPs for practices currently used for managing pilings, including piling wrapping materials and procedures, pile storage, pile and pile segment installation, and the disposal of spent treated timber. The proposed WYSAC project would use concrete pilings, which would minimize the risk of water quality impacts.

Removal of existing piles likely would disturb bottom sediments within the marina. Sediments in this portion of the harbor contain elevated contaminant concentrations which, if released from resuspended sediments, could affect water quality. However, any effects to water quality are expected to be localized and short-term because sediments suspended by construction activities would settle to the bottom within a period of minutes to hours, depending on the particle size and current speed. Also, the contaminants associated with bottom sediments typically have strong affinities for particles, and losses of soluble contaminants to marina waters are expected to be minimal. Therefore, construction of the proposed project would result in a less than significant impact to water quality. No mitigation is required.

Operation

Operation of the proposed project would not result in discharges of waste materials directly to surface water or groundwater. Any impacts to water quality from the proposed project operations would be incidental and minimal. For example, during sailing exercises, students could intentionally or accidentally tip their boats over in areas where the top of the masts could contact the harbor bottom and

disturb bottom sediments. Physical disturbances of the bottom could resuspend bottom sediment and remobilize sediment contaminants into the harbor water, representing a potential mechanism for altering water quality and exposing youths to waterborne contaminants. However, as discussed in Section 4.15 (Recreation), mitigation measures (MM REC-3 and MM REC-4) are proposed that would confine sailing exercises to a defined portion of the East Basin and prohibit boat tipping in this portion of the harbor. Further, the amount of bottom sediment that could be disturbed by the mast of a small boat would be small, and sediments resuspended by occasional disturbances would settle rapidly to the harbor bottom. Contaminants associated with bottom sediments, such as metals, chlorinated pesticides, and PAHs, have high affinities for particles. Consequently, contaminants remobilized into channel waters are expected to partition rapidly onto settling particles, such that any changes to water quality would be localized and short-term (i.e., minutes to hours) depending on site-specific mixing conditions. Therefore, proposed project operations would result in a less than significant impacts to water quality. No mitigation is required.

g) Place housing within a 100-year flood hazard area as mapped on a federal flood hazard boundary or Flood Insurance Rate Pap or other flood hazard delineation map?

No Impact. According to the Safety Element of the Los Angeles City General Plan, the project site is partially within the 100-year flood plain area (Figure 14). However, the proposed project would not construct housing. Therefore, the proposed project would not place housing within a 100-year flood hazard area and no impacts related to a 100-year flood hazard area would occur. No mitigation is required.

h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?

No Impact. As discussed in Section 4.9(g), the project site is partially within the 100-year flood plain area. However, per the Flood Insurance Rate Map (FIRM), the average depth of runoff for a 100 year event would be less than 1 foot. The proposed sailing center and related structures would redirect runoff flow patterns within the project site. However, the surrounding area generally is open and flat with little or no constrictions or interferences to runoff. Therefore, the presence of the proposed structures would not promote flooding at the site or at adjacent properties. No impacts related to a 100-year flood hazard area would occur. No mitigation is required.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less than Significant. The project site is not within a potential dam or levee inundation area as identified in the Los Angeles General Plan Safety Element (City of Los Angeles 1996). Thus, the proposed project would not expose people or structures to significant risk of loss, injury or death from failure of a levee or dam.

However, the proposed project site could be susceptible to flooding under some projected sea level rise scenarios. The State of California Sea Level Rise Interim Guidance Document, prepared by the Sea Level Rise Task Force of the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT) recommends using the ranges of Sea Level Rise presented in the December 2009 "Proceedings of National Academy of Sciences" publication by Vermeer and Rahmstorf as a starting place for estimating sea level projections. Sea level projections for the years 2030, 2050, 2070, and 2100 are listed in Table 6.

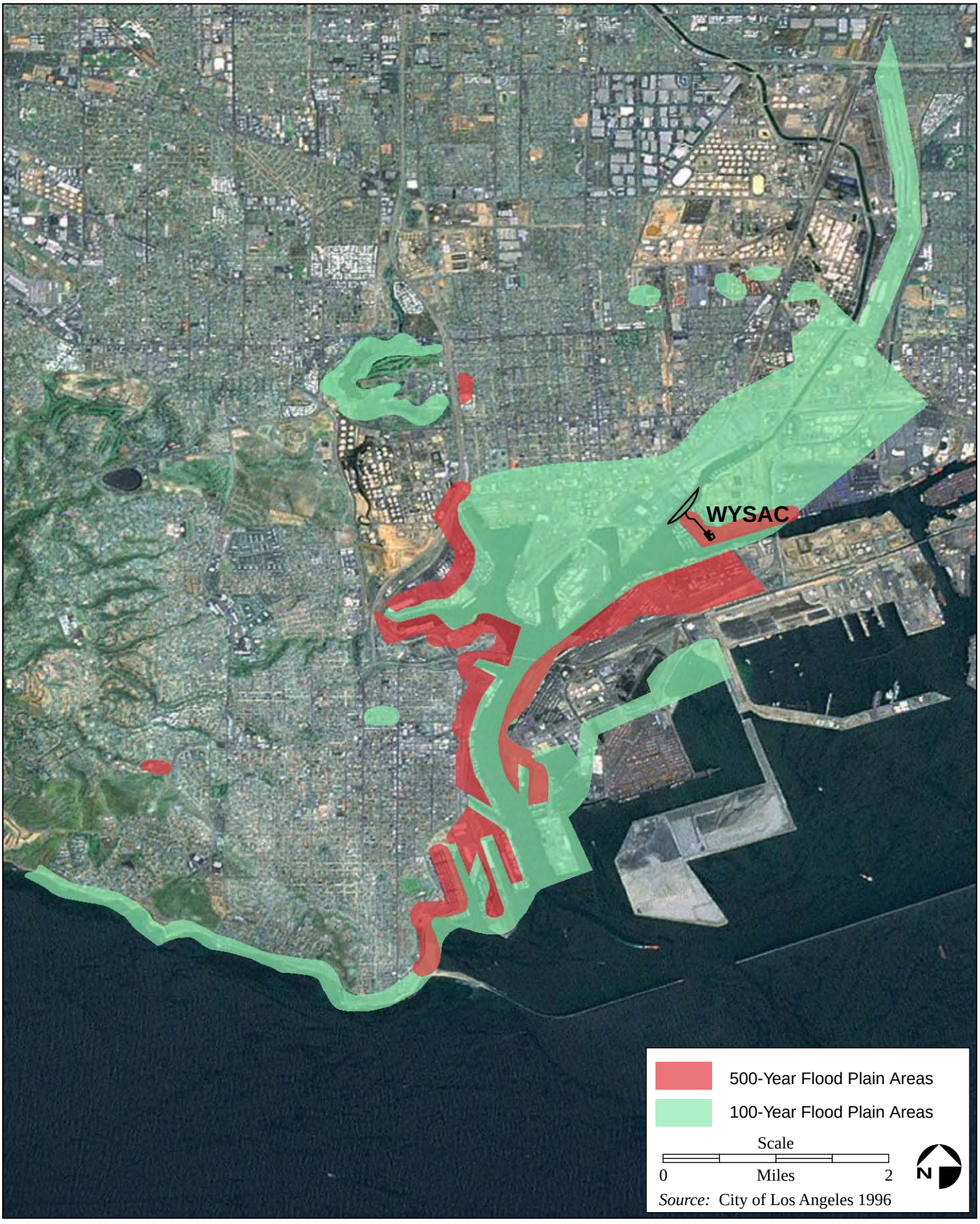

Figure 14. 100-Year and 500-Year Flood Area (from City of Los Angeles Safety Element)

Table 6. Sea Level Rise Projections Using 2000 as the Baseline

Year	*Level of GHG Emissions*	*Average Projected Sea Level Rise (inches)*	*Range in Projected Sea Level Rise (inches)*
2030		7	5-8
2050		14	10-17
2070	Low	23	17-27
	Medium	24	18-29
	High	27	20-32
2100	Low	40	31-50
	Medium	47	37-60
	High	55	43-69
Source: CO-CAT 2010			

The upland portion of the proposed WYSAC project site would be at an elevation of approximately 5 feet above mean sea level (Locus 2010). As shown in Table 6, sea level is projected to rise about 10 to 17 inches by 2050. The mean higher high water level in the harbor is 2.63 feet above mean sea level. Therefore, a rise in sea level 10 to 17 inches (0.8 to 1.4 feet) would not represent a risk of flooding to the project site and would not be expected to adversely impact the proposed project facilities, activities, or users. However, during extreme high tide, the water elevation in the harbor has reached 4.74 feet above mean sea level. Under these conditions, combined with a sea level rise of 17 inches, water level elevations could exceed 5 feet above mean sea level.

The Port presently is developing an adaptive strategy to mitigate the effects of sea level rise (POLA 2011), The final product of this study will be a practical guide on how the Port can address and prepare for the effects of climate change in their facility plan and the financial impacts of climate change on Port operations. Given that changes in water elevations in the harbor due to climate change would occur gradually over periods of decades, and the Port's strategy would be implemented far in advance of 2050, the potential for flooding impacts as a result of SLR would be less than significant and no further mitigation is required.

j) Inundation by seiche, tsunami, or mudflow?

Less than Significant. According to the Safety Element of the Los Angeles City General Plan, the project site is located within an area susceptible to impacts from a tsunami and subject to possible inundation as a result (Figure 15). However, subsequent detailed studies of tsunami risk within the Ports of Los Angeles and Long Beach indicate that the Wilmington Marina area is sufficiently interior and distant from open ocean such that waves under various scenarios would not reach above 2 feet and would not exceed deck elevations (Moffatt & Nichol 2007). As discussed above, the Wilmington Marina area would be more susceptible to inundation from future storm surges or tsunamis combined with higher water elevations under various sea level rise scenarios.

The topography of the project site, which is essentially flat, lacks sufficient relief to support a mudflow; the occurrence of mudflows at the project site is unlikely due to the lack of slope. Landscaping planned for the Wilmington Marina/Marina Parkway Project will include plantings on the slope and trees along the street that will minimize the potential for mudslides from the current ARSSS site. As such, impacts related to seiche, tsunami, or mudflow would be less than significant. No mitigation is required.

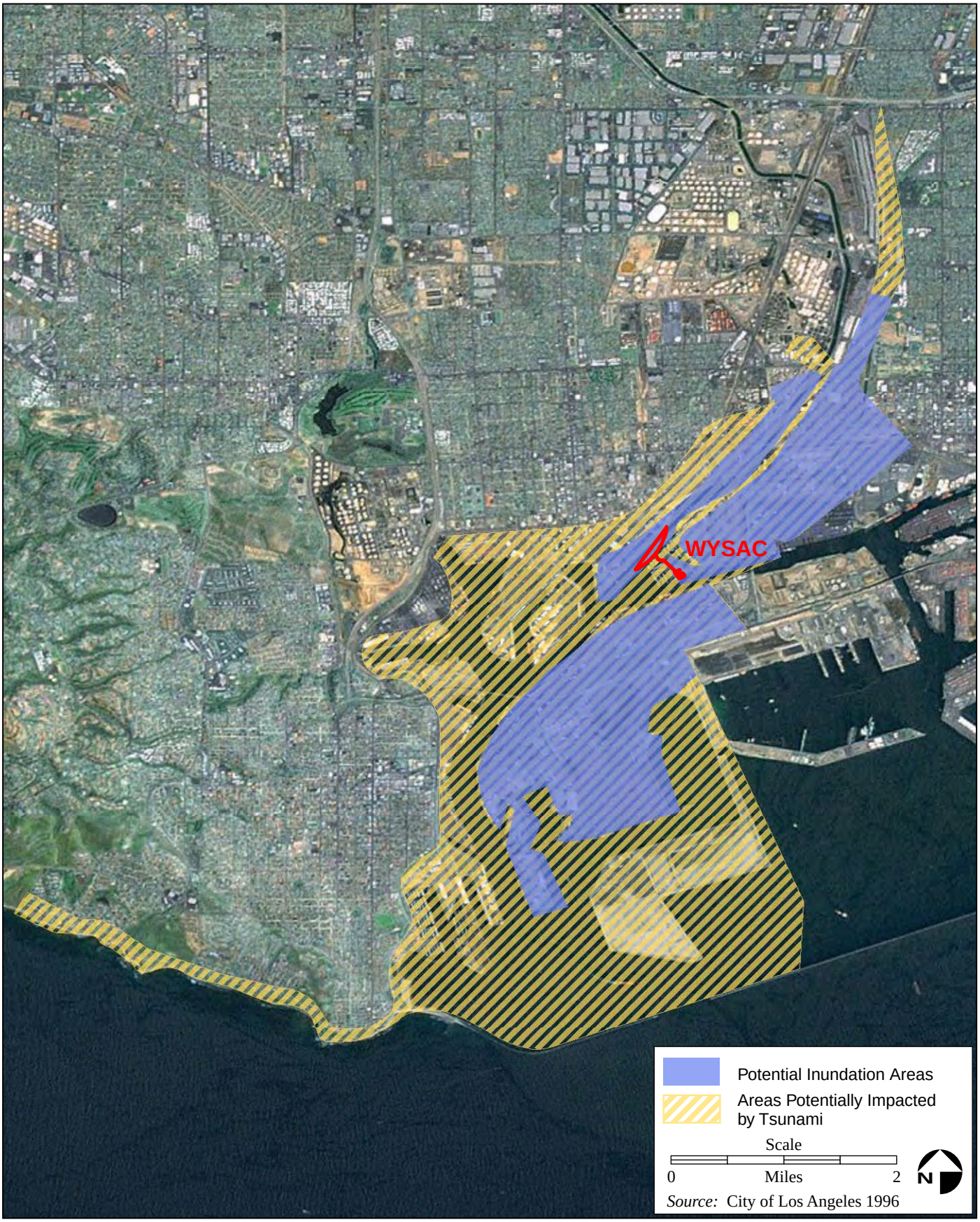

Figure 15. Tsunami and Inundation Areas (from City of Los Angeles Safety Element)

Table 5. Representative Data from Enhanced Monthly Water Quality Monitoring at Selected Harbor Locations.

MDL= method detection limit; RL=reporting limit; CMC=criterion maximum concentration; CCC=criterion continuous concentration;
ND = not detected;

						LA-49/49A										LA-50							LA-51								
Parameter	Units	MDL	RL	CMC	CCC	May-05	Sep-05	Jan-06	Mar-06	Jan-08	Jan-08	May-08	May-08	Sep-08	Sep-08	May-05	Sep-05	Jan-06	Mar-06	Jan-08	May-08	Sep-08	May-05	Sep-05	Jan-06	Jan-06	Mar-06	Jan-08	May-08	May-08	May-08	Sep-08	Sep-08	Sep-08
General Chemistry																																	
Total Organic Carbon	mg/L	0.10	0.20			ND	ND	ND	ND	0.70	0.70	0.60	0.70	0.60	0.90	ND	ND	ND	ND	0.90	0.60	0.40	ND	ND	ND	*	ND	0.80	0.80			0.50	0.50	0.50
Dissolved Organic Carbon	mg/L	0.10	0.20			0.67	0.61	ND	ND	0.60	0.90	0.60	1.70	0.50	0.50	0.56	0.62	ND	ND	0.60	1.00	0.60	0.65	0.53	ND	*	ND	0.60	0.80			0.80	0.50	0.60
TPH (g)	µg/L		100.00			ND	ND	ND	ND	ND	ND					ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND					
TPH (d)	µg/L		500.00			ND	ND	ND	ND	ND	ND					ND	ND	ND	110.00	ND			ND	ND	ND	ND	110.00	ND					
TRPH	mg/L	1.00	5.00																														
Ammonia-N	mg/L	0.03	0.03							0.07	0.07	0.06	0.05							0.09	0.08							0.07	0.06					0.03
Nitrate-N	mg/L	0.01	0.05							0.02	0.02	0.09	0.05							0.02	0.08							0.02	0.07					0.01
Nitrite-N	mg/L	0.01	0.05							0.01	0.01	<0.010	<0.010							0.01	<0.010							0.01	<0.010					<0.05
Total Suspended Solids	mg/L	0.50	5.00							11.00	3.70	2.80	5.20	3.00	3.00					4.30	3.50	3.50						11.70	2.50	82.80	0.80	3.20	5.50	3.00
Turbidity	NTU	1.00	2.00							1.80	2.70									2.10								ND						
Dissolved Metals																																	
Aluminum (Al)	µg/L	3.00	6.00							ND	ND	<3.000	7.10	9.80	<3.000					ND	<3.000	10.70						ND	<3.000	<3.000	<3.000	9.80	10.00	12.60
Antimony (Sb)	µg/L	0.01	0.02							0.21	0.19	0.17	0.19	0.18	0.22					0.20	0.22	0.22						0.17	0.26	0.43	0.28	0.24	0.21	0.22
Arsenic (As)	µg/L	0.01	0.02	69.00	36.00	1.14	1.18	1.28	1.24	1.31	1.34	1.26	1.18	1.59	1.44	1.20	1.26	1.30	1.18	1.31	1.21	1.55	1.18	1.25	1.27	1.30	1.20	1.17	1.29	1.02	1.26	1.59	1.64	1.54
Beryllium (Be)	µg/L	0.01	0.01							ND	ND	<0.005	<0.005	<0.005	<0.005					ND	<0.005	<0.005						ND	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cadmium (Cd)	µg/L	0.01	0.01	40.00	8.80	0.06	0.02	0.03	ND	0.04	0.04	0.05	0.06	0.03	0.03	0.05	0.10	0.03	ND	0.04	0.05	0.04	0.06	0.03	0.03	0.03	ND	0.04	0.07	0.03	0.08	0.03	0.03	0.04
Chromium (Cr)	µg/L	0.03	0.05	1100.00	50.00	0.25	0.29	0.29	0.28	0.15	0.14	0.10	0.12	0.16	0.13	0.27	0.31	0.28	0.28	0.14	0.21	0.15	0.27	0.36	0.30	0.29	0.31	0.14	0.12	0.06	0.14	0.15	0.15	0.16
Cobalt (Co)	µg/L	0.01	0.01							0.03	0.05	0.07	0.10	0.03	0.07					0.03	0.08	0.05						0.04	0.11	0.22	0.11	0.06	0.05	0.06
Copper (Cu)	µg/L	0.01	0.02	4.80	3.10	1.18	0.97	1.03	1.23	1.03	1.67	0.93	1.76	1.06	1.77	1.09	1.25	1.27	1.48	0.94	0.77	1.10	1.22	1.18	1.01	1.03	1.53	0.98	1.28	0.45	1.79	1.10	0.78	1.13
Iron (Fe)	µg/L	0.50	1.00							ND	ND	0.50	0.50	0.80	<0.500					ND	0.50	0.90						ND	0.70	0.90	0.50	<0.500	<0.500	<0.500
Lead (Pb)	µg/L	0.01	0.01	210.00	8.10	0.09	0.17	0.05	0.55	0.04	0.05	0.04	0.03	0.07	0.05	0.07	0.50	0.16	0.83	0.06	0.04	0.17	0.32	0.46	0.19	0.18	0.33	0.18	0.07	0.15	0.15	0.11	0.08	0.08
Manganese (Mn)	µg/L	0.01	0.02							3.39	4.35	3.31	6.12	2.36	3.47					4.34	3.23	4.88						4.65	5.52	4.51	5.97	5.83	4.10	6.71
Mercury (Hg)	µg/L	0.01	0.02	1.80	0.94	ND	0.00	ND	ND	ND	ND	<0.010	<0.010	<0.010	<0.010	ND	ND	ND	ND	ND	<0.010	<0.010	ND	0.00	ND	ND	ND	ND	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum (Mo)	µg/L	0.01	0.01							9.68	9.27	9.74	9.73	9.09	8.87					9.16	9.98	9.27						9.24	9.98	9.77	9.81	9.36	9.21	9.44
Nickel (Ni)	µg/L	0.01	0.01	74.00	8.20	0.33	0.36	0.47	0.38	0.38	0.39	0.39	0.40	0.26	0.32	0.35	0.57	0.66	0.47	0.38	0.45	0.33	0.43	0.46	0.63	0.64	0.50	0.39	0.52	0.64	0.61	0.35	0.31	0.37
Selenium (Se)	µg/L	0.01	0.02	290.00	71.00					0.02	0.02	0.02	0.02	0.01	0.01					0.02	0.02	0.01						0.02	0.03	0.03	0.03	0.01	0.01	0.01
Silver (Ag)	µg/L	0.02	0.04	1.90		ND	ND	ND	ND	ND	ND	<0.020	<0.020	<0.020	<0.020	ND	ND	ND	ND	ND	<0.020	<0.020	ND	ND	ND	ND	ND	ND	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Thallium (Tl)	µg/L	0.01	0.01							0.01	0.01	<0.005	<0.005	<0.005	0.01					0.01	<0.005	<0.005						0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Tin (Sn)	µg/L	0.01	0.01							0.01	ND	<0.005	<0.005	0.01	0.01					ND	<0.005	0.01						ND	<0.005	0.01	<0.005	0.01	0.01	0.01
Titanium (Ti)	µg/L	0.04	0.07							0.06	0.13	<0.035	<0.035	0.05	0.04					ND	<0.035	0.08						ND	<0.035	<0.035	<0.035	0.16	0.09	0.13
Vanadium (V)	µg/L	0.02	0.04							1.80	1.91	1.79	1.76	2.14	2.03					1.80	1.74	2.15						1.83	1.72	1.48	1.68	2.18	2.15	2.14
Zinc (Zn)	µg/L	0.01	0.01	90.00	81.00	8.20	6.29	7.83	10.70	3.06	6.75	4.20	7.22	5.58	5.21	8.33	6.77	11.90	15.10	3.99	4.48	16.71	7.66	9.48	13.10	12.40	15.30	5.29	9.23	7.61	12.78	4.52	3.97	2.89
Total Metals																																	
Aluminum (Al)	µg/L	3.00	6.00							92.00	84.00	46.70	33.10	64.50	42.30					74.00	63.90	62.00						53.00	36.40	1860.20	32.30	59.10	118.40	35.50
Antimony (Sb)	µg/L	0.01	0.02							0.14	0.13	0.15	0.25	0.15	0.21					0.18	0.14	0.21						0.15	0.21	0.20	0.27	0.19	0.17	0.21
Arsenic (As)	µg/L	0.01	0.02			1.18	1.27	1.35	1.24	1.33	1.36	1.28	1.21	1.63	1.49	1.25	1.31	1.38	1.18	1.41	1.34	1.67	1.25	1.29	1.35	1.37	1.20	1.41	1.24	3.00	1.33	1.64	1.75	1.68
Beryllium (Be)	µg/L	0.01	0.01							ND	ND	<0.005	<0.005	<0.005	<0.005					ND	<0.005	<0.005						ND	<0.005	0.06	<0.005	<0.005	<0.005	<0.005
Cadmium (Cd)	µg/L	0.01	0.01			0.06	0.02	0.03	ND	0.04	0.04	0.05	0.06	0.03	0.03	0.05	0.10	0.03	ND	0.04	0.05	0.04	0.06	0.03	0.03	0.03	ND	0.04	0.06	0.43	0.08	0.04	0.04	0.04

Table 5. Representative Data from Enhanced Monthly Water Quality Monitoring at Selected Harbor Locations.

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ND = not detected;

						LA-49/49A										LA-50							LA-51									
Parameter	Units	MDL	RL	CMC	CCC	May-05	Sep-05	Jan-06	Mar-06	Jan-08	Jan-08	May-08	May-08	Sep-08	Sep-08	May-05	Sep-05	Jan-06	Mar-06	Jan-08	May-08	Sep-08	May-05	Sep-05	Jan-06	Jan-06	Mar-06	Jan-08	May-08	May-08	May-08	Sep-08	Sep-08	Sep-08
Chromium (Cr)	µg/L	0.03	0.05			0.50	0.39	0.74	1.30	0.43	0.48	0.30	0.29	0.38	0.32	0.53	0.45	0.80	1.09	0.39	0.41	0.46	0.77	0.36	0.84	0.69	0.99	0.36	0.34	11.72	0.36	0.46	0.66	0.37
Cobalt (Co)	µg/L	0.01	0.01							0.08	0.09	0.09	0.11	0.08	0.15					0.06	0.11	0.10						0.07	0.12	1.86	0.13	0.11	0.13	0.11
Copper (Cu)	µg/L	0.01	0.02			1.51	1.56	1.96	2.12	1.75	2.58	1.69	2.73	1.84	2.82	1.47	1.70	2.07	2.75	1.63	1.67	2.09	1.59	1.43	1.90	1.66	2.73	1.70	2.20	31.35	2.79	2.12	2.17	1.87
Iron (Fe)	µg/L	0.50	1.00							103.60	91.80	62.40	46.40	69.60	50.40					82.80	81.70	70.00						70.30	62.20	2087.90	52.70	67.00	123.20	45.00
Lead (Pb)	µg/L	0.01	0.01			0.78	1.06	0.67	2.17	0.36	0.46	0.39	0.38	0.34	0.43	0.71	1.51	1.10	2.82	0.46	0.53	0.88	2.45	1.12	1.34	1.06	1.91	0.80	0.57	19.22	0.76	0.72	0.78	0.43
Manganese (Mn)	µg/L	0.01	0.02							6.44	7.03	6.27	9.37	4.36	5.69					7.11	6.95	7.24						7.09	6.55	35.95	8.12	8.43	7.38	6.56
Mercury (Hg)	µg/L	0.01	0.02			ND	0.62	ND	ND	ND	ND	<0.010	<0.010	<0.010	<0.010	ND	0.44	ND	ND	ND	<0.010	<0.010	ND	0.23	ND	ND	ND	ND	<0.010	0.03	<0.010	<0.010	<0.010	<0.010
Molybdenum (Mo)	µg/L	0.01	0.01							9.71	9.11	8.20	9.66	9.18	9.03					9.51	7.55	9.25						9.71	8.13	2.54	7.88	9.41	9.08	9.67
Nickel (Ni)	µg/L	0.01	0.01			0.33	0.47	0.63	0.61	0.47	0.44	0.40	0.41	0.34	0.38	0.38	0.66	0.79	0.65	0.48	0.43	0.41	0.43	0.51	0.78	0.74	0.70	0.50	0.56	3.27	0.64	0.43	0.45	0.43
Selenium (Se)	µg/L	0.01	0.02							0.02	0.02	0.02	0.03	0.01	0.02					0.02	0.02	0.02						0.02	0.03	0.07	0.03	0.01	0.01	0.02
Silver (Ag)	µg/L	0.02	0.04			ND	ND	ND	ND	ND	ND	<0.020	<0.020	<0.020	<0.020	ND	ND	ND	ND	ND	<0.020	<0.020	ND	ND	ND	ND	ND	ND	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Thallium (Tl)	µg/L	0.01	0.01							0.01	0.01	<0.005	<0.005	<0.005	0.01					0.01	<0.005	<0.005						0.01	<0.005	0.04	<0.005	<0.005	<0.005	<0.005
Tin (Sn)	µg/L	0.01	0.01							0.02	0.02	<0.005	0.01	0.02	0.02					0.02	0.01	0.04						0.02	0.01	0.27	0.01	0.02	0.03	0.02
Titanium (Ti)	µg/L	0.04	0.07							10.58	5.38	3.02	2.07	4.44	2.42					4.71	3.98	4.37						3.89	2.44	114.54	2.25	4.07	7.60	2.63
Vanadium (V)	µg/L	0.02	0.04							2.23	2.27	2.07	2.02	2.43	2.27					2.15	2.12	2.47						2.10	1.96	8.90	1.91	2.40	2.59	2.40
Zinc (Zn)	µg/L	0.01	0.01			9.01	7.65	9.11	12.34	5.08	8.44	4.85	8.44	21.61	7.77	9.29	7.71	13.29	20.84	5.20	5.64	21.16	8.76	9.99	14.86	13.70	18.08	6.08	10.15	150.26	15.39	5.10	5.27	7.71
PCBs and Pesticides																																		
Total PCB/Pesticides						ND	ND	ND	ND	ND	ND					ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND						
PAHs																																		
Total PAHs						ND	ND	ND	ND	89.5	61.2					ND	ND	ND	ND	97.3			ND	ND	ND	ND	ND	71.4						
Total Phenols						ND	ND	ND	ND	ND	ND					ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND						
Pyrethroids																																		
Total Pyrethroids										ND	ND									ND								ND						
Phthalates																																		
Total Pthalates						ND	6.60	ND	7.10	122052	156					ND	11.00	ND	7.80	77270			ND	ND	ND	ND	8.00	100603						
Butyltins																																		
Dibutyltin	ng/L	1.00	3.00			ND	ND	ND	ND	ND	ND	<1.000	<1.000	<1.000	<1.000	ND	ND	ND	ND	ND	<1.000	<1.000	ND	ND	ND	ND	ND	ND	<1.000			<1.000	<1.000	<1.000
Monobutyltin	ng/L	1.00	3.00			ND	ND	ND	ND	ND	ND	<1.000	<1.000	<1.000	<1.000	ND	ND	ND	ND	ND	<1.000	<1.000	ND	ND	ND	ND	ND	ND	<1.000			<1.000	<1.000	<1.000
Tetrabutyltin	ng/L	1.00	3.00			ND	ND	ND	ND	ND	ND	<1.000	<1.000	<1.000	<1.000	ND	ND	ND	ND	ND	<1.000	<1.000	ND	ND	ND	ND	ND	ND	<1.000			<1.000	<1.000	<1.000
Tributyltin	ng/L	1.00	3.00	420	7.4	ND	ND	ND	ND	ND	ND	53	<1.000	<1.000	<1.000	ND	ND	ND	ND	ND	79	<1.000	ND	ND	12	3	ND	ND	81			<1.000	<1.000	<1.000
Bacteria				AB411**																														
Enterococci/MF 10	CFU/100mL	10.00		104		<10	<10	10	63	40	ND	10	<10.000			<10	10	63	109	80	<10.000		<10	<10	74	*	240	ND	<10.000					<10
Fecal Coliform/MTF 20	MPN/100mL	20.00		400		<20	20	500	130	40	ND	20	20			20	<20	300	40	40	20		40	40	230	*	260	ND	<20.000					40
Total Coliform/MTF 20	MPN/100mL	20.00		10000		20	20	500	3000	40	10	20	20			40	<20	500	5000	70	20		110	40	130	*	3500	ND	20					40

4.10 Land Use and Planning

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
10. LAND USE AND PLANNING. Would the project:				
a. Physically divide an established community?	❑	❑	❑	■
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	❑	❑	❑	■
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	❑	❑	❑	■

Would the Project:

a) Physically divide an established community?

No Impact. There are no residential neighborhoods or communities near the proposed project location. No streets or sidewalks would be permanently closed as a result of the proposed project and no separation of uses or disruption of access between uses would occur. Therefore, implementation of the proposed project would not divide the established community. No impacts would occur and no mitigation is required.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The proposed project would not conflict with a specific plan, general plan, or zoning ordinance. The project site is zoned for industrial uses ([Q]M3-1). The Q Condition refers to zoning restrictions placed by the harbor dept. The WYSAC is consistent with the zoning, and is not barred by the Q condition. The proposed project would be consistent with the land use. The proposed project would not alter the land use of the project site or surrounding area, and would not conflict with any applicable land use plans. Therefore, no impact would occur. No mitigation is required.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The project site is not part of any special plan area, special land use, HCP, or natural community conservation plan (USFWS 2010, CDFG 2010). Therefore, no impact would occur and no mitigation is required.

4.11 Mineral Resources

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
11. MINERAL RESOURCES. Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	❑	❑	❑	■
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	❑	❑	❑	■

Would the Project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. The project site is close to an active oil drilling area immediately to the northeast of the site and is subject to developmental regulations relating to guidelines to mitigate oil drilling area hazards (City of Los Angeles Municipal Code 2011). The project site is on the southern edge of the Wilmington Oil Field. the third largest oil field in the United States, based on cumulative production. The Wilmington Oil Field extends from Torrance to the Harbor District of the City of Long Beach, a distance of approximately 13 miles (Otott and Clarke 1996). Over 30 wells are indicated on DOGGR and ZIMAS maps within one-quarter mile of the project site. One historic oil production well was located on the project site; however this well was plugged in 1987 (Locus 2010). Although located within the Wilmington Oil field, the proposed project would not result in a loss of availability to this resource. The surrounding area is zoned industrial, allowing for oil extraction, and the proposed project would not impair or interfere with opportunities for drilling productive oil wells from other nearby industrial properties. Construction and operation of the proposed sailing center would not directly impact the existing oil or diminish the ability to extract oil. As such, no impacts to mineral resources would occur. No mitigation is required.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. As discussed in Section 4.11(a), the project site is located in close proximity to an active oil drilling area and is subject to developmental regulations relating to guidelines to mitigate oil drilling area hazards (City of Los Angeles Municipal Code 2011). Although located within the Wilmington Oil Field, the proposed project would not prevent or impede access to mineral resources. The proposed project would not prevent extraction from the Wilmington Oil Field. As such, no loss of availability to mineral resources would occur and no mitigation is required.

4.12 Noise

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
12. NOISE. Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	❑	■	❑	❑
b. Exposure of persons to or generation of excessive groundborne vibration or	❑	❑	■	❑
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	❑	❑	■	❑
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	❑	■	❑	❑
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	❑	❑	❑	■
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	❑	❑	❑	■

Would the Project:

a) Expose persons or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact with Mitigation Implemented.

Construction

Construction activities associated with the proposed project would generate airborne noise that would be audible beyond the project boundaries. Construction generally occurs in several discrete phases. Each phase requires a specific complement of equipment with varying equipment type, quantity, and intensity. These variations in the operational characteristics of the equipment change the effect on the noise environment in the project vicinity. The effect of construction noise largely depends on the construction activities being performed on a given day, noise levels generated by those activities, distances to noise-sensitive receptors, and the existing ambient noise environment at the receptors. Noise level ranges for typical construction equipment that could be used for the proposed project are listed in Table 7.

Los Angeles City Noise Impact Assessment Guidelines establish two thresholds of significance depending on the duration of a construction project: 10 dBA above ambient levels for construction activities lasting more than one but less than ten days, and 5 dBA above ambient levels for construction activities lasting more than ten days in any three month period. Ambient noise levels in the vicinity of the

proposed WYSAC are assumed to be 55 dBA. Actual ambient noise levels are highly dependent on intermittent activity in the Port. When cargo vessels near the marinas are actively loading or unloading, ambient Leq levels can exceed 60 dBA (see Appendix D).

Although the project site is zoned as light to heavy manufacturing, approximately 30 liveaboards occupy slips in the marinas within the vicinity of the project site (see Figure 16). Liveaboards residing in the marinas meet the definition in the Los Angeles CEQA Thresholds Guidelines of a sensitive noise receptor.

Table 7. Noise Level Ranges of Construction Equipment*

Equipment	*Levels in dBA at 50 feet*
Front Loader	73-86
Trucks	82-95
Cranes (moveable)	75-88
Jackhammers	81-98
Generators	71-83
Compressors	75-87
Concrete Mixers	75-88
Concrete Pumps	81-85
Back Hoe	73-95
Pile Driving (impact - peaks)	95-107
Pile Driving (Vibratory)	79-91**
Tractor	77-98
Scraper/Grader	80-93
Paver	85-88

Notes:
* Source for most data: Exhibit I.1.1 City of Los Angeles CEQA Guidelines (2006)
** Source: "Airborne Noise Measurements during Vibratory Pile Installation -Technical Memorandum", Washington State Department of Transportation, June, 21, 2010

Accounting for the usage factor of individual pieces of equipment (most equipment does not operate continuously), the lack of local topographical shielding, and limited ground absorption effects from the largely unvegetated surroundings, construction activities on the project site would be expected to result in hourly average composite noise levels of 88 dBA Leq at a distance of 50 feet during the most intense construction activities, assuming a vibratory driver is used to install new dock piles. Maximum average (Leq) noise levels generated by a vibratory driver alone while driving new dock piles would be 79 dBA Leq at 50 feet. These levels would occur only for a limited time (a few days at most) when up to six new piles would be installed for the dock.

Because construction noise associated with a small project footprint is essentially a point source rather than a line source (like a highway), a 6 dBA attenuation for each doubling of distance from the construction site typically is used to estimate receptor impacts. Noise levels associated with construction of the proposed facilities, based on a 6 dB attenuation, are provided in Table 8.

It is important to note that even when pile driving is not occurring, construction noise is estimated to be up to 88 dBA at 50 feet from the composite source due to use of other construction equipment. These noise levels could occur on a daily basis (Monday through Friday from 8am and 4pm) for up to nine months.

Figure 16. Current Location of Liveaboards in the Vicinity of the Proposed Project

Table 8. Noise Impact at Distance from Combined Construction Noise Source (6 dB attenuation with doubling of distance)

Distance from Source (ft)	*Levels in dBA at Distance from 88 dBA Combined Source[1] (With Vibratory Pile Driver)*	*Levels in dBA at Distance from 86 dBA Combined Source[1] (Without Vibratory Pile Driver)*
50	88	86
100	82	80
200	76	74
400	70	68
800	64	62
1,600	58	56
3,200	52	50
6,400	46	44
Note: 1. Using FHWA recommended attenuation rate of 6 dBA for a doubling of distance.		

Liveaboard slips within about 710 feet of the project would experience noise levels over 65 dBA (10 dBA above ambient levels), assuming the use of a vibratory pile driver, for a period of up to several days at most. Slips within about 1,000 feet of the project would experience noise levels over 60 dBA (5 dBA above ambient levels) for the duration of the construction phase (approximately nine months). Therefore, noise levels within 1,000 feet of the project site would exceed the Los Angeles City Noise Impact Assessment Guidelines. However, these impacts could be mitigated with implementation of mitigation measures MM NOISE-1 through MM NOISE-4, discussed below.

Mitigation Measures

MM NOISE-1: **Noise Reduction during Pile Driving**. The contractor shall be required to use sound abatement techniques to reduce both noise and vibrations from pile driving activities. Sound abatement techniques shall include, but are not limited to, the use of vibratory pile driving equipment, which is in good or new condition and is equipped with intake and exhaust mufflers that are in good condition and appropriate for the equipment and sound blankets or aprons. Blankets or aprons are expected to reduce noise levels from the vibratory driver by 5 dBA.

MM NOISE-2: **Restricted Hours for Pile Driving**. In order to reduce the potential noise impact during construction, pile driving activities shall be limited to between the hours of 9:00am and 4:00pm on Monday-Friday.

MM NOISE-3: **Erect Temporary Noise Attenuation Barriers Between Construction Equipment and Sensitive Receptors**. The onshore portion of the construction site shall be shielded acoustically by temporary noise attenuation barriers. The barriers shall be installed at the periphery of the project site to block the line of sight between the equipment and the noise sensitive receptors (liveaboards). To provide the required degree of sound attenuation, the construction sound fence should be built to a minimum height of 8 feet above working grade without cracks or gaps in the face or large or continuous gaps at the base and have a minimum surface weight of 1.0 pound per square foot. The barrier should be installed using construction blanket type barrier materials secured to a cyclone fence or hung from guy wires. Acceptable construction blanket barriers can be rented or purchased from Environmental Noise Control[1] or other vendors. The noise barrier can also be built of 0.75 inch plywood panels if they are overlapped and installed without cracks or gaps at the face or base. Noise attenuation barriers are expected to reduce noise levels by 10 dBA.

[1] http://www.environmental-noise-control.com/noise_control_construction.php for more information.

MM NOISE-4: Temporarily Relocate Liveaboards During Dock Installation Operations. Temporary slips shall be made available to liveaboards presently within 400 feet of the boundary of in-water construction activities for the duration of construction operations involving heavy equipment (e.g. pile driving, grading, excavation, pouring of foundations, etc.).

Impacts After Mitigation

Assuming these mitigation measures are applied for airborne noise (vibratory pile driving, blanketing pile driving equipment, restricted pile driving hours, and erecting noise barriers surrounding the project site between receptors and sources), an overall combined attenuation of project construction noise of 12 dB could be achieved below the estimated worst case impact levels of 70 dB at a distance of 400 feet from the project site, resulting in an impact level of 58 dBA Leq at that distance. This represents an increment of 3 dBA above an ambient level of 55 dBA, which would result in impacts that are less than significant. However, liveaboards closer than 400 feet to construction activities producing more than a combined source level of 88 dB would still be exposed to noise levels that exceeded the threshold, although these impacts would be reduced to less than significant because temporary slips would be made available so that the liveaboards could relocate to an area 400 feet or more from the project boundary.

Operation

Operational noise would involve traffic-generated noise as the employees, students, and their parents arrive and depart. The project site is an industrial area located at the intersection of two streets (Shore Road and Anchorage Road) where most traffic is associated with neighboring yacht basins.

Typically, traffic volumes have to double (increase by 100 percent) before the associated increase in noise levels along roadways exceeds 3 dBA (Caltrans 2009). The proposed project operations would be expected to result in minimal increases in traffic (221 daily trips) (see Section 4.16). As a result, traffic-related noise impacts would be less than significant. No mitigation is required.

b) Expose persons or generate excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact. Construction operations would result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude rapidly with distance from the source. The effects of ground vibration may be imperceptible at the lowest levels; detectable at moderate levels, with low rumbling sounds; and damaging to nearby structures at the highest levels. While ground vibrations from typical construction activities rarely reach levels high enough to cause damage to structures, special consideration must be made when sensitive or historic land uses are near the construction site. The construction activities that typically generate the highest levels of vibration are blasting and impact pile driving.

Vibration-sensitive land uses include fragile/historic buildings, commercial buildings where low ambient vibration is essential for operations within the buildings (e.g., computer chip manufacturers and hospitals), and buildings where people sleep. There are no vibration-sensitive receptors near the project site. As a result, this impact would be less than significant and no mitigation is required.

c) Generate substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact. As discussed in Section 4.12(a), operational noise would involve minor traffic-generated noise as employees, students, and their parents arrive and depart. Consequently,

operation of the proposed project would not result in a noticeable change in the traffic noise of area roadways. As a result, this impact would be less than significant. No mitigation is required.

d) Generate substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact with Mitigation Implemented. As discussed in Section 4.12(a), construction of the proposed project would generate noise levels up to 70 dBA L_{eq} at 400 feet from the construction source. This is a substantial, temporary increase over ambient levels at these locations that exceeds the City's threshold of 10 dBA for construction activities lasting more than one day but less than ten days. Therefore, mitigation measures MM NOISE-1 through MM NOISE-3, listed above, would be necessary to reduce construction noise levels to no more than 58dBA (i.e., within 5 dB of ambient noise levels) at these receptor locations.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or pubic use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project site is not located within 2 miles of a public airport, nor is it located within an airport land use plan. No impact would occur and no mitigation is required.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project site is not located in the vicinity of a private airstrip. Therefore, no noise impacts related to private airstrip uses would occur. No mitigation is required.

4.13 Population and Housing

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
13. POPULATION AND HOUSING. Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	❑	❑	❑	■
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	❑	❑	❑	■
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	❑	❑	■	❑

Would the Project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The proposed project would construct and operate a single story 6,650 square feet classroom building, as well as parking improvements. The proposed project does not include any residential land uses and, therefore, would not result in a direct population increase from construction of new homes or businesses. Further, the proposed project would require relocating the existing utility lines but it would not include extension of roads or other infrastructure. The number of workers involved during construction is small and expected to come from the existing local population. Thus, the proposed project would not result in direct or indirect population growth and no mitigation is required.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. The project site is zoned for industrial uses ([Q]M3-1) and would be located completely within LAHD property. This zoning is incompatible with residential zoning. The proposed project would not displace existing housing or interfere with potential or planned future development of housing nor does the proposed project require the removal of housing. As such, no housing would be displaced by development of the proposed project. No impacts would occur and no mitigation is required.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Less than Significant Impact. As discussed in Section 4.13(b) above, the proposed project would not displace substantial numbers of people or necessitate the construction of replacement housing elsewhere. Mitigation Measure MM NOISE-4 (Section 4.12) could involve temporary relocation of liveaboards in the immediate vicinity of the project site during the in-water construction phase. However, no persons would be permanently displaced as a result of implementation of the proposed project and no impacts would occur. No mitigation is required.

4.14 Public Services

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
14. PUBLIC SERVICES.				
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire protection?	❑	❑	■	❑
ii) Police protection?	❑	❑	■	❑
iii) Schools?	❑	❑	❑	■
iv) Parks?	❑	❑	❑	■
v) Other public facilities?	❑	❑	❑	■

Would the Project:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

i) Fire Protection?

Less than Significant Impact. LAFD provides fire protection and emergency services for the project site. Fire protection capabilities are based on the distance from the emergency to the nearest fire station and the number of simultaneous emergency or fire-related calls. LAFD facilities in the vicinity of the project site include land-based fire stations and fireboat companies. In the harbor area, Battalion 6 is responsible for all of Wilmington and its waterfronts, Terminal Island and all of the surrounding water, San Pedro, Harbor City, and Harbor Gateway. There are 10 fire stations within these geographical areas, which consist of fire boats, hazardous material squads, paramedic and rescue vehicles, three truck companies, an urban search and rescue unit, and a foam tender apparatus. The 10 fire stations within the Port area include:

- Station 38 – Located at 124 East I Street, Wilmington, Station 38 is a taskforce station with a staff of nine that maintains a truck and engine company and paramedic ambulance. This station is located approximately is 1.3 miles northwest of the project site.
- Station 49 – Located at 400 Yacht Street, Berth 194 in Wilmington, Station 49 has a single engine company, two boats, a rescue ambulance, and is Battalion 6 Headquarters. There are 13 staff members at this station, which is located approximately 0.5 mile to the northwest of the project site across the harbor.

- Station 111 – Located at 1444 S. Seaside Avenue on Terminal Island, Station 111 has one fireboat and three staff members. This station is located approximately 3 miles from the site.
- Station 40 – Located at 330 Ferry Street on Terminal Island, Station 40 is equipped with a fire engine and two ambulances and has four firefighters and two paramedics on staff. This station is located approximately 1.6 miles from the project site.

The proposed project would be reviewed by the LAFD prior to commencement of construction activities. Further, the proposed project would comply with the City of Los Angles Municipal Code requirements and any LAFD requirements. The proposed project would not increase the demand for fire services and would not require the expansion of existing facilities nor the construction of new fire facilities. The impact would be less than significant and no mitigation is required.

ii) Police protection?

Less than Significant Impact. The project site is within the jurisdiction of the Los Angeles Port Police (Harbor Police). The Harbor Police are responsible for patrol and surveillance of Port property, including 12 square miles of landside property and 43 miles of waterfront. Port Police offices are located in the Harbor Administration Building at 425 South Palos Verdes Street in San Pedro. The Harbor Police Headquarters and office building is located at 330 S. Centre Street in San Pedro directly west of the Harbor Administration Building. Dive Unit facility boats and offices/lockers are located on 954 South Seaside Avenue on Terminal Island. Marine Unit boats and a small office are located at Berth 84, with additional offices in the Crowley Building nearby a Harbor Police training facility located at 300 Ferry Street. The Harbor Police have two beat/patrol areas in Wilmington. An Interagency Task Force Unit is located at 239 North Avalon Boulevard in Wilmington. In addition, there is a Wilmington substation at 300 Water Street near Berth 195, which is located 1.5 miles southwest of the project site.

Harbor Police are authorized for a total of 227 positions in fiscal year 2010–2011. The amount of total sworn staff is 127. The Harbor Police do not estimate the number of employed officers based on proposed development or anticipated population for a given area. Their staff/sworn officer totals are based on current Homeland Security data and levels of security at other ports of corresponding size and activity. Harbor Police are not a police agency driven by calls for service. The Harbor Police service levels are considered adequate in the project vicinity. The impact would be less than significant and no mitigation is required.

iii) Schools?

No Impact. The proposed project would construct a single story 6,650 square feet structure to house classrooms and support facilities such as offices and storage. The proposed project would not result in any increase in residential population. No housing or employment opportunities would be provided by the proposed project. Therefore, the proposed project would not result in new students or increase in demand on local schools. No impacts to schools would occur and no mitigation is required.

iv) Parks?

No Impact. The proposed project would not develop any residential uses or attract any new permanent residents that would increase the demand on local parks. Therefore, no impacts related to parks would occur. No mitigation is required.

v) Other Public Facilities?

No Impact. The proposed project would not develop any residential uses or attract any new permanent residents that would increase the demand on other public facilities. The proposed project would be operated as a youth sailing center, but it also would provide opportunities for hosting other public activities. Therefore, no adverse impacts on other public facilities would occur. No mitigation is required.

4.15 Recreation

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
15. RECREATION.				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	❑	❑	❑	■
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	❑	■	❑	❑

Would the Project:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed project would not develop any residential uses and, thus, would not generate new permanent residents. Thus, the proposed project would not result in an increased demand on existing parks and recreational facilities such that substantial physical deterioration would occur or be accelerated. Therefore, no impact would occur. No mitigation is required.

b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Less than Significant with Mitigation Incorporated. The proposed project would not result in any new permanent residents that would increase the demand on local recreational facilities. Further, the proposed project would not promote or indirectly induce new development that would require the construction or expansion of recreational facilities other than the sailing center.

While construction and operation of the proposed project would not have an adverse physical effect on the environment, the proposed project would provide new recreational opportunities (sailing and other on-water activities) for sensitive receptors which would entail risks to personal safety. Sailing exercises also present risks of interferences between sailors and commercial vessels operating in the harbor. Mitigation measure MM REC-1, listed below, would be implemented to avoid conflicts between inexperienced sailors and commercial shipping activities.

Because the program would include sailing exercises, there is a risk that sailors could fall into the water. The proposed project operator proposes to coordinate with local boys and girls clubs (e.g., YMCA) to provide off-site swimming lessons and first aid classes to youths interested in participating in the sailing program. The proposed project operator would require that all students wear life vests while sailing. Also, a WYSAC instructor in a motorized inflatable or launch would accompany the students during sailing exercises. The instructor would trained in first aid and CPR, and would carry a VHF radio and other safety equipment.

Additionally, the proposed project would attract sensitive receptors (8 to 18 year old youths) to conditions with potential health risks associated with the presence of sediment contaminants and waterborne pathogens. Results of an HRA (Appendix C) indicate that the estimated cancer risks and noncancer hazards associated with the proposed project are below levels of concern. The primary exposure route for humans to chemical contaminants in the marine environment typically is via consumption of seafood. However, the proposed project would not provide an opportunity for catching or consuming seafood from the harbor, so this exposure pathway would not contribute to adverse human health risks. As discussed previously, contaminants responsible for water quality impairments in the Consolidated Slip are associated with bottom sediments and with tissues of marine organisms. The potential for direct exposures (ingestion) to bottom sediments or tissues during sailing exercises is minimal.

There is also a potential for health effects associated with pathogens in surface water if surface water ingestion occurs during periods of stormwater discharge. As mentioned, results from water quality monitoring within the harbor indicate that the majority of the AB 411 and Basin Plan exceedances for bacterial levels occur following storm events. The majority of the water samples collected during the dry weather monitoring events have non-detectable levels of indicator bacteria.

Risks to human health would be mitigated by implementing mitigation measures MM REC-2 through MM REC-4 listed below.

Mitigation Measures

MM REC-1. **Coordinate Sailing Exercises with Port Pilots**. To avoid potential interferences between sailing exercises and commercial vessel traffic in the vicinity of the East Basin, the WYSAC operator shall coordinate with the Port Pilots to communicate movements in the East Basin and within the Port. The WYSAC operator shall not conduct sailing exercises at times when commercial vessels are entering or leaving the East Basin, especially Berths 195-199.

MM REC-2. **Prohibit Sailing Exercises for 96 hours Following a Storm Event**. To minimize potentials for exposures to waterborne pathogens, activities in or on the water shall cease for 96 hours after a storm water event to eliminate contact with the water and allow bacteria concentrations to drop to acceptable levels.

MM REC-3. **Boat Tipping Exercises in the East Basin are Prohibited**. Due to contaminated sediments, shallow depth, and water quality issues in the vicinity, no swimming or tipping exercises within the proposed project area shall occur. In general, contact with the water by youth shall be minimized.

MM REC-4. **Sailing Exercises Allowed in Designated Areas Only**. In consideration of sediment and water quality issues and navigational safety, sailing activities shall be allowed only in the designated areas.

With implementation of these mitigation measures, impacts would be less than significant.

4.16 Transportation and Traffic

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
16. TRANSPORTATION AND TRAFFIC. Would the project:				
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	❑	❑	■	❑
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	❑	❑	■	❑
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	❑	❑	❑	■
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	❑	❑	■	❑
e. Result in inadequate emergency access?	❑	❑	■	❑
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	❑	❑	❑	■

This analysis provides a summary of the Technical Memorandum prepared by Fehr & Peers, Inc. in August 2011. The traffic study is included as Appendix E and is incorporated, herein, by reference.

Would the Project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less than Significant Impact. Traffic conditions with the proposed project were compared to the applicable baseline to determine the proposed project impacts. Impacts were assessed by quantifying differences between baseline conditions and baseline plus project.

The traffic analysis was based on the assumption that on an average day the WYSAC would be staffed by up to 8 employees/volunteers to serve 75 students. It was estimated that half of the students would arrive at the project site by private vehicle and the other half would travel in four buses/vanpools to participate in three sailing classes. The project is estimated to generate 221 daily trips.

During the morning peak hour, up to eight employees would arrive via privately owned vehicles (POVs), each generating one inbound trip. With 25 students anticipated for each class, it was assumed that half are dropped off by POV with an average of 1.2 students per vehicle, resulting in 11 inbound and 11 outbound trips. The other half of the students would arrive in up to two buses or vanpools. These vehicles would arrive during the A.M. peak hour to drop-off students and are anticipated to wait for the class to end before departing, thus only the inbound trip occurs during the AM peak hour. Since the buses or vanpools would be larger vehicles, a passenger equivalency factor of two was applied to each vehicle, resulting in four total inbound vehicles. The final component of the trip generation includes the community room. Most of the activities at the community center are anticipated to occur during off-peak hours; however, to provide a conservative analysis, the standard trip generation rate for a community center (land use code 495 in "Trip Generation, 8th Edition," ITE, 2008) was applied, resulting in two inbound trips and one outbound trip during the morning peak hour. This results in an estimate of 37 morning peak hour trips, of which 25 are inbound and 12 are outbound.

During the afternoon peak hour, up to eight employees would depart via POV, each generating one outbound trip. With 25 students anticipated for each class and two afternoon classes, it is estimated that there would be 21 inbound and 21 outbound trips from POVs picking-up students. The remaining students would depart in up to two buses or vanpools. These vehicles would arrive before the PM peak hour to drop off students and are anticipated to wait for the class to end before departing during the PM peak hour; thus, only the outbound trip occurs during the P.M. peak hour, resulting in four outbound vehicles. The final component of the trip generation includes the community room, resulting in one inbound trip and two outbound trips. This results in an estimated 57 afternoon peak hour trips, of which 22 are inbound and 35 are outbound. The traffic analysis used these values to calculate the potential impacts to local roadway intersections and freeway segments in relation to the applicable acceptable levels of service (LOS).

The analysis studies three key intersections near the project site during the A.M. (7am -9am) and P.M. (4pm -6pm) peak periods of travel for potential significant impacts. The study intersections are:

1. Alameda Street and Anaheim Street;
2. Henry Ford Avenue and Anaheim Street; and
3. Henry Ford Avenue and SR 47 Terminal Island Freeway Ramps.

These intersections are shown in Figure 17. As described in Appendix E, the *Los Angeles Department of Transportation (LADOT) Traffic Study Policies and Procedures* (December 2010)" stipulates using the Critical Movement Analysis (CMA) method to assess levels of service. For signalized intersections, LOS values were determined by using CMA methodology contained in the Transportation Research Board's Circular No. 212 – Interim Materials on Highway Capacity.

LOS values are used by agencies to determine the adequacy of the operation of roadway intersections. LOS A is excellent and LOS D is the minimum desirable LOS. The City of Los Angeles has a sliding scale of significance thresholds for service levels C, D, E and F. The impact would be considered less than significant if the final LOS was A or B. Therefore, a project would have a significant impact on transportation/circulation upon operation of the project if it increases an intersection's Volume/Capacity (V/C) ratio in accordance with the following guidelines:

- V/C ratio increase greater than or equal to 0.040 if final LOS is C;
- V/C ratio increase greater than or equal to 0.020 if final LOS is D; or
- V/C ratio increase greater than or equal to 0.010 if final LOS is E or F.

Figure 17. Project Trip Distribution

Table 9 summarizes comparisons of the LOS at the key intersections for the CEQA Existing baseline and the CEQA existing baseline plus proposed project scenarios. As shown in the table, the proposed project would not result in significant impacts under existing plus project conditions.

Table 9. Existing (2011) Levels of Service

No.	*Intersection*	*Peak Hour*	*Existing Conditions*		*Existing plus Project*		*V/C*	*Significant*
			V/C	*LOS*	*V/C*	*LOS*	*Change*	*Impact?*
1**	Alameda St & Anaheim St	A.M.	0.503	A	0.510	A	0.007	NO
		P.M.	0.673	B	0.685	B	0.012	NO
2*	Henry Ford Ave & Anaheim St	A.M.	0.350	A	0.355	A	0.005	NO
		P.M.	0.645	B	0.651	B	0.006	NO
3*	Henry Ford Ave & SR-47 Ramps	A.M.	0.195	A	0.200	A	0.005	NO
		P.M.	0.271	A	0.284	A	0.013	NO

Notes:
* Intersection is currently operating under ATSAC system.
** Intersection is currently operating under ATSAC and ATCS systems.

Table 10 compares the LOS at the key intersections for the cumulative (2014) baseline and the cumulative (2014) baseline plus project scenarios. As shown in the table, the proposed project would not result in significant impacts under cumulative conditions.

Table 10. Future (2014) Levels of Service

No.	*Intersection*	*Peak Hour*	*Future Conditions*		*Future plus Project*		*V/C*	*Significant*
			V/C	*LOS*	*V/C*	*LOS*	*Change*	*Impact?*
1**	Alameda St & Anaheim St	A.M.	0.521	A	0.528	A	0.007	NO
		P.M.	0.696	B	0.708	C	0.012	NO
2**	Henry Ford Ave & Anaheim St	A.M.	0.332	A	0.338	A	0.006	NO
		P.M.	0.635	B	0.642	B	0.007	NO
3**	Henry Ford Ave & SR 47 Ramps	A.M.	0.173	A	0.178	A	0.005	NO
		P.M.	0.251	A	0.264	A	0.013	NO

Note:
** Intersection will operate under ATSAC and ATCS systems.

The proposed project would not result in traffic impacts and would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. The impact would be less than significant. No mitigation is required. Please refer to Sections 4.16 (b) and 4.16(f) below.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less than Significant Impact. Pursuant to the Los Angeles County Congestion Management Program, administered by the Los Angeles County Metropolitan Transportation Authority, a traffic impact analysis is required at the following:

- CMP arterial monitoring intersections, including freeway on- or off-ramps, where the proposed project would add 50 or more trips during either the A.M. or P.M. weekday peak hours; and
- CMP freeway monitoring locations where the proposed project would add 150 or more one-way trips during either the A.M. or P.M. weekday peak hours.

One CMP arterial monitoring station is located in the vicinity of the project site (Alameda Street & Pacific Coast Highway (PCH), located approximately 2 miles from the project site). However, the proposed project would add fewer than 50 trips during either the A.M. or P.M. peak hours.

Two CMP freeway monitoring stations are located in the vicinity of the project site; however, the project would add fewer than 150 one-way trips during the A.M. or P.M. peak hours. The nearest CMP freeway monitoring stations are listed below:

- I-110 south of C Street; and
- I-710 between Willow Street and PCH.

Therefore no further CMP analysis is necessary, and it is concluded that the proposed project would have a less than significant impact on the CMP monitoring network. No mitigation is required.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The project site is not located within 2 miles of a public airport, nor is it located within an airport land use plan. The nearest public airport/public use airport is the Long Beach Airport, located approximately 10 miles northeast of the project site. The proposed project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. The proposed project would not result in permanent aerial structures. No change to air traffic patterns would occur. As such, no impacts would occur. No mitigation is required.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than Significant Impact. The proposed project would construct a new 6,650 square feet facility to provide a meeting space and administrative offices supporting educational sailing and on-site activities. Improvements to the parking lot and driveways would be made as part of the proposed project and designed in accordance with the standards used by the LAHD and City of Los Angeles. Therefore, no impacts would occur and no mitigation is required.

e) Result in inadequate emergency access?

Less than Significant Impact. The project site is accessed by existing roadways that link it to the surrounding community. The proposed project includes site access improvements to upgrade the driveways on Anchorage Road and Shore Road, as well as improvements to internal circulation and parking areas. Plans for the proposed project would be subject to review by the City of Los Angeles and the LAFD to ensure that emergency access to the project site is adequate. As such, the proposed project would result in less than significant impacts related to emergency access. No mitigation is required.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. The proposed project site is not served by public transit, and all trips are anticipated to occur by private automobile or buses/vanpools. The closest bus stop to the proposed WYSAC facility is on Anaheim Street at Henry Ford Avenue, approximately one mile from the WYSAC facility. No bicycle or pedestrian facilities would be affected by the proposed project. As such, the project would not have an impact on the performance of these services or facilities. No mitigation is required.

4.17 Utilities and Service Systems

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
17. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	❑	❑	■	❑
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❑	❑	■	❑
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❑	❑	■	❑
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	❑	❑	❑	■
e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?\	❑	❑	■	❑
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	❑	❑	■	❑
g. Comply with federal, state, and local statutes and regulations related to solid waste?	❑	❑	■	❑

Would the Project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less than Significant Impact. The proposed project would discharge wastewaters to the existing sanitary sewer system and would not require an NPDES permit for a point source discharge from the RWQCB. The project site is serviced by the City of Los Angeles Bureau of Sanitation's Terminal Island Water Reclamation Plant (TIWRP). The proposed project would not provide new housing or a large number of employment opportunities, and no population increase would result from the construction or operation of the proposed project. The proposed project would not alter the current discharge from TIWRP and would not exceed wastewater treatment requirements of the RWQCB. Further, the proposed project would not involve any industrial process that might require an Industrial Waste permit from the Bureau of Sanitation. Impacts would be less than significant. No mitigation is required.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant Impact. As discussed in Section 4.17(a), the project site is serviced by the City of Los Angeles Bureau of Sanitation's TIWRP. TIWRP has an average dry weather flow capacity of 30 million gallons per day (MGD) (City of Los Angeles, Bureau of Sanitation 2005, DWP 2005). TIWRP currently operates at approximately 58 percent capacity, treating 17.5 MGD in 2008/09.

In the 2005 Urban Water Management Plan, Los Angeles Department of Water and Power (LADWP) forecasted that the City of Los Angeles would grow 0.4 percent annually over the next 25 years, or by approximately 368,000 persons. Total citywide demand for water is predicted to be 755,000 acre-feet in 2025 and 766,000 acre-feet in 2030. According to the 2005 Urban Water Management Plan, under wet, average, and dry years throughout the 25-year projection period, LADWP's supply portfolio is expected to be reliable, with adequate supplies available to meet projected demands through 2030 (DWP 2005).

No population increase would result from the construction and operation of the proposed project. In addition, the proposed project would not provide new housing or many employment opportunities. Construction of the proposed project would not require new water or wastewater facilities or the expansion of existing facilities. Operation of the proposed project would require minimal amounts of water. Therefore, impacts would be less than significant, and no mitigation is required.

c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less than Significant Impact. The proposed project would install a new stormwater drainage and outfall system at the project site that would allow for discharge of untreated runoff to the marina. The land portion of the project site is small (less than one acre), and the runoff volumes accommodated by the stormwater system also would be proportionally small. Installation of the new storm drain system would be in compliance with City of Los Angeles and LAHD requirements and would not cause significant impacts to existing resources at the project site or adjacent properties. Therefore, impacts would be less than significant. No mitigation is required.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

No Impact. The proposed project operations would result in an estimated water demand of 1,000 gallons/day based on a conservative LADWP water consumption factor of 150 gallons per day per 1,000 square feet for office space. This amounts to approximately 1.1 acre-feet t per year, which is comparable to the amount typically consumed by an average household. As discussed in Section 4.17(b), LADWP's water supply portfolio is expected to be reliable, with adequate supplies available to meet projected demands through 2030. As such, the proposed project would have adequate water supply and facilities to service the site. No impacts would occur and no mitigation is required.

e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant Impact. As discussed in Section 4.17(a), the proposed project would not provide new housing or a large number of employment opportunities, and no population increase would result from construction or operation of the proposed project. Because the proposed project would not result in a population increase, and the volume of wastewater generated by proposed project operations would not

exceed existing capacity, new wastewater treatment facilities, or the expansion of existing facilities would not be required. Impacts would be less than significant. No mitigation is required.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less than Significant Impact. Solid waste would be generated during construction of the proposed project. Construction and demolition activities would generate solids debris that would include wood and treated wood wastes. Although hazardous materials could be encountered and require disposal during construction activities, several contaminated soil treatment and disposal options and Class I landfills are available for off-site disposal that have adequate capacity. The proposed project would generate approximately 77 tons of solid waste per year, based on a rate of 11.54 tons per 1,000 square feet (6.65 x 11.54) (SCAQMD 2011). This is a conservative estimate as it does not take into account potential recycling measures of the proposed LEED Silver building.

The Solid Waste Integrated Resource Plan is a long-range master plan for solid waste management in the City of Los Angeles. It proposes an approach for the City to achieve a goal of diverting 70 percent of solid waste from landfills by 2013 and 90 percent by 2025. The Solid Waste Integrated Resource Plan recommends a series of policies, programs and facilities to be implemented over the next 20 years. The proposed project would be required to conform to the policies and programs of the Solid Waste Integrated Resource Plan. Compliance with the Solid Waste Integrated Resource Plan would ensure sufficient permitted capacity to serve the proposed project. As such, impacts would be less than significant. No mitigation is required.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Less than Significant Impact. As discussed in Section 4.17(f), the proposed project would be required to conform to the policies and programs of the Solid Waste Integrated Resource Plan. Compliance with the Solid Waste Integrated Resource Plan would ensure sufficient permitted capacity to serve proposed project. As such, impacts would be less than significant. No mitigation is required.

4.18 Mandatory Findings of Significance

Environmental Checklist

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
18. MANDATORY FINDINGS OF SIGNIFICANCE.				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	❑	■	❑	❑
b. Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.	❑	■	❑	❑
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	❑	❑	■	❑

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Less than Significant with Mitigation Incorporated. As described above, the proposed project would not alter or reduce habitat for fish or wildlife species or otherwise impact biological resources. To minimize potential impacts to marine species from underwater noise during construction, mitigation measure MM BIO-1 would be implemented, Additionally, potential impacts to unknown cultural resources are considered unlikely because the land portion of the project site is artificial fill that was placed after 1928 and the site has been used for oil production. To avoid potential impacts to buried historical resources, mitigation measures MM CUL-1 and MM CUL-2 are provided. With the implementation of the above mitigation measures, the proposed project would have a less than significant impact on biological, cultural, archaeological, and paleontological resources.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less than Significant with Mitigation Incorporated. The proposed project would result in no impacts to agricultural resources, land use planning, and mineral resources. Implementation of the identified project-specific mitigation measures and/or compliance with applicable codes, ordinances, laws, and other

required regulations would reduce the magnitude of any impacts associated with the proposed project to a level of less than significant.

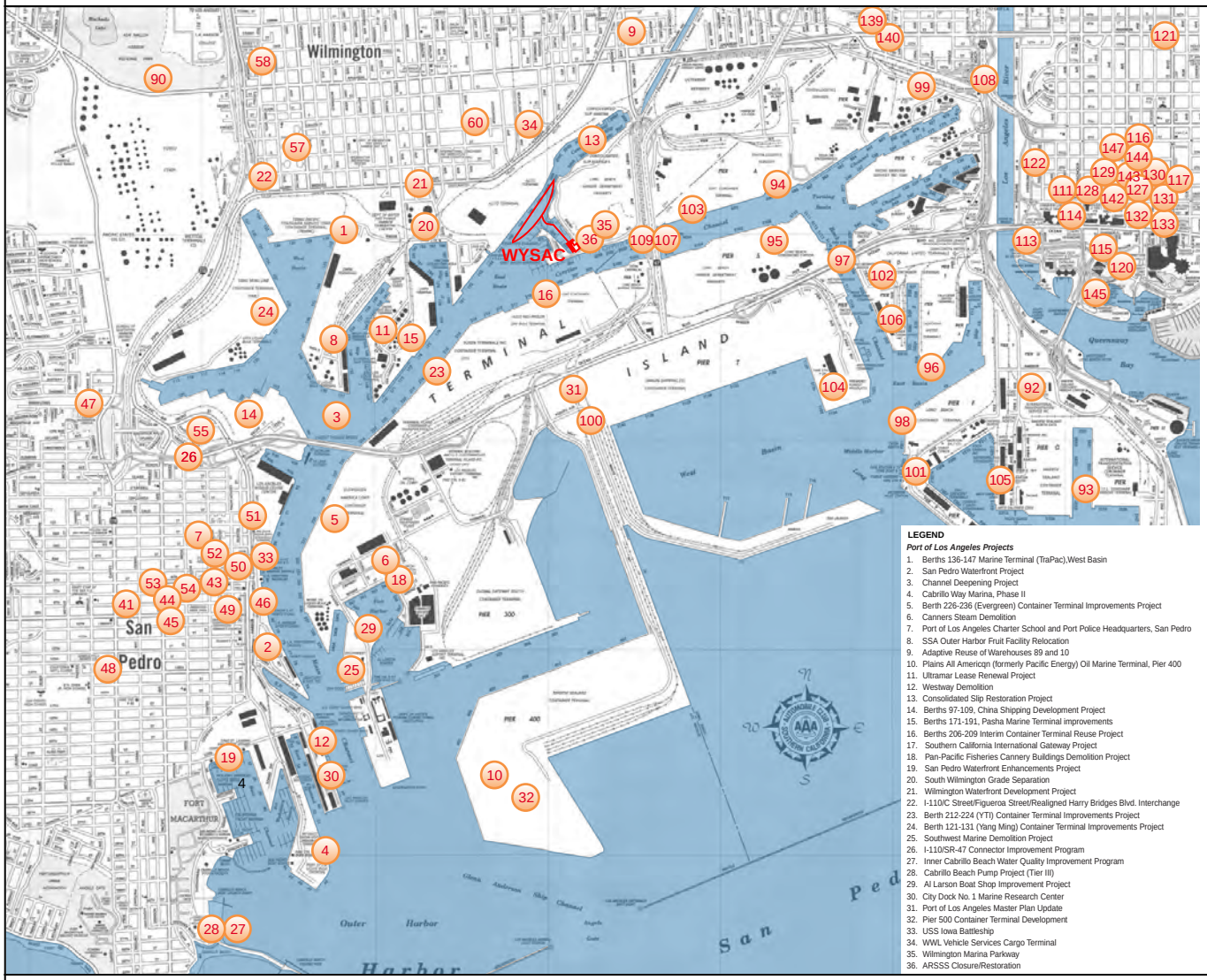
The locations of other ongoing or reasonably foreseeable future projects that could contribute to cumulatively considerable impacts are shown in Figure 18, and the project descriptions are summarized in Table 11. The ARSSS closure, Wilmington Marinas/Marina Parkway, and Consolidated Slip Sediment Remediation Projects are of greatest relevance to considerations of cumulative impacts from the proposed project. A separate project also may install a fiber optic cable that would require trenching through the WYSAC project site.

For the ARSSS closure project, the LAHD plans to discontinue use of the site for storage of dredged materials. Existing materials stored at the site will be treated with a chemical bonding agent that would act as a site cap and minimize potential erosion or dispersion by wind or runoff. As mentioned in Section 2.1.2, the ARSSS site was closed in December 2011. Previous surveys of potential air quality impacts from the ARSSS site recommended that soil particulate management occur and that dust control be performed at all times. Specifically, dust control measures will be implemented in 2012. Due to the introduction of youth sensitive receptors to the area (along with the approximately 30 liveaboard residents in the adjacent marinas), WYSAC operations shall not begin until the LAHD implements a soil particulate management program with effective dust control measures at the ARSSS site. Eventually, the site will be converted to a park as part of the proposed Wilmington Marina/Marina Parkway Project.

The conceptual plan for the Wilmington Marina/Marina Parkway Project (http://www.portoflosangeles.org/pdf/Wilmington_Marina_Planning_Study_Pres.pdf) includes the following elements: approximately 10 acres of native landscaping; 1.5 acres of wetlands; 5.7 acres of landscaped buffer, 5.3 acres of turf and landscaped buffer; 5.3 acres of hardscape and trails; and 1.6 acres of new parking. The project also would provide road improvements that would include a 12-feet wide pathway on Anchorage Road and a 4-feet wide side on Shore Road, as well as reconfiguring the intersection of Anchorage and Shore Roads. These elements would provide better access for buses and vans into and out of the WYSAC facility, as well as overflow parking, and connectivity to other recreational facilities.

The Consolidated Slip, located at the mouth of the Dominguez Channel, is the largest remaining toxic hotspot in the harbor. As discussed in the WRAP (POLA and POLB 2009), LAHD recognizes that legacy contamination must be addressed as part of future TMDL implementation because the majority of the 303(d)-listed areas are also areas of legacy contamination and the TMDLs will determine how, and to what level, those areas are remediated. LAHD is working with the regulatory agencies and other TMDL stakeholders to develop scientifically-based TMDLs for the harbor. Once those TMDLs are established, a comprehensive implementation plan will be developed to strategically manage remaining legacy sediments (hotspots) and comply with TMDLs. The remedial process ultimately will be driven by the regulatory agencies.

As discussed, the proposed project would not adversely affect agriculture, land use, or mineral resources, and the proposed project would not contribute to cumulative impacts to these resources. Proposed project-related noise impacts would be associated with short-term pile-driving operations and other construction activities, which would not result in cumulatively considerable impacts in connection with other past, current, and future projects due to the limited geographic range of project-related noise propagation. Additionally, the proposed project would not contribute to a cumulatively considerable increase in the demand for public services, recreation, or utilities, or construct facilities or infrastructure that would contribute cumulatively to risks of seismic, flooding, or tsunami damage or public safety related to geology and hazardous materials. However, the proposed project would result in minor air emissions that would contribute to cumulative air quality conditions and GHG impacts; daily vehicle trips that could contribute cumulatively to loss of service and traffic impacts; and stormwater discharges that could contribute to contaminant loadings to water quality-impaired portions of the harbor.



LEGEND

Port of Los Angeles Projects

1. Berths 136-147 Marine Terminal (TraPac),West Basin
2. San Pedro Waterfront Project
3. Channel Deepening Project
4. Cabrillo Way Marina, Phase II
5. Berth 226-236 (Evergreen) Container Terminal Improvements Project
6. Canners Steam Demolition
7. Port of Los Angeles Charter School and Port Police Headquarters, San Pedro
8. SSA Outer Harbor Fruit Facility Relocation
9. Adaptive Reuse of Warehouses 89 and 10
10. Plains All Americqn (formerly Pacific Energy) Oil Marine Terminal, Pier 400
11. Ultramar Lease Renewal Project
12. Westway Demolition
13. Consolidated Slip Restoration Project
14. Berths 97-109, China Shipping Development Project
15. Berths 171-191, Pasha Marine Terminal improvements
16. Berths 206-209 Interim Container Terminal Reuse Project
17. Southern California International Gateway Project
18. Pan-Pacific Fisheries Cannery Buildings Demolition Project
19. San Pedro Waterfront Enhancements Project
20. South Wilmington Grade Separation
21. Wilmington Waterfront Development Project
22. I-110/C Street/Figueroa Street/Realigned Harry Bridges Blvd. Interchange
23. Berth 212-224 (YTI) Container Terminal Improvements Project
24. Berth 121-131 (Yang Ming) Container Terminal Improvements Project
25. Southwest Marine Demolition Project
26. I-110/SR-47 Connector Improvement Program
27. Inner Cabrillo Beach Water Quality Improvement Program
28. Cabrillo Beach Pump Project (Tier III)
29. Al Larson Boat Shop Improvement Project
30. City Dock No. 1 Marine Research Center
31. Port of Los Angeles Master Plan Update
32. Pier 500 Container Terminal Development
33. USS Iowa Battleship
34. WWL Vehicle Services Cargo Terminal
35. Wilmington Marina Parkway
36. ARSSS Closure/Restoration

Potential Port-Wide Operational Projects

37. Extended Terminal Gates (Pier Pass)*
38. Optical Character Recognition*
39. Truck Driver Appointment System

ICTF Joint Powers Authority

40. Union Pacific Railroad ICTF Modernization Project

Community Projects San Pedro

41. Pacific Corridors Redevelopment Project*
42. Ponte Vista/Naval Site*
43. Centre Street Lofts
44. A-Delta Realty
45. 8th Street Lofts
46. San Pedro Plaza Park
47. Cabrillo Avenue Extension
48. Single Family Homes (Gaffey Street0
49. Mixed-Use Development, 281 W. 8th Street
50. Palos Verdes Urban Village
51. 319 N. Harbor Boulevard
52. Vue
53. La Salle Lofts
54. Bank Lofts
55. Temporary Little League Park

Community of Wilmington Projects

56. Distribution Center and Warehouse*
57. Dana Strand Public Housing Development Project
58. 931 N. Frigate
59. LASUD SR Span K-8 School 1234 No. Avalon Blvd.*
60. Wilmington Redevelopment Plan Amendment/Expansion Project
61. Banning Museum and Banning Park*

Projects in Harbor City, Lomita, and Torrance

62. Harbor City and Development Center*
63. Kaiser Permanente South Bay Master Plan*
64. Ponte Vista, 26900 Western Avenue (near Green Hills Park), Lomita*
65. 2244 Pacific Coast Highway (new address: 25820 Lucille), Lomita*
66. 25316 Ebony Lane, Lomita*
67. 25819-25 Eshelman Avenue, Lomita*
68. 262nd/Western, Lomita*
69. 25829-25837 Eshelman Avenue, Lomita*
70. Sepulveda Industrial Park, Torrance*
71. Hasan Ud-Din Hashmi 1918 Artesia Blvd., Torrance*
72. Dan Withee 24510 Hawthorne Blvd., Torrance*
73. Sunrise Senior Living 25535 Hawthorne Blvd., Torrance*
74. Capellino & Associates 1104 Sartori Ave., Torrance*
75. Linda Francis 18900 Hawthorne Blvd., Torrance*
76. Dean & Jan Thomas 3525 Maricopa St., Torrance*
77. Dave O. Roberts 435 Maples Ave., Torrance*
78. Imperial Investment & Development 2433 Moreton St., Torrance*
79. Torrance RF, L.L.C. 18203 Western Ave., Torrance*
80. Continental Development Corp., 23248 Hawthorne Blvd., Torrance*
81. Charles Belak-Berger 3720 Pacific Coast Highway, Torrance*
82. BP West Coast Products 18180 Prairie Ave., Torrance*
83. Graceway Church 431 Madrid Ave., Torrance*
84. Providence Health System 5215 Torrance Blvd., Torrance*
85. Torrence Memorial Medical Center 3330 Lomita Blvd., Torrance*
86. Chuck Stringfield 19701 Mariner Ave., Torrance*
87. Gospel Venture International Church 17811 Western Ave., Torrance*
88. Continental Development 2843 Lomina Blvd., Torrance*
89. Mark Sachs 2909 Pacific Coast Highway, Torrance*
90. Wilmington Drain Multi-Use & Machado Lake Ecosystem Rehabilitation Project, Harbor City/Lomita
91. Rockefeller Group Professional Center Development*

Port of Long Beach Projects

92. Middle Harbor Terminal Redevelopment, Port of Long Beach
93. Piers G & J Terminal Redevelopment Project, Port of Long Beach
94. Pier A East, Port of Long Beach
95. Pier S Marine Terminal, Port of Long Beach
96. Administration Building & Maintenance Facility Replacement Project
97. Gerald Desmond Bridge Replacement Project, Port of Long Beach & Caltrans/FHWA
98. Chemoil Marine Terminal, Tank Installation, Port of Long Beach
99. Pier B Rail Yard Expansion
100. Terminal Island Rail Projects
101. Mitsubishi Cement Corporation Facility Modifications
102. Polaris Aggregate Terminal
103. Pier A West Remediation Project
104. Total Terminal International Grain Export Terminal Installation Project
105. Sulex Demolition Project
106. Cemera Long Beach Aggregate Terminal

ACTA and Caltrans Projects

107. Schuyler Heim Bridge Replacement & State Route (SR) 47 Terminal Island Expressway
108. I-710 (Long Beach Freeway) Major Corridor Study
109. Cerritos Channel Bridge

City of Long Beach Projects

110. Shoreline Gateway Project*
111. West Gateway Redevelopment Project
112. 2nd+PCH*
113. Golden Shore Master Plan
114. Press-Telegram Mixed Use Development
115. Sierra Hotel Project
116. Long Beach Downtown Plan
117. Art Exchange
118. North Village Center*
119. Kroc Community Center*
120. Hotel Sierra, 290 Bay Street
121. 1235 Long Beach Blvd., Mixed-Use Project
122. Douglas Park Rezone Project*
123. Ocean Blvd. Project*
124. Drake Chavez Park Expansion*
125. Poly Gateway Project, Pacific Coast Highway & Martin Luther King Jr. Avenue*
126. 15th St. & Alamitos Ave. Open Space Development Intersection Improvements*
127. WPA Mosaic Open Space Development
128. Lyon West Gateway Residential Development, Broadway at Magnolia Ave. & 3rd St.
129. Pine-Pacific, bounded by Pine & Pacific Avenues, and 3rd & 4th Streets
130. Lofts at 3rd & Promenade
131. Broadway Block Development, Broadway, Long Beach Blvd., 3rd St., and Elm Ave.
132. Long Beach Transit/Visitor Information Center, downtown Long Beach
133. Hotel Esterel, Promenade at Broadway
134. Promenade Master Plan, between Shoreline Dr. & 5th Street*
135. Admiral Kidd Park Expansion Site, Santa Fe at Willard*
136. Pacific Coast Highway Streetscape Improvement*
137. Everbright Paper Recycling Center*
138. Redbarn Pet Products*
139. Smith-Co Construction
140. J.C.D.S. Properties - Sudduth Tire
141. Westside Storm Drain Improvement Project*
142. 250 Pacific Avenue
143. Acres of Books
144. 495 Promenade North
145. 100 Aquarium Way
146. 2010 Ocean Blvd.*
147. 433 Pine Ave.
148. 600 E. Broadway*

**Project not shown on figure because it is not specific to a location, or the location has not been determined.*

Scale
0 Mile 1
Source: POLA 2011

Base map source: California State Automobile Association 2005.

Figure 18. Location of Cumulative Projects in the Vicinity of the Proposed Project

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
Port of Los Angeles Projects			
1	Berth 136-147 Marine Terminal, West Basin	Element of the West Basin Transportation Improvement Projects. Expansion and redevelopment of the TraPac Marine Terminal to 243 acres, including improvement of Harry Bridges Boulevard and a 30-acre landscaped area, relocation of an existing railyard and construction of a new on-dock railyard, and reconfiguration of wharves and backlands (includes filling of the Northwest Slip, dredging, and construction of new wharves).	EIR certified on December 6, 2007. Construction started in 2009 and ongoing through 2015.
2	San Pedro Waterfront Project	The "San Pedro Waterfront" Project is a 5- to 7-year plan to develop along the west side of the Main Channel, from the Vincent Thomas Bridge to the 22nd Street Landing Area Parcel up to and including Crescent Avenue. Key components of the project include construction of a North Harbor Promenade, construction of a Downtown Harbor Promenade, construction of a Downtown Water Feature, enhancements to the existing John S. Gibson Park, construction of a Town Square at the foot of 6th Street, construction of a 7th Street Pier, construction of a Ports O' Call Promenade, development of California Coastal Trail along the waterfront, construction of additional cruise terminal facilities, construction of a Ralph J. Scott Historic Fireboat Display, relocation of the SS Lane Victory, extension of the Red Car line, and related parking improvements.	EIR certified on September 29, 2009. Construction began in March 2012 and is expected to be completed in 2020.
3	Channel Deepening Project	Dredging and sediment disposal. This project deepened the Port of Los Angeles Main Channel to a maximum depth of -53 ft mean lower low water (MLLW; lesser depths are considered as project alternatives) by removing between approximately 3.94 million and 8.5 million cubic yards of sediments. The sediments were disposed at several sites for up to 151 acres (61 hectares) of landfill. The EIR/EIS certified for the project identified significant biology, air, and noise impacts. A Supplemental EIS/EIR is being prepared for new fill locations. The Additional Disposal Capacity Project would provide approximately 3 million cubic yards of additional disposal capacity needed to complete the Channel Deepening Project and maximize beneficial use of dredged material by constructing lands for eventual terminal development and provide environmental enhancements at various locations in the Port of Los Angeles.	EIR certified on April 29, 2009. Construction expected 2010-2012. Completion set for 2013.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
Port of Los Angeles Projects (continued)			
4	Cabrillo Way Marina, Phase II,	Redevelopment of the old marinas in the Watchorn Basin and development of the backland areas for a variety of commercial and recreational uses.	EIR certified December 2, 2003. Construction complete.
5	Berth 226-236 (Evergreen) Container Terminal Improvements Project	Proposed redevelopment of existing container terminal, including improvements to wharves, adjacent backland, crane rails, lighting, utilities, new gate complex, grade crossings and modification of adjacent roadways and railroad tracks.	On hold.
6	Canners Steam Remediation	Remediation of the former Canner's Steam Plant in the Fish Harbor area of the Port of Los Angeles.	On hold.
7	Port of Los Angeles Charter School and Port Police Headquarters, San Pedro	Proposal to lease property for the Port of Los Angeles Charter School and to construct a Port Police Headquarters and office. 330 S. Centre Street, San Pedro.	Completed.
8	SSA Outer Harbor Fruit Facility Relocation	Proposal to relocate the existing fruit import facility at 22nd and Miner to Berth 153.	On hold.
9	Adaptive Reuse of Warehouses 9 and 10	Adaptive reuse of Warehouses 9 and 10 for visitor-serving uses to complement recreational activity at adjacent 22nd Street Park. Proposal to lease property to Crafted at the Port of Los Angeles.	Addendum to San Pedro Waterfront EIR completed. Construction expected 2012- 2013.
10	Plains All American (formerly Pacific Energy) Oil Marine Terminal, Pier 400	Proposal to construct a Crude Oil Receiving Facility on Pier 400 with tanks on Terminal Island and other locations on Port property, with the preferred location being the former LAXT terminal, as well as construct new pipelines between Berth 408, storage tanks, and existing pipeline systems.	EIR certified on November 20, 2008. Construction expected 2012-2014.
11	Ultramar Lease Renewal Project	Proposal to renew the lease between the Port of Los Angeles and Ultramar Inc., for continued operation of the marine terminal facilities at Berths 163-164, as well as associated tank farms and pipelines. Project includes upgrades to existing facilities to increase the proposed minimum throughput to 10 million barrels per year (mby), compared to the existing 7.5 mby minimum.	On hold.
12	Westway Demolition	Decommissioning of the Westway Terminal along the Main Channel (Berths 70-71). Work includes decommissioning and removing 136 storage tanks with total capacity of 593,000 barrels.	Remedial planning underway. Surface demolition began in June 2012.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
Port of Los Angeles Projects (continued)			
13	Consolidated Slip Restoration Project	Remediation of contaminated sediment at Consolidated Slip at Port of Los Angeles. Remediation may include capping sediment or removal/disposal to an appropriate facility. Work includes capping and/or treatment of approximately 30,000 cubic yards of contaminated sediments.	Remedial actions are being evaluated in conjunction with Los Angeles RWQCB and USEPA.
14	Berths 97-109, China Shipping Development Project	Development of the China Shipping Terminal Phase I, II, and III including wharf construction, landfill and terminal construction and backland development.	EIR certified on December 8, 2009. Construction started in 2009 and ongoing through 2013.
15	Berths 171-181, Pasha Marine Terminal Improvements Project	Redevelopment of existing facilities at Berths 171-181 as an omni (multi-use) facility.	Project EIR on hold.
16	Berth 206-209 Interim Container Terminal Reuse Project	Proposal to allow interim reuse of former Matson Terminal as a medium-density container and breakbulk terminal. The terminal would accommodate one vessel and utilize four cranes.	Draft EIS/EIR on hold.
17	Southern California International Gateway Project (SCIG)	Construction and operation of a 157-acre dock railyard intermodal container transfer facility (ICTF) and various associated components, including the relocation of an existing rail operation.	DEIR released September 2011. Construction anticipated 2013-2015.
18	Pan-Pacific Fisheries Cannery Buildings Demolition Project,	Demolition of two unused buildings and other small accessory structures at the former Pan-Pacific Cannery in the Fish Harbor area of the Port of Los Angeles (POLA).	NOP released October 2005. Draft EIR released July 2006. Final EIR on hold.
19	San Pedro Waterfront Enhancements Project	Project includes creation of 16 acres of public open space at 22nd Street Park, pedestrian and landscaping improvements at Cabrillo Beach, and pedestrian access, landscaping and public art at the SP Slip.	MND approved in April 2006. Construction from 2007 to 2012.
20	South Wilmington Grade Separation	An elevated grade separation would be constructed along a portion of Fries Avenue or Marine Avenue, over the existing rail line tracks, to eliminate vehicular traffic delays that would otherwise be caused by trains using the existing rail line and the new ICTF railyard. The elevated grade would include a connection onto Water Street. There would be a minimum 24.5-foot clearance for rail cars traveling under the grade separation.	Construction anticipated 2012 – 2014.
21	Wilmington Waterfront Development Project	Project includes light-industrial, commercial, and public open space uses within a 90-acre site. Features include a 10-acre elevated park over active rail lines, 250-foot observation tower, and a Wilmington waterfront promenade near Banning's Landing.	The LAHC certified the EIR and approved the project on June 18, 2009. Construction expected 2016-2020.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
Port of Los Angeles Projects (continued)			
22	I-110/C Street/Figueroa Street/ Realigned Harry Bridges Blvd Interchange	Consolidation of the following intersections: I-110/C Street/Figueroa Street interchange intersection and the intersection of Harry Bridges Boulevard-Alameda Street/John S. Gibson Boulevard/Figueroa Street. Construction of a new, northbound I-110 off-ramp with a direct connector ramp to eastbound Harry Bridges Boulevard-Alameda Street (i.e., a new, free-flow, northbound off-ramp to eastbound Harry Bridges-Alameda Street).	MND adopted. Construction expected 2013-2016.
23	Berth 212-224 (YTI) Container Terminal Improvements Project	Wharf modifications at the YTI Marine Terminal Project involves wharf upgrades and backland reconfiguration, including new buildings.	EIR/EIS on hold.
24	Berth 121-131 (Yang Ming) Container Terminal Improvements Project	Reconfiguration of wharves and backlands. Expansion and redevelopment of the Yang Ming Terminal.	EIR/EIS on hold.
25	Southwest Marine Demolition Project	Demolition of buildings and other small accessory structures at the Southwest Marine Shipyard.	Draft EIR released September 2006. Final EIR on hold.
26	I-110/SR-47 Connector Improvement Project	This project will eliminate an existing weaving condition of slow uphill moving trucks and fast downhill moving vehicles with the addition of a lane on the westbound to northbound SR 47/I-110 connector. This additional lane will continue through the I-110 Off-Ramp at John S. Gibson Boulevard where the intersection will be widened to better facilitate truck turning movements and accommodate additional southbound left turn and northbound right turn lanes.	MND adopted. Construction expected 2013-2016.
27	Inner Cabrillo Beach Water Quality Improvement Program	Phased improvements at Cabrillo Beach to reduce the wet and dry weather high concentrations of bacteria. Includes sewer and storm drain work, sand replacement, and bird excluders.	Construction complete.
28	Cabrillo Beach Pump Project (Tier III)	Phased improvements at Cabrillo Beach to reduce the wet and dry weather high concentrations of bacteria circulation improvements.	On hold.
29	Al Larson Boat Shop Improvement Project	Redevelopment and expansion of the Al Larson Boat Shop (Berth 258).	EIR has been certified. Construction anticipated 2012-2014.
30	City Dock No. 1 Marine Research Center	Adaptive reuse of warehouses at Berths 57 and Berths 58-60 on a 28-acre site for use as an urban marine research center. Includes future develop of the Westways terminal, including construction of a 50,000 sf building and a 80,000 sf seawater wave tank.	EIR has been released. Construction anticipated 2013-2025.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
Port of Los Angeles Projects (continued)			
31	Port of Los Angeles Master Plan Update	Redevelopment of Fish Harbor, redevelopment of Terminal Island and consideration of on-dock rail expansion, and consolidation of San Pedro and Wilmington Waterfront districts.	Scoping phase for Program EIR began in July 2012.
32	Pier 500 Container Terminal Development	Creation of up to 200-acre fill to support backland and new wharfs for the operation of a new container terminal.	Conceptual planning
33	USS Iowa Battleship	Permanent mooring of USS Iowa Navy Battleship at Berth 87 and construction of landside museum and surface parking to support 371,000 annual visitors.	EIR certified in May 2012, and USS Iowa relocation completed in July 2012.
34	WWL Vehicle Services Cargo Terminal	Expansion of vehicle offloading processing and operations, including cargo increase up to 220,000 vehicles per year and construction of two additional rail loading tracks.	Conceptual planning
	Berth 302-306 (APL) Container Terminal Project	This project would include terminal and wharf improvements to the existing 291-acre APL Terminal on Pier 300, including new cranes, development of additional backlands area, wharf extension, a new berth on the east side of Pier 300, new terminal facilities, and other minor upland improvements (i.e., utility infrastructure). The terminal expansion area would include the 41-acre fill area that was completed as part of the Channel Deepening Project (number 3 above), and other adjacent parcels (15 acres). Under this project, the APL Terminal would operate approximately 347 acres. These improvements would facilitate the handling of cargo throughput at the APL Terminal through 2027, which is projected to be 3.2 million TEUs.	Project EIR/EIS approved in June 2012. Construction anticipated 2012-2015.
Various	Maintenance Dredging	Maintenance dredging is the routine removal of accumulated sediment from channel beds to maintain the design depths of navigation channels, harbors, marinas, boat launches, and port facilities. This is conducted regularly for navigational purposes (at least once every five years).	Continuous, but intermittent on average every 3-5 years.
Eight cargo terminals and World Cruise Center	Alternative Maritime Power (AMP™)	AMP™ systems (also known as “cold-ironing) at the Port include a shore side power source, a conversion process to transform the shore side power voltage to match the vessel power systems, and a container vessel that is fitted with the appropriate technology to utilize electrical power while at dock.	Construction anticipated to be complete by 2014.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
Port of Los Angeles and/or Port of Long Beach Potential Port-Wide Operational Projects			
35	Extended Terminal Gates (Pier Pass)	POLA and POLB program to use economic incentives to encourage cargo owners to use terminal gates during off-peak hours.	Program in Progress
36	Optical Character Recognition	Ports terminals have implemented OCR technology, which eliminates the need to type container numbers in the computer system. This expedites the truck driver through terminal gates.	Conceptual planning.
37	Truck Driver Appointment System	Appointment system that provides a pre-notification to terminals regarding which containers are planned to be picked up.	Implemented.
ICTF Joint Powers Authority			
38	Union Pacific Railroad ICTF Modernization Project	UP proposal to modernize existing intermodal yard four miles from the Port.	Project EIR under preparation. DEIR expected Winter 2012.
Community of San Pedro Projects			
39	Pacific Corridors Redevelopment Project, San Pedro	Development of commercial/retail, manufacturing, and residential components. Construction underway of four housing developments and Welcome Park.	Project underway. Estimated 2032 completion year according to Community Redevelopment Agency of Los Angeles.
40	Ponte Vista/Naval Site	Construct 1,135 residential units, including single family homes, apartments, and condominiums, and open space.	NOP released in October 2010.
41	Centre Street Lofts	Construct residential units and ground floor commercial at 285 W. 6th Street	Construction Completed
42	A-Delta Realty	Artist's Lofts and retail space at 731-741 S. Pacific Ave.	Construction completed.
43	8th Street Lofts	Loft apartments at southeast corner of 8th Street and Pacific Ave.	Construction completed.
44	San Pedro Plaza Park	Outdoor improvements including minor grading, hillside slope repair, small retaining walls, view deck, fencing, gates, security lighting, seating areas, signage, landscaping, and irrigation.	Construction is expected to begin in June 2012, and to be completed by June 2013.
45	Cabrillo Avenue Extension	This project will widen Cabrillo Avenue to 36-ft of roadway and 9-ft of sidewalk from Miraflores Avenue to existing alley. It will also widen the existing alley to 25-ft and connect it to Channel Street by acquiring right-of-way.	Construction is expected to begin in January 2012, and to be completed by June 2012.
46	Single Family Homes (Gaffey Street)	Construct 135 single-family homes. About 2 acres. 1427 N. Gaffey Street (at Basin Street), San Pedro.	Project approved; construction pending.
47	Mixed-use development, 281 W 8th Street	Construct 72 condominiums and 7,000-ft2 retail. 281 West 8th Street (near Centre Street), San Pedro.	Under construction according to City of Los Angeles Zoning Information and Map Access System (ZIMAS).

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
Community of San Pedro Projects (continued)			
48	Palos Verdes Urban Village	Construct 251 condominiums and 4,000-ft2 retail space. 550 South Palos Verdes Street, San Pedro.	No construction has started.
49	319 N. Harbor Blvd	Construction of 94 unit residential condominiums.	Construction has not started according to LADOT Planning Department.
50	Vue	Construct 220 housing unit apartments. 255 5th Street, San Pedro (near Centre Street).	Construction completed.
51	La Salle Lofts	Construct 26 units with ground floor commercial at 255 W. 7th Street	Construction completed.
52	Bank Lofts	89-unit apartment complex with ground floor commercial, 407th 7th Street	Construction completed.
53	Temporary Little League Park	Construction of temporary baseball fields for the Eastview Little League at Knoll Hill.	Construction completed
Community of Wilmington Projects			
54	Distribution center and warehouse	A 135,000-ft2 distribution center and warehouse on 240,000-ft2 lot w/47 parking spaces at 755 East L Street, (at McFarland Avenue) in Wilmington.	No construction has started; lot is vacant and bare. LADOT Planning Department has no estimated completion year.
55	Dana Strand Public Housing Redevelopment Project	413 units of mixed-income affordable housing to be constructed in four phases: Phase I - 120 rental units; Phase II - 116 rental units; Phase III - 100 senior units; Phase IV - 77 single family homes. The plans also include a day care center, lifelong learning center, parks and landscaped open space.	Phases I and II have been completed and are being leased Phases III and IV are currently under development.
56	931 N. Frigate	Private school expansion for 72 student increase for a total of 350 students.	Construction has not started according to LADOT Planning Department.
57	LASUD SR Span K-8 School. 1234 N. Avalon Blvd	Construction of 1278 student elementary school	Construction has not started according to LADOT Planning Department.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
Community of Wilmington Projects (continued)			
58	Wilmington Redevelopment Plan Amendment/ Expansion Project, Wilmington	The existing Wilmington Industrial Park would be expanded by an additional 2,487 acres, for a total of approximately 2,719 acres. Under the probable maximum level of development, the overall project area could support up approximately 7,326 residential units (primarily multi-family; zone changes under the Plan would permit multi-use and higher density residential development). In addition to the residential development, the Project could accommodate up to approximately 207 acres (9 million sf) of commercial development and up to 333 acres (14.5 million sf) of industrial development.	NOP for Program EIR out for public review August 2010. Currently on hold.
59	Banning Museum and Banning Park	Banning Museum: Refurbishment of museum buildings and improvements to the open space/garden, including waterproofing Banning Museum, relocating an existing LADWP Transformer, rehabilitating the walkways, and Rose garden and museum landscaping. Banning Park: Improvements to Athletic Fields, Recreation Center and Walking Paths, including: rooftop HVAC replacement to recreation center; walkway resurfacing around the entire park (except within the Banning Residence Museum's perimeter wrought iron fencing); and door replacement to the recreation center; and, reconstruct the existing baseball field.	Construction began in November 2010 and is expected to be completed by December 2012.
Projects in Harbor City, Lomita, and Torrance			
60	Harbor City Child Development Center	Conditional use permit to open 50-student preschool at existing church building (25000 South Normandie Avenue, Harbor City, at Lomita Boulevard).	Construction has not started according to LADOT Planning Department.
61	Kaiser Permanente South Bay Master Plan	Construct 303,000-ft2 medical office building, 42,500-ft2 records center/ office/warehouse, 260 hospital beds. 25825 Vermont Street, Harbor City (at Pacific Coast Highway).	In construction.
62	Ponte Vista, 26900 Western Avenue (near Green Hills Park), Lomita	Construct 1,950-unit for-sale stacked townhomes and condominiums including senior housing. Approximately 40 percent of the Project's post-development acreage would consist of landscaped common area. Rolling Hills Prep School being developed in an adjacent lot.	FEIR issued June 2008. LADOT Planning Department reports estimated 2012 completion year.
63	2244 Pacific Coast Highway (new address: 25820 Lucille), Lomita	A request for a Site Plan Review to construct a new retail commercial building.	In plan check as of November 2009.
64	25316 Ebony Lane, Lomita	A request to construct 16 detached senior housing units.	In plan check.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
Projects in Harbor City, Lomita, and Torrance (continued)			
65	25819-25 Eshelman Avenue, Lomita	Proposed 20-unit senior housing development .	In plan check.
66	262nd/Western, Lomita	Construct an 11,100-square ft. office building on the southeast corner of Western Avenue and 262nd Street.	Construction pending.
67	25829-25837 Eshelman Ave., Lomita	Construct 16 new condominium units.	In plan check.
68	Sepulveda Industrial Park, Torrance	Construct 154,105-sqft industrial park (6 lots). Sepulveda Industrial Park (TT65665) 1309 Sepulveda Boulevard, Torrance (near Normandie Avenue).	No construction started. LADOT Planning Department has no estimated completion year.
69	Hasan Ud-Din Hashmi 1918 Artesia Blvd.,Torrance	Remodel/demolition of certain existing structures and the construction of a new 23,914 sq ft worship building, covered patio & outdoor covered lobby	Construction underway (soil contamination issues).
70	Dan Withee 24510 Hawthorne Blvd., Torrance	Construction of mixed-use development consisting of two-story commercial office, restaurant building, and 14 attached residential condominium units	Under construction.
71	Sunrise Senior Living 25535 Hawthorne Blvd., Torrance	Operation of an assisted living facility	Building permit issued on March 2008.
72	Capellino & Associates 1104 Sartori Ave., Torrance	Construction of professional office condominium development	Under construction.
73	Linda Francis 18900 Hawthorne Blvd., Torrance	Operation of new automobile sales & repair facility (MINI Cooper)	Under construction.
74	Dean & Jan Thomas 3525 Maricopa St, Torrance	Construction of 12 attached condominium Units	Construction pending
75	Dave O. Roberts 435 Maple Ave., Torrance	Construction of two, one-story industrial buildings exceeding 15,000 sq ft	Construction pending.
76	Imperial Investment & Development 2433 Moreton St., Torrance	Construction and operation of 27,000 sq ft full-service spa	Construction pending.
77	Torrance RF, L.L.C. 18203 Western Avenue, Torrance	Construction of new restaurant/retail/commercial building	Construction pending.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
Projects in Harbor City, Lomita, and Torrance (continued)			
78	Continental Development Corp. 23248 Hawthorne Blvd., Torrance	Construction of a new retail store	Construction pending.
79	Charles Belak-Berger 3720 Pacific Coast Highway, Torrance	Construction of new 20,300 sq ft and commercial center with 18,688 sq ft subterranean parking structure	Construction pending.
80	BP West Coast Products, LLC 18180 Prairie Avenue, Torrance	Construction of new service station and 2,300 sq ft convenience store with off-sale beer & wine	Construction pending.
81	Graceway Church 431 Madrid Avenue, Torrance	Conversion of an industrial building for the operation of a church with shared parking	Construction pending.
82	Providence Health System 5215 Torrance Blvd., Torrance	Construction of 2, 3-story medical office buildings & 2, 3-story parking structures	Construction pending.
83	Torrance Memorial Medical Center, 3330 Lomita Blvd, Torrance	Construction of a new 7-story hospital tower & the removal of an existing medical office condominium building	Construction pending
84	Chuck Stringfield 19701 Mariner Ave., Torrance	Conversion of two industrial buildings to industrial condominiums	Construction pending.
85	Gospel Venture International Church 17811 Western Avenue, Torrance	Conversion of existing industrial building for operation as a church	Construction pending.
86	Continental Development 2843 Lomita Boulevard, Torrance	Construction of 25,000 sq ft medical office building to replace existing manufacturing building	Construction pending.
87	Mark Sachs 2909 Pacific Coast Hwy. Torrance	Construction of a new 16,978 sq ft automobile dealership showroom facility	Application approved on November 2009.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
Projects in Harbor City, Lomita, and Torrance (continued)			
88	Wilmington Drain Multi-Use and Machado Lake Ecosystem Rehabilitation Project, Harbor City/Lomita	The project consists of two components: 1) Wilmington Drain Multi-Use; and, 2) Machado Lake Ecosystem Rehabilitation. Wilmington Drain improvements include dredging, channel and bank stabilization, habitat and park design, and site-design and structural BMPs. Improvements to Machado Lake (and Harbor Regional Park) would include habitat and park design enhancements, site-design and structural BMPs, lake rehabilitation (i.e., water quality enhancements), and miscellaneous recreational improvements.	Notice of Determination was filed in September 28, 2010. Construction is expected to begin late 2011 and through 2014.
89	Rockefeller Group Professional Center Development	Construction of a 351,200-sf medical/office and professional building, and light industrial condominium buildings. The project would be constructed over two phases.	FEIR completed February 2010. Phase I construction is completed, and Phase II is expected to be completed by late 2011.
Port of Long Beach Projects			
90	Middle Harbor Terminal Redevelopment, Port of Long Beach	The project consolidates two existing container terminals into one 345-acre terminal. Construction includes approximately 54.6 acres of landfill, dredging, and wharf construction; construction of an intermodal railyard; and reconstruction of terminal buildings.	Approved project. Construction underway 2010-2019.
91	Piers G & J Terminal Redevelopment Project, Port of Long Beach	Redevelopment of two existing marine container terminals into one terminal in the Southeast Harbor Planning District area. The project will develop a marine terminal of up to 315 acres by consolidating portions of two existing terminals on Piers G and J and several surrounding parcels. Construction will occur in four phases and will include approximately 53 acres of landfills, dredging, concrete wharves, rock dikes, and road and railway improvements.	Approved project. Construction underway (2005-2015).
92	Pier A East, Port of Long Beach	Redevelopment of 32 acres of existing auto storage area into container terminal uses.	Conceptual planning.
93	Pier S Marine Terminal, Port of Long Beach	Development of a 150-acre container terminal on Pier S and construction of navigational safety improvements to the Back Channel.	EIS/EIR released September 2011.
94	Administration Building Replacement Project, Port of Long Beach	Replacement of the existing Port Administration Building and Maintenance Facility with a new facility on an adjacent site on Pier G.	Approved project. Construction underway 2009-2012.
95	Gerald Desmond Bridge Replacement Project, Port of Long Beach and Caltrans/FHWA	Replacement of the existing 4-lane Gerald Desmond highway bridge over the Port of Long Beach Back Channel with a new 6- to 8-lane bridge.	Final EIR/EA certified in July 2010. Construction anticipated to being in 2012.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
Port of Long Beach Projects (continued)			
96	Chemoil Marine Terminal, Tank Installation, Port of Long Beach	Construction of two petroleum storage tanks and associated relocation of utilities and reconfiguration of adjoining marine terminal uses between Berths F210 and F211 on Pier F.	EIR on hold.
97	Pier B Railyard Expansion	Expansion of the existing Pier B Railyard in two phases, including realignment of the adjacent Pier B Street and utility relocation.	EIR being prepared.
98	Terminal Island Rail Projects	Construct rail improvements on Terminal Island, including a grade separation at Reeves Avenue and additional storage tracks.	EIR being prepared (2012-2015).
99	Mitsubishi Cement Corporation Facility Modifications	Facility modification, including the addition of a catalytic control system, construction of four additional cement storage silos, and upgrading existing cement unloading equipment on Pier F.	NOP/IS released in August 2011.
100	Polaris Aggregate Terminal	Construction and operation of a sand, gravel, and aggregate receiving, storage, and distribution terminal on Pier D.	NOP being prepared.
101	Pier A West Remediation Project, Port of Long Beach	Remediation of approximately 90 acres of oil production land, including remediation of soil and groundwater contamination, relocation of oil wells, filling, and paving.	Cleanup complete (2008-2009).
102	Total Terminal International Grain Export Terminal Installation Project	Construction and operation of a grain transloading facility on a vacant 10-acre site on Pier T adjacent to the existing Hanjin container terminal. It would utilize existing infrastructure to the extent feasible and require no changes to shipping vessel operations.	NOP/IS released in August 2011.
103	Sulex Demolition Project	Demolition of a sulfur export facility on Pier G to fulfill the conditions of lease termination. No future use for the site is identified.	NOP/IS released in December 2010.
104	Cemera Long Beach Aggregate Terminal	Construction and operation of a sand, gravel, and aggregate receiving, storage, and distribution terminal on Pier D.	EIR on hold.
Alameda Corridor Transportation Authority and Caltrans Projects			
105	Schuyler Heim Bridge Replacement and State Route (SR) 47 Terminal Island Expressway	ACTA/Caltrans project to replace the Schuyler Heim Bridge with a fixed structure and improve the SR-47/Henry Ford Avenue/Alameda Street transportation corridor by constructing an elevated expressway from the Heim Bridge to SR 1 (Pacific Coast Highway).	EIR/EIS approved; construction delayed/start date undetermined.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
Alameda Corridor Transportation Authority and Caltrans Projects (continued)			
106	I-710 (Long Beach Freeway) Major Corridor Study	Develop multi-modal, timely, cost-effective transportation solutions to traffic congestion and other mobility problems along approximately 18 miles of the I-710, between the Port Complex ports and State Route 60. Early Action Projects include: a) Port Terminus: Reconfiguration of SR 1 (Pacific Coast Highway) and Anaheim Interchange, and expansion of the open/green space at Cesar Chavez Park. b) Mid Corridor Interchange: Reconfigurations Project for Firestone Boulevard Interchange and Atlantic/Bandini Interchange.	NOP/NOI released August 2008. DEIR/EIS under preparation.
107	Cerritos Channel Bridge	New rail bridge adjacent to existing Badger Avenue Rail Bridge	Project delayed - start date undetermined.
City of Long Beach Projects			
108	Shoreline Gateway Project	Mixed-use development of a 22-story residential tower with retail, commercial, and office uses located north of Ocean Boulevard, between Atlantic Avenue and Alamitos Avenue, a 15- to 19-story stepped slab building west of the existing Lime Avenue and Ocean Boulevard intersection, and a 10-story building.	Final EIR certified in September 2006. Entitlements granted. City Planning Department has no estimated construction start and completion year.
109	West Gateway Redevelopment Project	Redevelop nine existing parcels, including apartments, condominiums, and retail, on Broadway between Chestnut and Maine.	Under construction.
110	2nd+PCH	The proposed project located at 6400 East Pacific Coast Highway would include the demolition of existing on-site uses and would provide new residential, office, retail, and potential hotel uses, along with associated parking and open space.	DEIR was released on April 19, 2010. In process for entitlement. City Planning Department has no estimated construction start and completion year.
111	Golden Shore Master Plan	The proposed project would provide new residential, office, retail, and potential hotel uses, along with associated parking and open space.	Final EIR was released on January 2010. In process for entitlement. City Planning Department has no estimated construction start and completion year.
112	Press-Telegram Mixed Use Development	Construction of two high-rise buildings on the 2.5-acre (1-ha) Press-Telegram site. Each building would be 22 stories and 250 ft (76 m) in height. The project would be a mixed-use development with 542 residential units, and 32,300 square feet (3,000 square meters) of office and institutional space.	Draft EIR prepared August 2006.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
City of Long Beach Projects (continued)			
113	Sierra Hotel Project	Development of a 91,304-square–foot (8,482-square-meter), 7-story hotel structure with 140 rooms. Parking will be provided in the multi-level parking structure located across the street at the southwest corner of Cedar Avenue and Seaside Way.	EIR certified December 2005.
114	Long Beach Downtown Plan	Development standards and design guidelines for an expected increase in the density and intensity of existing Downtown land uses by allowing up to: (1) approximately 5,000 new residential units; (2) 1.5 million square feet of new office, civic, cultural, and similar uses; (3) 384,000 square feet of new retail; (4) 96,000 square feet of restaurants; and (5) 800 new hotel rooms.	Draft EIR released December 2010
115	Art Exchange	Project components include artist studios, multipurpose/classroom space, hot shop for glass and ceramics production, a centrally located open courtyard, gallery space, office, and service areas.	Draft EIR was released in December 2009. City Planning Department has no estimated construction start and completion year.
116	North Village Center	The proposed project involves the redevelopment of an approximately 6.3-acre site in the City of Long Beach with a mixed-use “village center” project.	Final EIR was released in November 2009. In process for entitlement. City Planning Department has no estimated construction start and completion year.
117	Kroc Community Center	The reformation of up to 19 acres of land designated by the Salvation Army, through a grant from the Kroc Foundation, for the location of a new recreation and community center.	Final EIR was released in June 2009. Entitlements granted. City Planning Department has no estimated construction start and completion year.
118	Hotel Sierra, 290 Bay St	This project consists of a new 5-story 125-room hotel with approximately 15,000 square feet of ground floor retail space.	EIR Addendum was released in May 2009. City Planning Department has no estimated construction start and completion year.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
City of Long Beach Projects (continued)			
119	1235 Long Beach Blvd. Mixed-Use Project	The proposed project would include demolition of existing on-site uses and construction of a mixed-use (transit oriented) development that includes the construction of 3 buildings consisting of 170 residential condominium units, 186 senior (age-restricted) apartment units, and 42,000 sq. ft. of retail/restaurant floor area.	EIR Addendum was released in January 2008. Entitlements granted. City Planning Department has no estimated construction start and completion year.
120	Douglas Park Rezone Project	The project consists of development of 1,400 residential units along with 3.3 million square feet of mixed commercial and light industrial development (which included a maximum of 200,000 square feet of retail uses), 400 hotel rooms, and 10.5 acres of park space, with an additional 2.5 acres for view corridors/pedestrian easements and bicycle paths.	Construction is underway. Entitlements granted.
121	Ocean Blvd. Project	The proposed project would include the demolition of existing structures, the development of 51 condominium units and the remodel of an existing building to maintain 11 motel units. The residential development would be four stories in height above street level and would have two levels of subterranean parking.	Notice of Intent to Adopt was released in August 2009. Entitlements granted. City Planning Department has no estimated construction start and completion year.
122	Drake/Chavez Park Expansion	Developing new and expanding existing open space opportunities in the Drake/Chavez Park.	Project in progress.
123	Poly Gateway Project, Pacific Coast Highway and Martin Luther King Jr. Avenue	Development of passive open space that will serve as a gateway to Poly High School, located directly behind the site.	Construction was expected to begin in 3rd Quarter 2008. Construction status unknown.
124	15th Street and Alamitos Avenue Open Space Development and Intersection Improvements	Passive park to include pedestrian hardscape, landscape lighting, light poles and planting areas.	Construction underway.
125	WPA Mosaic Open Space Development	Relocation of historic mural to an open space development at the south end of CityPlace.	Construction is expected to start in 2010.
126	Lyon West Gateway Residential Development, Broadway at Magnolia Avenue and 3rd Street	Mixed-use project consisting of 291 rental apartments (265 market rate and 26 affordable) and 15,000 square feet of commercial space.	Construction underway.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
City of Long Beach Projects (continued)			
127	Pine – Pacific, bounded by Pine and Pacific Avenues, and 3rd and 4th Streets	Phase 1 will consist of a 5-story residential project with 175 living units and 7,280 square feet of retail space. Phase 2 is slated as a 12-story mid-rise residential development with 186 units and 18,670 square feet of retail.	Approved project. Construction pending
128	Lofts at 3rd and Promenade	This is a mixed-use development project that consists of 104 rental homes and 13,550 square feet of first-floor retail space.	Construction underway.
129	Broadway Block Development, Broadway, Long Beach Boulevard, 3rd street, and Elm Avenue	Mixed-use project consisting of an art center, residential units and commercial space.	Conceptual project.
130	Long Beach Transit/Visitor Information Center, downtown Long Beach	1,900 square-foot transit customer service and visitor information center.	Construction underway.
131	Hotel Esterel, Promenade at Broadway	Seven-story, 165-room hotel with 8,875 square feet of retail space and 3,000 square feet of meeting space.	Construction underway.
132	Promenade Master Plan, between Shoreline Drive and 5th Street	Improvement, expansion and redesign of The Promenade. The Master Plan encompasses the gateways, hardscape, landscape, furniture, lighting and public art plazas along the three blocks between Ocean Boulevard and 3rd Street, as well as renovation of the amphitheater.	Construction underway.
133	Admiral Kidd Park Expansion Site, Santa Fe at Willard	The Admiral Kidd Park Expansion Site consists of the acquisition and development of industrial property for a 120,000-square-foot park expansion.	The site has been acquired and cleared. Construction underway.
134	Pacific Coast Highway Streetscape Improvement Project	This project involves the design and construction of new street medians, sidewalk landscaping, public art and refurbishment of existing bus shelters.	Approved project. Construction pending.
135	Everbright Paper Recycling Center	This is a development of a bulk paper recycling and processing center	Construction start date was expected to be in 3rd Quarter 2008, and completion date was expected to be in 2nd Quarter 2009. Construction status unknown.
136	Redbarn Pet Products	Upgrade with the development of an office and warehouse for use in the manufacturing and distribution of their pet food products.	Approved project. Construction pending.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
City of Long Beach Projects (continued)			
137	Smith-Co Construction	The Smith-Co Construction project consists of a plan to develop Agency-owned property into a two-story, 6,100-square-foot office and warehouse facility for Smith-Co Construction.	Construction start date was expected to be in 3rd Quarter 2005, and completion date was expected to be in 4th Quarter 2008. Construction status unknown.
138	J.C.D.S Properties – Sudduth Tire	J.C.D.S Properties – Sudduth Tire is a new development consisting of a two-story office building and shop area as well as a storage facility for local businesses.	Construction start date was expected to be in 3rd Quarter 2005, and completion date was expected to be in 4th Quarter 2007. Construction status unknown.
139	Westside Storm Drain Improvement Project	The Agency, along with developer DMJM Harris/AECOM plans to improve and update existing storm drains in an effort to remedy street flooding.	Construction start date was expected to be in 1st Quarter 2006, and completion date is to be determined. Construction status unknown.
140	250 Pacific Avenue	Conversion of AMC Pine Square movie theaters to 74 residential units.	In process for entitlement. City Planning Department has no estimated construction start and completion year.
141	Acres of Books	Construction of 11,000 sq. ft. collaborative art center including the partial reuse of an historic structure (240 Long Beach Blvd.)	In process for entitlement. City Planning Department has no estimated construction start and completion year.
142	495 The Promenade North	Construction of 35,000 sq. ft., 5-story mixed-use development including 6,000 sq. ft. of ground floor commercial area and 21 residential units.	In process for entitlement. City Planning Department has no estimated construction start and completion year.
143	100 Aquarium Way	23,300 sq. ft. expansion to the Aquarium of the Pacific.	In process for entitlement. City Planning Department has no estimated construction start and completion year.
144	2010 Ocean Blvd.	Construction of 56 residential condominiums units with 40 hotel rooms.	Entitlements granted. City Planning Department has no estimated construction start and completion year.

Table 11. List of Cumulative Projects

No. in Fig. 17	*Project Title and Location*	*Project Description*	*Project Status*[a]
City of Long Beach Projects (continued)			
145	433 Pine Ave.	Mixed use development of 28 residential units with 15,000 square feet of commercial (Newberry's Department Store)	Under construction
146	600 E. Broadway	48,000 sq. ft. Vons Market w/128 rooftop parking spaces development	Under construction

Notes:

a. Construction date for the Port projects based on an assumption that the project would be approved by the LAHD.

References:

City of Los Angeles Zoning Information and Map Access System (ZIMAS) http://zimas.lacity.org/

City of Torrance Community Development Department's Major Project Report July 1, 2009 – December 31, 2009 http://torranceca.gov/PDF/July_1_2009_thru_Dec_31_2009.pdf

City of Long Beach Department of Development Services – Major Project List – April 2010. http://www.lbds.info/planning/environmental_planning/environmental_reports.asp http://www.lbds.info/projects/default.asp

City of Lomita Current Projects List, January 2011.

City of Los Angeles, Community of San Pedro Projects List, January 2011.

Future sources of air emissions within the project region would combine with proposed project emissions and produce cumulative air quality impacts. As discussed in Section 4.3, the magnitude of the air emissions associated with the proposed project activities would be low and proposed project-specific air quality impacts would be less than significant. These incremental proposed project impacts, combined with other foreseeable sources of air emissions, would result in less than significant cumulative air quality impacts. Additionally, LAHD terminated use of the ARSSS site for storage of dredged sediments and plans to implement measures in 2012 to minimize potentials for future dispersion of airborne particulates from the ARSSS site. These actions, combined with the proposed Wilmington Marina/Marina Parkway project, are expected to result in reductions in particulate matter concentrations and overall improvements to the air quality conditions in the vicinity of the proposed project.

The proposed project would generate GHG emissions that would be far below the SCAQMD thresholds. The potential effects of the proposed project on GHG emissions are by nature global and cumulative impacts, as individual sources of GHGs are not large enough to have an appreciable effect on climate change. A cumulatively considerable impact on global climate change would occur only when proposed GHG emissions combine with GHG emissions from other man-made activities on a global scale. In accordance with the Green LA Plan, the LAHD prepared a Harbor Department Climate Action Plan (December 2007) that outlines current and proposed actions to reduce GHGs from port operations. The LAHD is developing a Sustainability Plan that will incorporate environmental programs and reports, including the Climate Action Plan. These actions are intended to reduce GHG emissions from port operations and the potential for cumulative direct and indirect impacts.

The project site is in an area of the harbor with impaired water quality and subject to TMDLs. The project would not discharge wastes or contribute to the current or future contaminant loading to this water body, other than minor volumes of stormwater runoff from the small (less than one acre) site of the proposed facility. Contributions of stormwater runoff from this facility to the current and future contaminant loading in the Consolidated Slip area would be negligible. Additionally, sailing exercises conducted as part of the proposed project would not contribute to contaminant loadings to the harbor. Therefore, the cumulative impact of the proposed project on hydrology and water quality would be less than significant.

The impacts of the proposed project on cumulative traffic impacts are discussed in Appendix E. For Future CEQA (Cumulative) analysis baseline conditions are defined as baseline traffic conditions with the addition of non-related background traffic for the year 2014. Traffic conditions with the proposed project were estimated from the increase in traffic due to the construction and operation of the WYSAC to the applicable CEQA baseline. Results of the analysis show that there are no significant cumulative traffic impacts associated with the proposed project at local roadway intersections (see Appendix E, Table 4).

The proposed project would not result in significant impacts that cannot be mitigated to a less than significant level, as described for each the issue areas. Because of the small scale and localized effects of the proposed project, the potential incremental contribution from the proposed project would not be cumulatively considerable. The analysis in this IS/MND has determined that the proposed project would not have any individually limited or cumulatively considerable impacts. No additional mitigation would be required.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact. The operations (i.e., sailing instructions) associated with the proposed project would expose sensitive receptors (8 to 18 year old students) to physical and environmental conditions with potential safety and human health risks. These conditions include exposures to high soil

methane emissions, exposures to waterborne pathogens and chemical contaminants, and safety issues related to boating, such as avoiding commercial vessel traffic or capsizing the sailboat. The proposed project has considered these risks and incorporated design features, such as requirements for Level V building design, and mitigation measures, such as restrictions to in-water activities following rain events, to minimize the potential for adverse effects on sensitive receptors. Adverse effects on human beings resulting from implementation of the proposed project would be less than significant.

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Section 5.0

Mitigation Monitoring and Reporting Plan

CEQA requires public agencies to adopt a reporting or monitoring program for the changes to the project that have been adopted to mitigate or avoid significant effects on the environment (PRC Section 21081.6). The purpose of this program is to ensure that when an MND identifies measures to reduce potential environmental impacts to less than significant levels, that those measures are implemented as detailed in the environmental document. As lead agency, the LAHD is responsible for implementation of this MMRP. Once the Board of Harbor Commissioners adopts the MMRP, the applicable LAHD division(s) will incorporate the mitigation monitoring/reporting requirements in the appropriate permits (i.e., engineering specifications, engineering construction permits, and/or real estate entitlements). Therefore, in accordance with the aforementioned requirements, this MMRP lists each mitigation measure, describes the methods for implementation and verification, and identifies the responsible party or parties as detailed below in Table 12.

Table 12. Mitigation Measures, Timing, Methods, and Responsible Party

Mitigation Measure	Timing	Method	Implementation	Monitoring and Reporting
MM BIO1: Monitoring In-Water Noise Impacts to Biological Resources	During project construction.	A qualified biologist shall be required to monitor the area in the vicinity of pile driving activities for any fish kills during pile driving. If there are any reported fish kills, pile driving shall be halted and the USACE and NMFS shall be notified via the EMD. The biological monitor shall also note (surface scan only) whether marine mammals are present within 300 feet of the pile driving, and if any are observed, temporarily halt pile driving until the observed mammals move beyond this distance. At the initiation of each pile driving event, the pile driving shall also employ a "soft-start" in which the driver is operated at less than full capacity (i.e., approximately 40–60 percent energy levels) with no less than a 1-minute interval between each strike for a 5-minute period.	The mitigation measure must be included in the construction specifications and in the lease. A qualified biologist shall be retained by EMD or by the construction contractor with EMD approval.	EMD and Construction Contractor.
MM CUL-1: During construction, an archaeological monitor shall be required for all ground disturbing activities, including asphalt removal, and in the event any cultural resources are encountered during earthmoving activities, the construction contractor shall cease activity in the affected area until the discovery can be evaluated by the cultural resources specialist in accordance with the provisions of CEQA §15064.5. The archaeologist shall complete any requirements for the mitigation of adverse effects on any resources determined to be significant and implement appropriate treatment measures.	During project construction.	A qualified archaeologist shall be retained by EMD or by the construction contractor with EMD approval. All construction equipment operators shall attend a preconstruction meeting presented by a professional archaeologist that shall review types of cultural resources and artifacts that would be considered potentially significant, and to ensure operator recognition of these materials during construction. If materials are found, the construction contractor shall contact EMD, the LAHD Inspector, and/or the County Coroner, if necessary.	The mitigation measure must be included in the construction specifications and in the lease. EMD and Construction Contractor. LAHD Real Estate Division for lease requirements.	EMD and Construction Contractor.

Table 12. Mitigation Measures, Timing, Methods, and Responsible Party

Mitigation Measure	Timing	Method	Implementation	Monitoring and Reporting
MM CUL-2: During construction, paleontological monitoring shall be required during all ground disturbing activities; and in the event any paleontological resources are encountered during earthmoving activities, the construction contractor shall cease activity in the affected area until the discovery can be evaluated by the qualified paleontological resources specialist in accordance with the provisions of CEQA §15064.5.	During project construction.	Monitoring shall include the inspection of exposed surfaces and microscopic examination of matrix in potential fossil bearing formations. In the event microfossils are discovered, the monitor shall collect matrix for processing. Paleontologic monitor(s) should be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments that are likely to contain the remains of small fossil invertebrates and vertebrates. If potentially important paleontological resources are discovered, the construction activity within 100 feet of the find shall be diverted and the discovery reported to the construction contractor, the LAHD Inspector and to EMD. Monitoring may be reduced if some of the potentially fossiliferous units are determined upon exposure and examination by qualified paleontologic personnel to have low potential to contain fossil resources or if excavation is determined to be within disturbed or fill sediments. In the event paleontological resources are encountered during earthmoving activities, recovered specimens shall be prepared by the paleontologist to a point of identification and permanent preservation. Recovered specimens shall be identified and curated into an established, accredited, professional museum repository with permanent retrievable paleontological storage. All construction equipment operators shall attend a preconstruction meeting presented by a professional paleontologist retained by EMD or the construction contractor that shall review types of materials that would be considered potentially significant, and to ensure operator recognition of these materials during construction. If materials are found, the construction contractor shall contact EMD.	The mitigation measure must be included in the construction specifications and in the lease. A qualified paleontologist shall be retained by EMD or by the construction contractor with EMD approval.	EMD and Construction Contractor.
MM NOISE-1: Noise Reduction during Pile Driving.) The contractor shall be required to use sound abatement techniques to reduce both noise and vibrations from pile driving activities.	During project construction.	Sound abatement techniques shall include the use of vibratory pile driving equipment, which is in good or new condition and is equipped with intake and exhaust mufflers that are in good condition and appropriate for the equipment and sound blankets or aprons.	The Construction Contractor would be responsible for implementing this measure.	EMD and Construction Contractor.
MM NOISE-2: Restricted Hours for Pile Driving.	During project construction.	In order to reduce the potential impact during construction, pile driving activities shall be limited to between the hours of 9am and 4pm on Monday-Friday.	The Construction Contractor would be responsible for implementing this measure.	EMD and Construction Contractor.

Table 12. Mitigation Measures, Timing, Methods, and Responsible Party

Mitigation Measure	Timing	Method	Implementation	Monitoring and Reporting
MM NOISE-3: Erect Temporary Noise Attenuation Barriers Between Construction Equipment and Sensitive Receptors. Construction equipment that will be stationary for extended periods (e.g., generators) shall be shielded by erection of temporary noise attenuation barriers.	During project construction.	The onshore portion of the construction site shall be shielded acoustically by temporary noise attenuation barriers. The barriers shall be installed at the periphery of the project site to block the line of sight between the equipment and liveaboards. To provide the required degree of sound attenuation, the construction sound fence should be built to a minimum height of 8 feet above working grade without cracks or gaps in the face or large or continuous gaps at the base and have a minimum surface weight of 1.0 pound per square foot. The barrier should be installed using construction blanket type barrier materials secured to a cyclone fence or hung from guy wires.	The Construction Contractor would be responsible for implementing this measure.	EMD and Construction Contractor.
MM NOISE-4: Temporarily Relocate Liveaboards During Dock Installation Operations.	During project construction.	Temporary slips shall be made available to liveaboards presently within 400 feet of the boundary of in-water construction activities for the duration of construction operations involving heavy equipment (e.g. pile driving, grading, excavation, pouring of foundations, etc.).	LAHD Real Estate Division would be responsible for coordinating lease requirements	EMD.
MM REC-1. Coordinate Sailing Exercises with Port Pilots.	During project operations.	To avoid potential interferences between sailing exercises and commercial vessel traffic in the vicinity of the East Basin, the WYSAC operator shall coordinate with the Port Pilots to communicate movements in the East Basin and within the Port. The WYSAC operator shall not conduct sailing exercises at times when commercial vessels are entering or leaving the East Basin, especially Berths 195-199.	This measure would be implemented by the project operator.	EMD and Project Operator
MM REC-2. Prohibit Sailing Exercises for 96 hours Following a Storm Event.	During project operations.	To minimize potentials for exposures to waterborne pathogens, activities in or on the water shall cease for 96 hours after a storm water event to eliminate contact with the water and allow bacteria concentrations to drop to acceptable levels.	This measure would be implemented by the project operator.	EMD and Project Operator
MM REC-3. Boat Tipping Exercises in the East Basin are Prohibited.	During project operations.	Due to contaminated sediments, shallow depth, and water quality issues in the vicinity, no swimming or tipping exercises within the proposed project area or within the Consolidated Slip shall occur. In general, contact with the water by youth shall be minimized.	This measure would be implemented by the project operator.	EMD and Project Operator
MM REC-4. Sailing Exercises Allowed in Designated Areas Only. In consideration of sediment and water quality issues and navigational safety, sailing activities shall be allowed only in the designated areas.	During project operations.	The project operator shall mark the boundaries of the sailing area with temporary markers or weighted floats, and instruct the students to stay within the marked area. Instructors shall monitor the students during all sailing exercises.	This measure would be implemented by the project operator.	EMD and Project Operator

Section 6.0
Proposed Finding

LAHD has prepared this IS/MND to address the environmental effects of the proposed project. Based on the analysis provided in this IS/MND, LAHD finds that with the incorporation of described revisions to the project and mitigation measures, the proposed project would not have a significant effect on the environment.

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Section 7.0
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Section 8.0
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Section 9.0
Acronyms and Abbreviations

AB	Assembly Bill
AQMP	Air Quality Management Plan
ARB	Air Resources Board
ARSSS	Anchorage Road Sediment Storage Site
ATSAC	Automated Traffic Surveillance and Control System
ATSC	Automated Terminal Service Communication
bgs	below ground surface
BMPs	Best Management Practices
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
CAAQS	California Ambient Air Quality Standards
CCC	criterion continuous concentration
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	Methane
CHHSLs	California Human Health Screening Levels
CMA	Critical Movement Analysis
CMP	Congestion Management Plan
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	CO_2-equivalents
CPR	cardiopulmonary resuscitation

CTR	California Toxics Rule
CWA	Clean Water Act
dBA	A-Weighted Sound Level
dB	decibels
DC	Direct Current
DO	Dissolved oxygen
DOGGR	California Department of Conservation, Division of Oil, Gas, and Geothermal Resources
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
FIRM	Flood Insurance Rate Map
GHG	Greenhouse Gases
GWP	Global Warming Potential
HCP	Habitat Conservation Plan
HDPE	High Density Polyethylene
HRA	Health Risk Assessment
HSC	Health and Safety Code
HVAC	heating, ventilation, and air conditioning
I-	Interstate
IS/MND	Initial Study/Mitigated Negative Declaration
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAHD	Los Angeles Harbor Department
LBP	lead-based paint
LEED	Leadership in Energy and Environmental Design
LEL	lower explosive limit
Leq	Equivalent Noise Level
LID	Low Impact Development
LOS	Level of Service
LST	Localized Significance Threshold
MGD	million gallons per day
MLLW	mean lower low water
MMRP	Mitigation Monitoring and Reporting Program

MND	Mitigated Negative Declaration
N_2O	Nitrous oxide
NAAQS	National Ambient Air Quality Standards
NCCP	Natural Community Conservation Planning
ND	Negative Declaration
NO_2	Nitrogen dioxide
NO_X	Nitrogen oxides
NPDES	National Pollution Discharge Elimination System
NPL	National Priority List
O_3	Ozone
OSHA	Occupational Safety & Health Administration
PA	Project Areas
PAHs	Polycyclic aromatic hydrocarbons
Pb	Lead
PCB	Polychlorinated Biphenyl
PCH	Pacific Coast Highway, State Route 1
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter less than 2.5 microns in diameter
PM_{10}	Particulate Matter less than 10 microns in diameter
PMP	Port of Los Angeles Master Plan
POLA	Port of Los Angeles
POVs	privately owned vehicles
ppm	parts per million
ppmv	parts per million volume
PRC	Public Resources Code
PRGs	Preliminary Remediation Goals
RWQCB	Los Angeles Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SEAs	Significant Ecological Areas
SO_2	Sulfur dioxide
SO_X	Sulfur oxides
sq m	square meters
SR	State Route
SRA	source receptor area

SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
TBT	tributyltin
TIWRP	Terminal Island Water Reclamation Plant
TMDL	Total Maximum Daily Loads
TPH	Total Petroleum Hydrocarbon
TPH-d	TPH as diesel
TPH-MO	TPH as motor oil
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
V/C	Volume/Capacity
VHF	Very High Frequency
VOC	Volatile Organic Compounds
WYSAC	Wilmington Youth Sailing and Aquatic Center
WWL	Wallenius Wilhelmsen Logistics

Appendix A

Parcel Profile Report

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City of Los Angeles
Department of City Planning

6/9/2011
PARCEL PROFILE REPORT

PROPERTY ADDRESSES
1151 N ANCHORAGE ROAD

ZIP CODES
90744

RECENT ACTIVITY
None

CASE NUMBERS
CPC-2005-8252-CA
CPC-2000-4046-CA
CPC-1986-832-GPC
ORD-165406-SA7
ORD-165406-SA6
ORD-165406-SA5B
ORD-165406-SA5A
ENV-2005-8253-ND
ENV-2005-8253-MND
ENV-2001-846-ND
ROW-30277

Address/Legal Information	
PIN Number	024B209 3
Lot/Parcel Area (Calculated)	7,772,264.0 (sq ft)
Thomas Brothers Grid	PAGE 824 - GRID E1
	PAGE 824 - GRID E2
	PAGE 824 - GRID F1
	PAGE 824 - GRID F2
	PAGE 824 - GRID G1
	PAGE 824 - GRID G2
Assessor Parcel No. (APN)	7440010***
Tract	TIDE LAND LOCATION NO. 152
Map Reference	PAT 9-274 M D & D 14-85/87
Block	None
Lot	None
Arb (Lot Cut Reference)	None
Map Sheet	024B205
	024B209
	024B213
	027B209
	027B213
Jurisdictional Information	
Community Plan Area	Port of Los Angeles
Area Planning Commission	Harbor
Neighborhood Council	Wilmington
Council District	None
Census Tract #	2947.00
	2949.00
	2961.00
LADBS District Office	San Pedro
Planning and Zoning Information	
Special Notes	None
Zoning	M3
	[Q]M2-1
	[Q]M3-1
Zoning Information (ZI)	ZI-1192 2000 ft. Buffer Zone for BZP Site (420 Henry Ford Avenue)
	ZI-1192 2000 ft. Buffer Zone for BZP Site (210 South Avalon Boulevard)
	ZI-1195 State of California (Division of Oil and Gas) Approval
General Plan Land Use	Recreation and Commercial
General Plan Footnote(s)	Yes
Hillside Area (Zoning Code)	No
Specific Plan Area	None
Special Land Use / Zoning	None
Design Review Board	No
Historic Preservation Review	No
Historic Preservation Overlay Zone	None
Other Historic Designations	None
Other Historic Survey Information	None

Mills Act Contract	None
POD - Pedestrian Oriented Districts	None
CDO - Community Design Overlay	None
NSO - Neighborhood Stabilization Overlay	No
Streetscape	No
Sign District	No
Adaptive Reuse Incentive Area	None
Baseline Mansionization Ordinance	No
CRA - Community Redevelopment Agency	None
Central City Parking	No
Downtown Parking	No
Building Line	None
500 Ft School Zone	No
500 Ft Park Zone	No
Assessor Information	
Assessor Parcel No. (APN)	None
APN Area (Co. Public Works)*	None
Use Code	Not Available
Assessed Land Val.	None
Assessed Improvement Val.	None
Last Owner Change	None
Last Sale Amount	None
Tax Rate Area	None
Deed Ref No. (City Clerk)	None
Building 1	No data for building 1
Building 2	No data for building 2
Building 3	No data for building 3
Building 4	No data for building 4
Building 5	No data for building 5
Additional Information	
Airport Hazard	None
Coastal Zone	None
Farmland	Area Not Mapped
Very High Fire Hazard Severity Zone	No
Fire District No. 1	No
Flood Zone	AE D=N/A E=9 IN (LOMA)
Hazardous Waste / Border Zone Properties	2000 ft. Buffer Zone for BZP Site (210 South Avalon Boulevard)
	2000 ft. Buffer Zone for BZP Site (420 Henry Ford Avenue)
Methane Hazard Site	Methane Zone
High Wind Velocity Areas	No
Special Grading Area (BOE Basic Grid Map A-13372)	No
Oil Wells	YES
Alquist-Priolo Fault Zone	No
Distance to Nearest Fault	0.81536 (km)
Landslide	No
Liquefaction	Yes
Economic Development Areas	
Business Improvement District	None
Federal Empowerment Zone	None
Renewal Community	No
Revitalization Zone	San Pedro / Wilmington
State Enterprise Zone	None
Targeted Neighborhood Initiative	None
Public Safety	

Police Information

Bureau	South
	South
	South
Division / Station	Harbor
	Harbor
	Harbor
Reporting District	529
	527
	559

Fire Information

District / Fire Station	40
	49
Batallion	6
	6
Division	2
	2
Red Flag Restricted Parking	No

CASE SUMMARIES

Note: Information for case summaries is retrieved from the Planning Department's Plan Case Tracking System (PCTS) database.

Case Number:	CPC-2005-8252-CA
Required Action(s):	CA-CODE AMENDMENT
Project Descriptions(s):	AN ORDINANCE ESTABLISHING PERMANENT REGULATIONS IMPLEMENTING THE MELLO ACT IN THE COASTAL ZONE.
Case Number:	CPC-2000-4046-CA
Required Action(s):	CA-CODE AMENDMENT
Project Descriptions(s):	
Case Number:	CPC-1986-832-GPC
Required Action(s):	GPC-GENERAL PLAN/ZONING CONSISTENCY (AB283)
Project Descriptions(s):	AB-283 PROGRAM - GENERAL PLAN/ZONE CONSISTENCY - PORT OF LOS ANGELES - COMMUNITY WIDE ZONE AND GENERAL PLAN CHANGES TO BRING THE PLAN AND ZONING INTO CONSISTENCY. INCLUDES CHANGES OF HEIGHT AS NEEDED. REQUIRED BY COURT AS PART OF SETTLEMENT IN THE HILLSIDE FEDERATION LAWSUIT
Case Number:	ENV-2005-8253-ND
Required Action(s):	ND-NEGATIVE DECLARATION
Project Descriptions(s):	AN ORDINANCE ESTABLISHING PERMANENT REGULATIONS IMPLEMENTING THE MELLO ACT IN THE COASTAL ZONE.
Case Number:	ENV-2005-8253-MND
Required Action(s):	MND-MITIGATED NEGATIVE DECLARATION
Project Descriptions(s):	Data Not Available
Case Number:	ENV-2001-846-ND
Required Action(s):	ND-NEGATIVE DECLARATION
Project Descriptions(s):	

DATA NOT AVAILABLE

ORD-165406-SA7

ORD-165406-SA6

ORD-165406-SA5B

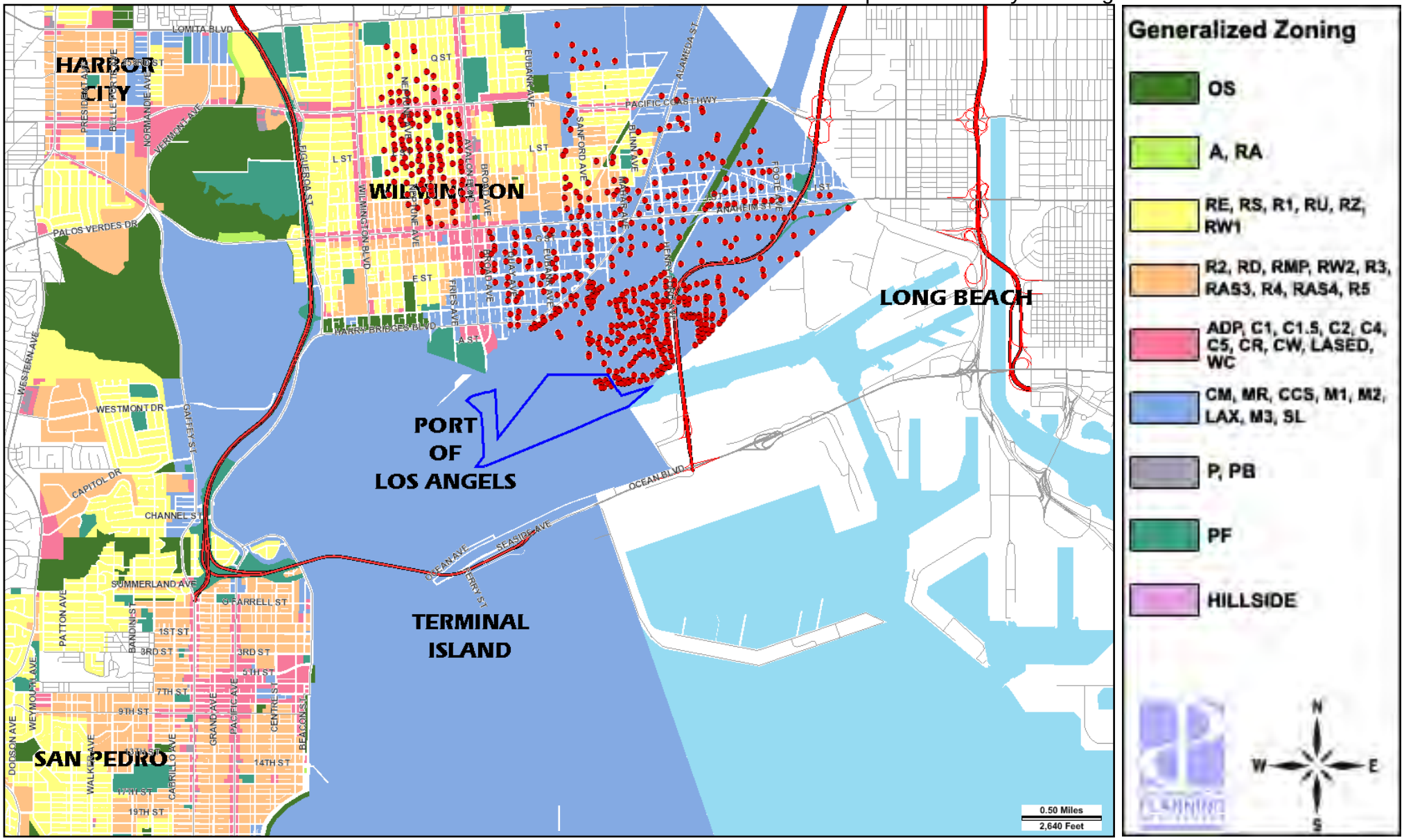
ORD-165406-SA5A

ROW-30277

ZIMAS PUBLIC

06/09/2011

City of Los Angeles
Department of City Planning



Address: 1151 N ANCHORAGE ROAD
APN: 7440010***
PIN #: 024B209 3

Tract: TIDE LAND LOCATION NO. 152
Block: None
Lot: None
Arb: None

Zoning: M3, [Q]M2-1, [Q]M3-1
General Plan: Recreation and Commercial

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Appendix B

Air Quality Calculations

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Emissions Calculations

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Appendix B - Air Quality/GHGs Table of Contents

Table B-1. Activity Data for Construction of the POLA Willmington Youth Sailing Center Project (Page 1 of 2)
Table B-1. Activity Data for Construction of the POLA Willmington Youth Sailing Center Project (Page 2 of 2)
Table B-2. Air Emission Factors for the POLA Willmington Youth Sailing Center Project
Table B-3. Daily Air Emissions due to Construction of the POLA Willmington Youth Sailing Center Project (Page 1 of 2)
Table B-4. Summary of Daily Construction Emissions - La Bonita Park Pump Station MND

Table B-1. Activity Data for Construction of the POLA Willmington Youth Sailing Center Project (Page 1 of 2)

Construction Activity/Source	*Hp Rating*	*Average Daily % of Full Throttle*	*Number Active*	*Hours/ Day*	*Daily HP-Hr*	*Total Work Days*
Site Preparation						
Backhoe	160	0.50	1	6	480	6
Bulldozer	165	0.50	1	8	660	2
Compactive Roller	165	0.50	1	6	495	4
Grader	180	0.50	1	8	720	2
Loader	215	0.50	1	6	645	4
Scraper	195	0.50	1	8	780	2
Water Truck	175	0.40	1	4	280	12
Haul Truck (1)	NA	NA	15	4	NA	2
Supply Trucks (1)	NA	NA	40	2	NA	4
Fugitive Dust (2)	NA	NA	0.6	8	NA	12
Construct Sailing Center Building						
Air Compressor - 100 CFM	50	0.60	1	6	180	15
Concrete/Industrial Saw	84	0.73	1	6	368	15
Crane	190	0.30	1	4	228	15
Forklift	94	0.48	1	4	179	15
Generator	45	0.60	1	6	162	15
Concrete Trucks (1)	NA	NA	15	4	NA	2
Supply Trucks (1)	NA	NA	40	2	NA	5
Fugitive Dust (2)	NA	NA	0.2	8	NA	2
Construct Storage/Workshop						
Air Compressor - 100 CFM	50	0.60	1	6	180	2
Concrete/Industrial Saw	84	0.73	1	3	184	2
Crane	190	0.30	1	1	57	2
Forklift	94	0.48	1	1	45	2
Generator	45	0.60	1	6	162	2
Concrete Trucks (1)	NA	NA	15	2	NA	1
Supply Trucks (1)	NA	NA	40	1	NA	1
Fugitive Dust (2)	NA	NA	0.01	8	NA	1
Construct Boat Storage						
Air Compressor - 100 CFM	50	1	1	6	180	4
Concrete/Industrial Saw	84	1	1	3	184	4
Crane	190	0	1	1	57	4
Forklift	94	0	1	1	45	4
Generator	45	1	1	6	162	4
Concrete Trucks (1)	NA	NA	15	2	NA	2
Supply Trucks (1)	NA	NA	40	2	NA	2
Fugitive Dust (2)	NA	NA	0.02	8	NA	2

Notes: (1) Number Active = miles/roundtrip, Hours/Day = daily truck trips, and Daily Hp-Hrs = daily miles.

(2) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table B-1. Activity Data for Construction of the POLA Willmington Youth Sailing Center Project (Page 2 of 2)

Construction Activity/Source	*Hp Rating*	*Average Daily % of Full Throttle*	*Number Active*	*Hours/ Day*	*Daily HP-Hr*	*Total Work Days*
Install Utilities						
Air Compressor - 100 CFM	50	0.60	1	4	120	45
Backhoe	160	0.50	1	6	480	8
Dump Truck	250	0.25	1	4	250	4
Crane	190	0.30	1	3	171	12
Forklift	94	0.48	1	4	179	16
Generator	45	0.60	1	6	162	45
Loader	160	0.40	1	4	256	8
Water Truck	175	0.40	1	2	140	20
Concrete Trucks (1)	NA	NA	15	4	NA	6
Supply Trucks (1)	NA	NA	40	1	NA	14
Fugitive Dust (2)	NA	NA	0.1	8	NA	20
Pave Parking Lot						
Backhoe	160	0.50	1	4	320	3
Compactive Roller	165	0.50	1	6	495	2
Grader	180	0.50	1	8	720	1
Loader	215	0.50	1	4	430	2
Paving Machine	200	0.50	1	8	800	1
Water Truck - 5000 Gallons	175	0.40	1	4	280	1
Haul Truck - Paving (1)	NA	NA	15	5	73	1
Haul Truck - Base (1)	NA	NA	15	2	35	1
Semi Truck (1)	NA	NA	20	2	47	1
Fugitive Dust (2)	NA	NA	0.2	8	NA	3
Landscaping						
Backhoe	160	0.50	1	3	240	3
Dump Truck	250	0.25	1	2	125	3
Forklift	94	0.48	1	1	45	2
Loader	160	0.40	1	2	128	3
Water Truck - 5000 Gallons	175	0.40	1	2	140	2
Supply Trucks (1)	NA	NA	40	1	NA	2
Demolish Docks/Construct New Docks/Launch Ramp						
Air Compressor - 100 CFM	50	0.60	1	6	180	15
Concrete/Industrial Saw	84	0.73	1	6	368	3
Crane	190	0.30	1	4	228	6
Forklift	94	0.48	1	4	179	5
Generator	45	0.60	1	6	162	15
Loader	215	0.50	1	4	430	3
Haul Truck (1)	NA	NA	15	5	NA	3
Supply Trucks (1)	NA	NA	40	5	NA	5

Notes: (1) Number Active = miles/roundtrip, Hours/Day = daily truck trips, and Daily Hp-Hrs = daily miles.

(2) Number Active is acres disturbed at one time and Total Hp-Hrs is acre-days for the entire activity.

Table B-2. Air Emission Factors for the POLA Willmington Youth Sailing Center Project

Project Year/Source Type	Fuel Type	Emission Factors (Grams/Horsepower-Hour)							References
		VOC	CO	NOx	SOx	PM_{10}	$PM_{2.5}$	CO_2	
Tier 3 or less Standards									
Off-Road Equipment - 25-50 Hp	D	1.30	3.69	3.25	0.004	0.31	0.29	568	(1)
Off-Road Equipment - 51-120 Hp	D	0.20	2.37	3.30	0.004	0.30	0.28	568	(2)
Off-Road Equipment - 121-175 Hp	D	0.20	0.87	2.80	0.004	0.22	0.20	568	(2)
Off-Road Equipment - 176-250 Hp	D	0.20	0.75	2.80	0.004	0.15	0.14	568	(2)
Off-Road Equipment - 251-500 Hp	D	0.20	0.84	2.80	0.004	0.15	0.14	568	(2)
On-road Truck - 5 mph (Gms/Mi)	D	5.93	19.04	20.51	0.03	1.29	1.18	2,862	(3)
On-road Truck - 25 mph (Gms/Mi)	D	0.81	5.66	9.22	0.02	0.82	0.75	1,661	(3)
On-road Truck - 55 mph (Gms/Mi)	D	0.45	3.62	9.26	0.01	0.36	0.33	1,438	(3)
On-Road Trucks - Composite (Gms/Mi)	D	0.80	4.80	9.81	0.01	0.49	0.45	1,554	(4)
Fugitive Dust (Lbs/acre-day)	- - -	- - -	- - -	- - -	- - -	36.6	3.7	- - -	(5)

Notes: (1) Statewide average emission factors for year 2012 interpolated from year 2010 and 2020 data estimated by the OFFROAD2007 model, as presented in *URBEMIS2007 for Windows Users' Guide, Appendix I* (Jones&Stokes Ass. 2007).

(2) Equal to the cleanest of EPA Tier 2 or 3 nonroad emission standards. For example, since there are no Tier 3 standards for PM, data presented = Tier 2 standards. Additionally, since there are no Tier 2/3 standards for CO, data presented derived from nonroad certification data found in *Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling -- Compression-Ignition* (USEPA 2004).

(3) Estimated with EMFAC2007 for heavy diesel trucks and SCAB annual average year 2012 at 60 degrees/50% humidity (ARB 2006). Units in grams/mil

(4) Composite factors based on a round trip of 75% at 55 mph, 20% at 25 mph, and 5% at 5 mph. Units in grams/mile.

(5) Units in lbs/acre-day (*AP-42* Section 11.2.3 [USEPA 1995]). Factors reduced by 68% from uncontrolled levels to simulate compliance with SCAQMD Rule 403.

Table B-3. Daily Air Emissions due to Construction of the POLA Willmington Youth Sailing Center Project (Page 1 of 2)

	Pounds per Day						Total Tons
Construction Activity/Source	*VOC*	*CO*	*NOx*	*SOx*	*PM_{10}*	*$PM_{2.5}$*	*CO_2*
Site Preparation							
Backhoe	0.2	0.9	3.0	0.0	0.2	0.2	1.8
Bulldozer	0.3	1.3	4.1	0.0	0.3	0.3	0.8
Compactive Roller	0.2	0.9	3.1	0.0	0.2	0.2	1.2
Grader	0.3	1.2	4.4	0.0	0.2	0.2	0.9
Loader	0.3	1.1	4.0	0.0	0.2	0.2	1.6
Scraper	0.3	1.3	4.8	0.0	0.3	0.2	1.0
Water Truck	0.1	0.5	1.7	0.0	0.1	0.1	2.1
Haul Truck	0.1	0.6	1.3	0.0	0.1	0.1	0.2
Supply Trucks	0.1	0.8	1.7	0.0	0.1	0.1	0.5
Fugitive Dust					21.8	2.2	
Subtotal	2.0	8.7	28.1	0.0	23.6	3.8	10.2
Construct Sailing Center Building							
Air Compressor - 100 CFM	0.5	1.5	1.3	0.0	0.1	0.1	1.7
Concrete/Industrial Saw	0.2	1.9	2.7	0.0	0.2	0.2	3.5
Crane	0.1	0.4	1.4	0.0	0.1	0.1	2.1
Forklift	0.1	0.9	1.3	0.0	0.1	0.1	1.7
Generator	0.5	1.3	1.2	0.0	0.1	0.1	1.5
Concrete Trucks	0.1	0.6	1.3	0.0	0.1	0.1	0.2
Supply Trucks	0.1	0.8	1.7	0.0	0.1	0.1	0.7
Fugitive Dust					8.4	0.8	0.0
Architectual Coatings	23.2						
Subtotal	24.8	7.5	10.9	0.0	9.2	1.6	11.4
Construct Storage/Workshop							
Air Compressor - 100 CFM	0.5	1.5	1.3	0.0	0.1	0.1	0.2
Concrete/Industrial Saw	0.1	1.0	1.3	0.0	0.1	0.1	0.2
Crane	0.0	0.1	0.4	0.0	0.0	0.0	0.1
Forklift	0.0	0.2	0.3	0.0	0.0	0.0	0.1
Generator	0.5	1.3	1.2	0.0	0.1	0.1	0.2
Concrete Trucks	0.1	0.3	0.6	0.0	0.0	0.0	0.1
Supply Trucks	0.1	0.4	0.9	0.0	0.0	0.0	0.1
Fugitive Dust					0.3	0.0	
Subtotal	1.2	4.8	6.0	0.0	0.8	0.5	0.9
Construct Boat Storage							
Air Compressor - 100 CFM	0.5	1.5	1.3	0.0	0.1	0.1	0.5
Concrete/Industrial Saw	0.1	1.0	1.3	0.0	0.1	0.1	0.5
Crane	0.0	0.1	0.4	0.0	0.0	0.0	0.1
Forklift	0.0	0.2	0.3	0.0	0.0	0.0	0.1
Generator	0.5	1.3	1.2	0.0	0.1	0.1	0.4
Concrete Trucks	0.1	0.3	0.6	0.0	0.0	0.0	0.1
Supply Trucks	0.1	0.8	1.7	0.0	0.1	0.1	0.3
Fugitive Dust					0.7	0.1	
Subtotal	1.3	5.2	6.8	0.0	1.2	0.5	1.9

Table B-3. Daily Air Emissions due to Construction of the POLA Willmington Youth Sailing Center Project (Page 1 of 2)

	Pounds per Day						Total Tons
Construction Activity/Source	*VOC*	*CO*	*NOx*	*SOx*	*PM_{10}*	*$PM_{2.5}$*	*CO_2*
Install Utilities							
Air Compressor - 100 CFM	0.3	1.0	0.9	0.0	0.1	0.1	3.4
Backhoe	0.2	0.9	3.0	0.0	0.2	0.2	2.4
Dump Truck	0.1	0.4	1.5	0.0	0.1	0.1	0.6
Crane	0.1	0.3	1.1	0.0	0.1	0.1	1.3
Forklift	0.1	0.9	1.3	0.0	0.1	0.1	1.8
Generator	0.5	1.3	1.2	0.0	0.1	0.1	4.6
Loader	0.1	0.5	1.6	0.0	0.1	0.1	1.3
Water Truck	0.1	0.3	0.9	0.0	0.1	0.1	1.8
Concrete Trucks	0.1	0.6	1.3	0.0	0.1	0.1	0.6
Supply Trucks	0.1	0.4	0.9	0.0	0.0	0.0	1.0
Fugitive Dust					3.7	0.4	
Subtotal	1.6	6.7	13.5	0.0	4.6	1.3	18.7
Pave Parking Lot							
Backhoe	0.1	0.6	2.0	0.0	0.2	0.1	0.6
Compactive Roller	0.2	0.9	3.1	0.0	0.2	0.2	0.6
Grader	0.3	1.2	4.4	0.0	0.2	0.2	0.5
Loader	0.2	0.7	2.7	0.0	0.1	0.1	0.5
Paving Machine	0.4	1.3	4.9	0.0	0.3	0.2	0.5
Water Truck - 5000 Gallons	0.1	0.5	1.7	0.0	0.1	0.1	0.2
Haul Truck - Paving	0.1	0.8	1.6	0.0	0.1	0.1	0.1
Haul Truck - Base	0.1	0.4	0.8	0.0	0.0	0.0	0.1
Semi Truck	0.1	0.5	1.0	0.0	0.1	0.0	0.1
Fugitive Dust					7.5	0.8	
Subtotal	1.6	7.0	22.2	0.0	8.9	2.0	3.2
Landscaping							
Backhoe	0.1	0.5	1.5	0.0	0.1	0.1	0.5
Dump Truck	0.1	0.2	0.8	0.0	0.0	0.0	0.2
Forklift	0.0	0.2	0.3	0.0	0.0	0.0	0.1
Loader	0.1	0.2	0.8	0.0	0.1	0.1	0.2
Water Truck - 5000 Gallons	0.1	0.3	0.9	0.0	0.1	0.1	0.2
Supply Trucks	0.1	0.4	0.9	0.0	0.0	0.0	0.1
Subtotal	0.4	1.8	5.1	0.0	0.4	0.3	1.3
Demolish Docks/Construct New Docks/Launch Ramp							
Air Compressor - 100 CFM	0.5	1.5	1.3	0.0	0.1	0.1	1.7
Concrete/Industrial Saw	0.2	1.9	2.7	0.0	0.2	0.2	0.7
Crane	0.1	0.4	1.4	0.0	0.1	0.1	0.9
Forklift	0.1	0.9	1.3	0.0	0.1	0.1	0.6
Generator	0.5	1.3	1.2	0.0	0.1	0.1	1.5
Loader	0.2	0.7	2.7	0.0	0.1	0.1	0.8
Haul Truck	0.1	0.8	1.6	0.0	0.1	0.1	0.4
Supply Trucks	0.4	2.1	4.3	0.0	0.2	0.2	1.7
Subtotal	2.0	9.6	16.4	0.0	1.1	1.0	8.2
Total Construction GHGs							55.8
Total Construction GHGs Amoritized (30 Years)							1.9
Annual Operational GHGs							306.9
Combined Project GHGs (1)							308.8

Note: (1) Equal to amoritized construction + annual operational GHGs.

Table B-4. Summary of Daily Construction Emissions - La Bonita Park Pump Station MND

Construction Activity	*Pounds per Day*					
	VOC	*CO*	*NOx*	*SOx*	*PM_{10}*	*$PM_{2.5}$*
Site Preparation	2.0	8.7	28.1	0.0	23.6	3.8
Construct Sailing Center Building	24.8	7.5	10.9	0.0	9.2	1.6
Construct Storage/Workshop	1.2	4.8	6.0	0.0	0.8	0.5
Construct Boat Storage	1.3	5.2	6.8	0.0	1.2	0.5
Install Utilities	1.6	6.7	13.5	0.0	4.6	1.3
Pave Parking Lot	1.6	7.0	22.2	0.0	8.9	2.0
Landscaping	0.4	1.8	5.1	0.0	0.4	0.3
Demolish Docks/Construct New Docks/Launch Ramp	2.0	9.6	16.4	0.0	1.1	1.0
Total Project Emissions	35.0	51.3	109.0	0.2	49.8	11.1
Peak Daily Emissions (1)					23.6	3.8
Peak Daily Emissions (1)	28.9	24.2	37.2	0.1		
SCAQMD Daily Significance Thresholds	75	550	100	150	150	55

Note: (1) Peak daily emissions of VOC, CO, NOx, and SOx would occur during simultaneous construct sailing center building, construct storage/workshop, con
Peak daily emissions of PM10 and PM2.5 would occur during site preparation

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Modeling Results Available Upon Request

Modeling Outputs

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Appendix C

Human Health Risk Assessment

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18912 North Creek Parkway, Suite 101
Bothell, Washington 98011
(425) 482-3334

DATE: August 8, 2011
FROM: Iris Winstanley, Human Health Risk Assessor, SAIC
TO: Jan Green Rebstock, Project Manager, Port of Los Angeles
SUBJECT: Health Risk Assessment, Wilmington Youth Sailing Center Project

This memorandum summarizes the results of an assessment of the potential human health risks from exposure to harbor water and sediments associated with the proposed Wilmington Youth Sailing Center (WYSAC) project. Available sediment and water quality data for the site area within the Consolidated Slip, as provided by the Port, were used in this health risk assessment (HRA); no additional sample collection or analysis was performed.

Site History and Background

The proposed WYSAC project is located in Wilmington, near the northwest corner of Shore Road and Anchorage Road in Wilmington, California. The project includes construction of a 5,000 square foot building and associated on-site parking, and demolition/construction of slips and a 150-foot long dock. The facility will provide access to aquatic activities and educational programs for at-risk youth. Operations are intended to serve approximately 75 youths each day.

Some related program activities are expected to occur near Cabrillo Beach and in association with the Wilmington YMCA Pool; activities occurring at other locations are not addressed in this HRA.

The property is currently used for boat, car, and truck storage. The property has historically been occupied by oil wells, aboveground storage tanks, and outdoor storage yards. All former wells have reportedly been plugged since 1987. Environmental issues related to water quality, contaminated sediments, soil and groundwater contamination, soil gas, and air quality were identified as part of a Phase I and Limited Phase II ESA (2010) for the WYSAC site.

Permit conditions will be incorporated into the project approval process for operations and construction activities to minimize health and environmental impacts.

The Consolidated Slip, to the northeast of the project site, is part of the Montrose Chemical Superfund site. Over time, the Consolidated Slip received drainage from the upstream Montrose site via the Dominguez Channel, and the sediments became contaminated with toxic chemicals and pesticides, including DDT. Preliminary sediment data indicates that sediments just west of the project site have been impacted by those chemicals. In addition, sediments northwest of the site are contaminated with PCBs, PAHs, and heavy metals. Due to the contaminated nature of the Consolidated Slip and its status as a Superfund site, WYSAC activities will be prohibited in this location.

Surface water quality testing results indicate that after a storm, it takes at least 96 hours for bacteria levels from stormwater runoff to drop to acceptable levels. Therefore, activities in and over the water will be restricted within 96 hours after a storm event.

Exposure Pathways and Media of Concern

Based on information provided by the port, and review of activities at other community sailing centers that provide services for at-risk youth, such as those in Milwaukee, Boston, Baltimore, Long Beach, and Burlington, the following receptors and pathways were selected for evaluation:

Potentially Exposed Populations: Youth-aged participants in sailing and other educational programs at the WYSAC. Participants are assumed to be ages 8 to 18, and activities include shore-based as well as on-water activities. Activities are assumed to include one-week summer camps and after-school programs.

Media of Concern: Youth participants may come in contact with sediments and harbor surface water during the on-water activities. The depth of water near the proposed WYSAC is approximately 11 feet. Given the presence of contaminated sediments in the area, and that the masts of training vessels are typically 14 feet or taller, tipping exercises within the project vicinity will not be permitted. In general, contact with the water will be avoided, and swimming near the WYSAC and in the Consolidated Slip is prohibited. Therefore, while contact with sediments and surface water may occur if a participant falls out of the boat or if the boat is accidentally overturned, significant contact with contaminated media will not take place on a regular basis.

The designated navigational area for the WYSAC is shown in Figure 1.

Exposure Pathways: During sailing and education activities at the WYSAC, human receptors will not typically be in contact with contaminated media. Swimming is not allowed in this area, and sailboat tipping exercises will be conducted at Cabrillo Beach or another location. Receptors may incidentally ingest or come in contact with contaminants in sediment or surface water during routine activities (e.g., dipping hands or arms in the water, coming in contact with water spray during windy conditions) or accidentally (e.g., falling out of the boat, accidentally tipping the boat).

The following exposure pathways are postulated:

- Incidental ingestion of sediments
- Dermal contact with sediments
- Incidental ingestion of surface water
- Dermal contact with surface water

Selection of Chemicals of Potential Concern (COPCs)

Sediment

Three surface sediment samples have been collected within the designated navigational area. To identify chemicals of potential concern (COPCs) for human health risk, highest detected sampling data are typically compared to health-protective screening levels for the environmental media and relevant exposure pathways. No screening levels specific to sediment and surface water exposure during recreational activities have been developed. Therefore, maximum detected surface sediment concentrations of contaminants were compared to the California Human Health Screening Levels (CHHSLs) and the USEPA Regional Screening Levels (RSLs) for residential soil exposure. Risks from recreational exposure to contaminants in sediment and surface water are likely to be significantly lower than risks from residential exposure to contaminants in soil. Chemicals with concentrations above the screening levels are listed below.

Table 1. Chemicals of Potential Concern in Sediment

Chemical	*Lower of Residential CHHSL or RSL (mg/kg DW)*	*Maximum Detected Conc'n in Surface Sediments (mg/kg DW)*
Arsenic	0.07	16.2
Lead	80	168
Total PCBs	0.089	0.16
Benzo(a)anthracene	0.15	0.34
Benzo(a)pyrene	0.015	0.73
Benzo(b)fluoranthene	0.15	1.3
Dibenz(a,h)anthracene	0.015	0.33
Indeno(1,2,3-cd)pyrene	0.15	0.63
Note: DW = dry weight		

Surface Waters

Surface water samples have been collected from three monitoring stations within the project area (LA49, LA50, LA51) between May 2005 and September 2008. Maximum detected surface water concentrations of contaminants were compared to the USEPA RSLs for tap water. Risks from recreational exposure to contaminants in surface water are likely to be significantly lower than risks from residential exposure to contaminants in tap water. Chemicals with concentrations above the screening levels are listed below.

Table 2. Chemicals of Potential Concern in Surface Water

Chemical	*Residential Tap Water RSL (ug/L)*	*Maximum Detected Conc'n in Surface Water (ug/L)*
Arsenic (total)	0.045	3.0
Benzo(a)pyrene	0.0029	0.0064
Bis(2-ethylhexyl)phthalate	4.8	122

These chemicals are considered COPCs and were evaluated quantitatively in this HRA.

Quantification of Exposure

Chemical-specific exposure (or intake) was calculated for each exposure pathway, consistent with USEPA guidance (USEPA 1989). Intakes were calculated for Reasonable Maximum Exposure (RME) conditions for each exposure area.

Intakes were calculated separately for cancer and noncancer health effects. This is because exposures to carcinogens are averaged over a lifetime (i.e., 70 years) while exposures to noncarcinogens are averaged over the duration of exposure. The following equations were used to calculate chemical intakes.

Incidental Ingestion of Sediment**.** Intake of chemicals through ingestion of sediment was calculated for youths (age 8 to 18) using the following equation:

$$Intake(mg/kg - day) = \frac{CS \; x \; IR \; x \; FI \; x \; EF \; x \; ED \; x \; CF1}{BW \; x \; AT}$$

Where:

CS	=	Chemical exposure point concentration (EPC) in sediment (mg/kg)
IR	=	Ingestion rate (mg/day)
FI	=	Fraction ingested from contaminated source (unitless)
EF	=	Exposure frequency (days/yr)
ED	=	Exposure duration (yrs)
CF1	=	Conversion factor (kg/mg)
BW	=	Body weight (kg)
AT	=	Averaging time (days)

Dermal Contact with Sediment**.** The following equation was used to calculate the absorbed dose of chemicals from dermal contact with sediment by youth participants:

$$Absorbed \; Dose(mg/kg - day) = \frac{CS \; x \; CF1 \; x \; SA \; x \; AF \; x \; ABS \; x \; EF \; x \; ED}{BW \; x \; AT}$$

Where:

CS	=	Chemical EPC in sediment (mg/kg)
CF1	=	Conversion factor (kg/mg)
SA	=	Skin surface area available for contact (cm^2)
AF	=	Soil to skin adherence factor (mg/cm^2-event)
ABS	=	Dermal absorption factor (unitless)
EF	=	Exposure frequency (events/yr)
ED	=	Exposure duration (yrs)
BW	=	Body weight (kg)
AT	=	Averaging time (days)

Incidental Ingestion of Surface Water**.** Exposure resulting from contact with surface water during on-water activities was evaluated using the following equation:

$$Intake(mg/kg - day) = \frac{CW \; x \; CR \; x \; CF2 \; x \; CF3 \; x \; ET \; x \; EF \; x \; ED}{BW \; x \; AT}$$

Where:

CW	=	Chemical EPC in water (ug/L)
CR	=	Contact rate (mL/hr)
CF2	=	Conversion factor (L/mL)
CF3	=	Conversion factor (mg/ug)
ET	=	Exposure time (hrs/event)
EF	=	Exposure frequency (events/yr)
ED	=	Exposure duration (yrs)
BW	=	Body weight (kg)
AT	=	Averaging time (days)

Dermal Contact with Water**.** The following equation was used to evaluate dermal exposure to contaminants in surface water:

$$Absorbed\ Dose\ (mg/kg\text{-}day) = \frac{CW\ x\ SA\ x\ Kp\ x\ ET\ x\ EF\ x\ ED\ x\ CF4}{BW\ x\ AT}$$

Where:

CW	=	Chemical EPC in water (mg/L)
SA	=	Skin surface area available for contact (cm^2)
Kp	=	Permeability coefficient (cm/hr)
ET	=	Exposure time (hrs/event)
EF	=	Exposure frequency (events/yr)
ED	=	Exposure duration (yrs)
CF4	=	Conversion factor (L/cm^3)
BW	=	Body weight (kg)
AT	=	Averaging time (days)

The exposure point concentration (EPC) is an estimate of the arithmetic average concentration for a chemical within an exposure unit. Ideally, the EPC should be the true average concentration within the exposure unit. However, because only three sediment samples and limited surface water data were available for use in this HRA, the maximum detected concentrations of each chemical were used to represent a health-protective estimate of the exposure point concentration, as listed in Table 1. Use of the maximum detected concentration likely results in overestimation of human health risk.

Exposure Parameters

Exposure factors used in the HRA are described below. Since no site-specific exposure parameters were available, conservative, health-protective values were selected for all variables. These values are likely to result in significant overestimate of human health risk.

Sediment Ingestion Rate (IR). The default residential soil ingestion rate for children (200 mg/day) was used to reflect incidental ingestion of sediment by youth participants in WYSAC aquatic programs.

Skin Surface Area (SA). Skin surface area (SA) describes the amount of skin that is exposed to contaminated media. For sediment and surface water contact, the average total body skin surface area of 15,900 cm^2 for children ages 11 to 16 was used, as listed in USEPA's Child-Specific Exposure Factors Handbook (USEPA 2008). This value reflects potential exposures during swimming. Since program participants will swim in Port waters only if they accidentally fall in, this is a very conservative assumption.

Soil to Skin Adherence Factor (AF). USEPA's recommended soil adherence factor value of 0.2 mg/cm^2 was used (USEPA 2008). This value represents a conservative estimate of soil adherence for children playing in wet soil.

Dermal Absorption Factor (ABS). A dermal absorption value (ABS) is used in the calculation of the absorbed dose of chemical resulting from dermal contact with sediment. The ABS term accounts for desorption of chemicals from the sediment matrix and subsequent absorption of chemicals across the skin and into the bloodstream.

Exposure Frequency (EF). For youth program participants, an exposure frequency of 168 hours per year was assumed. This value represents exposures to contaminated media for a reasonable maximum exposed individual of two hours per day, five days per week, for two one-week summer camp sessions;

and two hours per day, two days per week, during the remaining nine months to represent an after-school program. This is equivalent to approximately seven 24-hour days per year. A total of 84 discrete contact events was assumed.

Surface Water Contact Rate (CR). A surface water ingestion rate of 50 mL/hour was assumed for all receptors; this is the default rate for surface water ingestion while swimming (USEPA 1989).

Exposure Time (ET). An average exposure time of 2 hours per event was assumed for program participants. This represents the average time of contact with sediment and surface water during on-water activities, and likely results in an overestimation of risk.

Permeability Coefficient (Kp). The permeability coefficient for dermal absorption from water (Kp) is derived from a parameter called flux, which is the amount of chemical absorbed across a defined surface area of skin per unit time (mg/cm^2-hr). The flux is normalized for the concentration of the chemical to obtain the Kp (cm/hr), which represents the rate at which the chemical crosses the skin barrier. Kp values for each COPC were obtained from the USEPA's Risk Assessment Guidance for Superfund (RAGS) Part

Table 3. Exposure Assumptions

Parameter	*Abbreviation*	*Units*	*Value*	*Rationale/Reference*
Sediment Exposures				
Chemical concentration in sediment	CS	mg/kg	Chemical-specific	Maximum detected concentration (see Table 1)
Sediment ingestion rate	IR	mg/day	200	Default child soil ingestion rate, residential scenario (USEPA 1991)
Fraction ingested from contaminated source	FI	unitless	1	Professional judgement; assumes all ingested sediment is from contaminated area
Exposure frequency	EF	days/yr	7	Assumes 2 hrs/day, 5 days/week, for two one-week summer camp sessions, and 2 hrs/day, 2 days/week during the nine school months
Exposure duration	ED	yrs	1	Assumes one full year of participation in the sailing program
Conversion factor 1	CF1	kg/mg	10^{-6}	0.000001 kg per mg
Body weight	BW	kg	56.8	Mean body weight for children aged 11 to 16, males and females combined (USEPA 2008)
Averaging time	AT	days	25,550 (cancer); 365 (noncancer)	Default values (USEPA 1989)
Skin surface area available for contact	SA	cm^2	15,900	Mean total body skin surface area for children aged 11 to 16, males and females combined (USEPA 2008)
Soil-to-skin adherence factor	AF	mg/cm^2-event	0.2	USEPA recommended value for children playing in wet soil (USEPA 2008)
Dermal absorption factor	ABS	unitless	chemical-specific	Arsenic 0.03; PCBs 0.14; carcinogenic PAHs 0.13; pathway not quantitatively evaluated for metals without dermal absorption factors (USEPA 2004)
Surface Water Exposures				
Chemical concentration in water	CW	ug/L	chemical-specific	Maximum detected concentration (see Table 1)

Table 3. Exposure Assumptions

Parameter	*Abbreviation*	*Units*	*Value*	*Rationale/Reference*
Surface Water Exposures (continued)				
Contact rate	CR	mL/hr	50	Default value for swimming; USEPA 1989
Conversion factor 2	CF2	L/mL	10^{-3}	0.001 L per mL
Conversion factor 3	CF3	mg/ug	10^{-3}	0.001 mg per ug
Exposure time	ET	hrs/event	2	Assumes 2 hours of on-water exposure per day
Exposure frequency	EF	events/yr	84	Assumes 2 days per week for 2 one-week summer sessions, plus 2 days per week during the school year.
Exposure duration	ED	yrs	1	Assumes one full year of participation in the sailing program
Body weight	BW	kg	56.8	Mean body weight for children aged 11 to 16, males and females combined (USEPA 2008)
Averaging time	AT	days	25,550 (cancer); 365 (noncancer)	Default values (USEPA 1989)
Skin surface area available for contact	SA	cm^2	15,900	Mean total body skin surface area for children aged 11 to 16, males and females combined (USEPA 2008)
Permeability coefficient	Kp	cm/hr	chemical-specific	Arsenic 0.001; benzo(a)pyrene 0.7; bis(2-ethylhexyl)phthalate 0.25; from USEPA 2004
Conversion factor 4	CF4	L/cm^3	10^{-3}	0.001 L per cubic centimeter

E guidance (USEPA 2004).

Toxicity Assessment

Toxicity values have been developed to estimate the potential for adverse health effects as a function of human exposure to a chemical. Toxicity values are combined with daily intakes and absorbed dose to calculate human health risks through previously identified scenarios. Exposure to chemicals can result in carcinogenic or non-carcinogenic pathologies; therefore, these two categories of adverse human health effects are characterized separately. Dose-response estimates are presented as reference doses (RfDs) for non-carcinogenic effects (those not related to cancer) and cancer slope factors (CSFs) for carcinogenic effects. Some chemicals (e.g., arsenic) may exhibit both types of effects.

RfDs and SFs for the COPCs identified above are presented in Table 4 below. The toxicity values were obtained from USEPA's Regional Screening Level table (dated June 2011).

Table 4. Toxicity Values

COPC	*Cancer Slope Factor, Oral* $(mg/kg\text{-}d)^{-1}$	*Reference Dose, Oral (mg/kg-d)*
Arsenic	1.5	0.003
Lead	NA	NA
Total PCBs	2.0	0.00002[a]
Benzo(a)anthracene	0.73	NA
Benzo(a)pyrene	7.3	NA
Benzo(b)fluoranthene	0.73	NA
Dibenz(a,h)anthracene	7.3	NA
Indeno(1,2,3-cd)pyrene	0.73	NA
Bis(2-ethylhexyl)phthalate	0.014	0.02

a. Oral RfD for Aroclor 1254 was used.

Risk Characterization

Risk characterization integrates the results of the exposure and toxicity assessments by combining estimates of chemical intake with toxicity to determine the likelihood of adverse effects to potentially exposed populations. Risk characterization also serves as the bridge between risk assessment and risk management and is a key step in the ultimate decision-making process (USEPA 1989). Because of the fundamental differences in the mechanisms through which carcinogenic and non-carcinogenic processes occur, risks are characterized separately for these two types of health effects. Risk estimates for each exposure pathway are listed below.

Noncancer Health Effects. The potential for noncancer health effects was evaluated by comparing the intake of a chemical with the reference dose. The resulting ratio is the hazard quotient (HQ), which is calculated using the following equation:

$$HQ = \frac{Intake}{RfD}$$

Where:

Intake = Average daily intake of a chemical (mg/kg-day)
RfD = Reference dose (mg/kg-day)

An HQ is not a mathematical prediction of the incidence or severity of effects (i.e., probability), but is instead a numerical index (i.e., a ratio) that can be used to determine if the estimated exposure may present a potential health threat (USEPA 1989). When the daily intake of a chemical exceeds the reference dose (i.e., HQ greater than 1) there is a potential for noncancer health effects.

Noncancer hazards resulting from exposure to multiple chemicals are estimated through the calculation of a hazard index (HI). An HI is a summation of relevant HQ values and is used to determine if an exposed individual is at risk of developing adverse health effects resulting from simultaneous exposure to all selected chemicals by all complete exposure pathways. Risks from exposure to multiple chemicals are assumed to be additive; this does not address potential synergistic or antagonistic interactions. The HI assumes that cumulative sub-threshold exposures to multiple chemicals could result in an adverse effect and that the magnitude of the effect is proportional to the sum of the HQs:

$$HI = HQ_i + HQ_2 + \ldots + HQ_n$$

An HI greater than 1 suggests that simultaneous exposure to all chemicals may present a potential health threat. The level of concern increases as the HI approaches and exceeds a value of 1.

Cancer Risk. Potential health risk associated with carcinogens was estimated by calculating the increased probability of an individual developing cancer during his or her lifetime as a result of exposure to a carcinogenic compound. These excess lifetime cancer risks were computed using the estimated chemical intakes calculated in the exposure assessment and the cancer slope factors identified in the toxicity assessment. The total lifetime cancer risk was calculated by summing the cancer risks across all carcinogenic chemicals and for all complete exposure pathways relevant for a given population. For carcinogenic chemicals, USEPA has established a target cancer risk range of 10^{-6} to 10^{-4}. Increased cancer risks less than 10^{-6} indicate no action is required. Cancer risks between 10^{-6} and 10^{-4} will probably not warrant cleanup unless dictated by site-specific circumstances or other considerations. Increased cancer risks greater than 10^{-4} indicate some type of action needs to be considered.

When calculating cancer risk it can be assumed that the dose-response relationship will be in the linear portion of the dose-response curve according to the following equation:

$$Cancer\ Risk = Intake \times CSF$$

Where:

Cancer risk = A unitless probability of an individual developing cancer
Intake = Chemical intake (mg/kg – day)
CSF = Cancer slope factor $(mg/kg - day)^{-1}$

Resulting cancer risks represent the incremental probability of an individual developing cancer over a lifetime as a result of exposure to a potential carcinogen. Because the CSFs are typically the 95th percentile of the probability of a carcinogenic response, the resulting carcinogenic risk estimate is also an upper bound determination. In other words, the true risk is not likely to exceed the estimated risk and is in fact likely to be less. Because 95th percentiles are not truly additive, the total cancer risk may become artificially more conservative as risks from a number of different carcinogens are combined. Thus the total cancer risk may be overestimated because of the combination of conservative estimates of cancer potency used to calculate risk.

Risk Characterization Results. Risk estimates are presented in Table 5 below.

Table 5. Risk Characterization Results

The threshold for cancer risk is 1E-6; the threshold for noncancer risk is 1.

Chemical	*Cancer Risk*			*Noncancer Hazard Index*		
	Ingestion	*Dermal Contact*	*Total Cancer Risk*	*Ingestion*	*Dermal Contact*	*Total Hazard Index*
Exposure to Contaminants in Sediment						
Arsenic	2.3E-8	1.1E-8	3.5E-8	0.0037	0.0017	0.0054
Lead	NA	NA	NA	NA	NA	NA
Total PCBs	3.2E-10	7.0E-10	1.0E-9	0.00055	0.0012	0.0013
Benzo(a)anthracene	2.4E-10	5.0E-10	7.4E-10	NA	NA	NA
Benzo(a)pyrene	5.1E-9	1.1E-8	1.6E-8	NA	NA	NA
Benzo(b)fluoranthene	9.1E-10	1.9E-9	2.8E-9	NA	NA	NA
Dibenz(a,h)anthracene	2.4E-9	4.9E-9	7.2E-9	NA	NA	NA
Indeno(1,2,3-cd)pyrene	4.4E-10	9.2E-10	1.4e-9	NA	NA	NA
Total Sediment Exposure Risk/Hazard	3.3E-8	3.1E-8	6.4E-8	0.0042	0.0030	0.0072
Exposure to Contaminants in Surface Water						
Arsenic	2.6E-11	8.3E-9	8.3E-9	4.1E-6	0.0013	0.0013
Benzo(a)pyrene	2.7E-13	6.0E-8	6.0E-8	NA	NA	NA
Bis(2-ethylhexyl)phthalate	9.9E-12	7.9E-8	7.9E-8	2.5E-6	0.020	0.020
Total Surface Water Exposure Risk/Hazard	2.6E-11	6.9E-8	6.9E-8	6.5E-6	0.021	0.021
Total Risk/Hazard – All Pathways	3E-8	1E-7	**1E-7**	7E-6	0.02	**0.03**

In summary, cancer risks (1E-7) and noncancer hazards (0.03) associated with exposures to harbor sediment and surface water during youth sailing activities at the proposed WYSAC are estimated to be below levels of concern.

Risks from Exposure to Pathogens

Fecal and total coliform concentrations measured in surface water in the study area were compared to California State water quality standards to assess the potential for risks from human pathogens. Fecal coliform concentrations in surface water are an indicator of the presence of fecal contamination and an increased likelihood of infection by human pathogens. It should be noted that fecal coliforms may originate from non-human sources and hence may not accurately predict concentrations of pathogenic organisms, however they can be used as a general indicator of water quality.

Water samples collected from three stations within the study area were reviewed. Total coliform exceeded the single sample ocean recreational water quality criterion of 1,000/100mL in at least one sample from each location; fecal coliform exceeded the single sample ocean recreational water quality criterion of 400/100mL in a single sample. These results indicate that there is a potential for human health effects associated with pathogens in surface water.

The presence of coliform bacteria is used as a general indicator of potential health effects; no quantitative estimate of human health risk has been developed.

Surface water quality testing results indicate that it takes at least 96 hours after a storm event for bacteria levels from stormwater runoff to drop to acceptable levels. Therefore, restriction of on-water activities within 96 hours after a storm event will mitigate the potential risk to youth participants from exposure to pathogens.

Summary and Conclusions

Site-specific contaminant concentrations and conservative, health-protective assumptions were used to estimate health risks to youth participants during on-water activities at the proposed WYSAC. Based on this evaluation, estimated cancer risks and noncancer hazards are below levels of concern. There is a potential for health effects associated with pathogens in surface water if surface water ingestion occurs during periods of stormwater discharge.

As a further precaution to minimize exposures to COPCs, the following conditions should be implemented as proposed:

- No swimming in the site area;
- No water activities within 96 hours of a storm event;
- No boat tipping exercises within the navigation area.

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Appendix D

Ambient Noise Measurements

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MEMO

Date: September 29, 2011

To: Mr. Andrew D. Nelson
SAIC

From: Fred M. Svinth, INCE, Assoc. AIA
Illingworth & Rodkin, Inc.

Subject: **Wilmington Youth Sailing & Aquatic Center**
Noise Measurement Data Summary

This memo presents the results of a noise monitoring survey completed between Thursday September 22nd and Friday September 23rd, 2011 to quantify the existing noise environment in the live-a-board communities within the vicinity of the Wilmington Youth Sailing & Aquatic Center (WYSAC) project within the Port of Los Angeles. One long-term (LT-1) and two short-term (ST-1 and ST-2) noise measurement locations were established. The approximate locations of these noise measurements are shown in Figure 1.

Figure 1: Aerial Photo with Live-aboard and Noise Measurement Locations

The long-term noise measurement documented noise levels during the daytime, evening, and nighttime in consecutive 10-minute intervals, and show the existing trend in noise levels over a 24-hour period. This measurement was made in at the edge of the Yacht Haven Marina parking area, an area representative of the existing noise environment experienced within the live-a-board areas closest to the proposed project. Short-term measurements were made during three daytime periods, morning, midday and afternoon, in 10-minute intervals at each measurement location. The two short-term locations are considered representative of the existing noise environment experienced in more outlying live-a-board areas within the vicinity of the proposed project, which would have a fairly clear line of sight to proposed dock improvements. These measurements were, respectively, made in the parking areas of the California Yacht Marina, and the Holiday Harbor Marina. The internal clocks on all sound levels monitors were synchronized prior to measurement initiation to allow the short-term measurement to be directly correlated to the long-term results. The long-term noise measurement results are shown in Chart 1, and the short-term measurement results are shown in Table 1.

Chart 1: Measured Noise Levels at LT-1

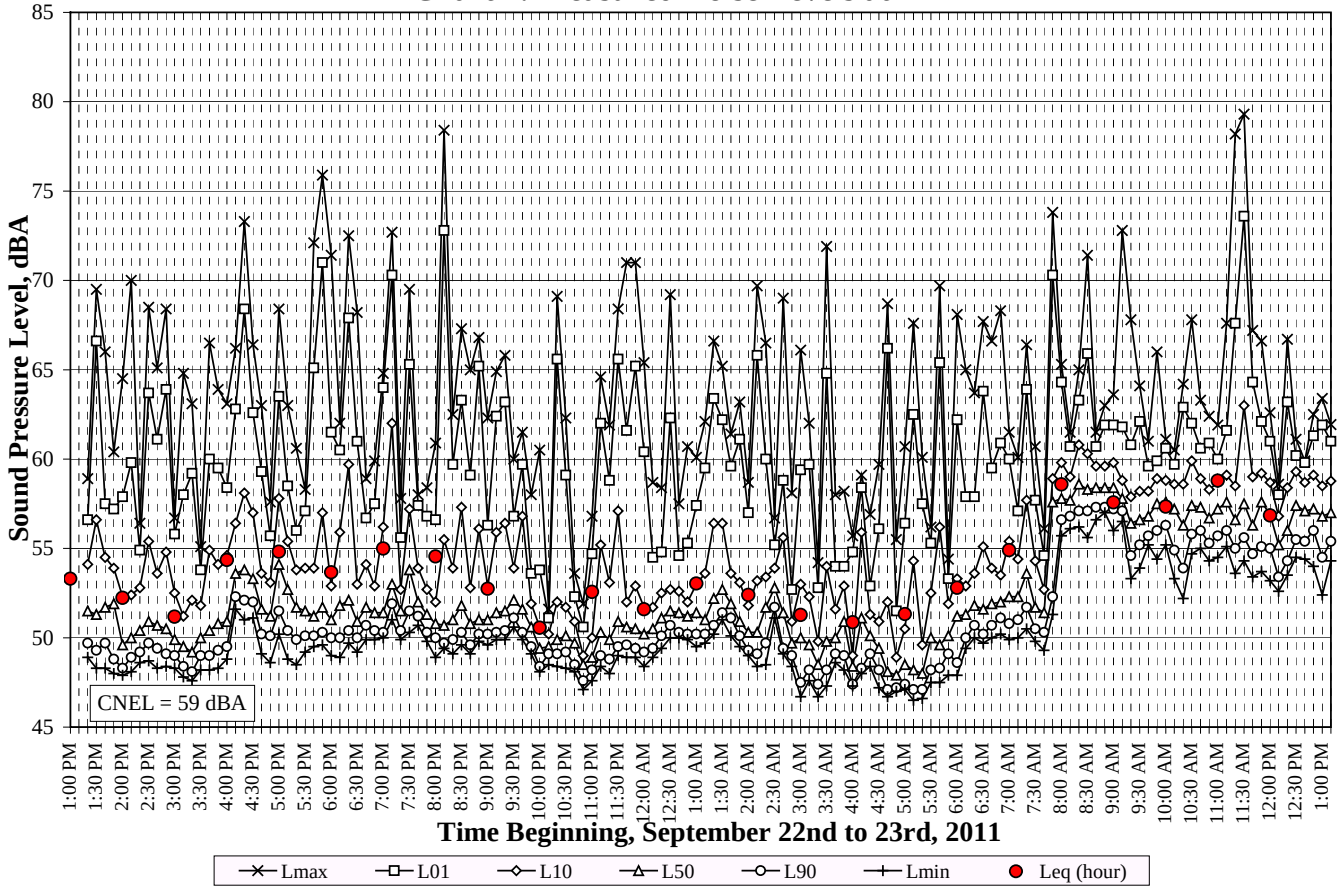

Table 1: 10-minute Short-term Noise Measurement Data

Location	Date	Time	Lmax	L01	L10	Leq	L50	L90	Lmin
ST-1	09/22/11	3:40 PM	57	54	51	49	48	47	46
	09/23/11	8:50 AM	67	66	65	65	65	64	63
	09/23/11	12:40 PM	68	66	66	65	65	64	63
ST-2	09/22/11	4:00 PM	71	65	55	54	51	50	49
	09/23/11	9:10 AM	62	61	61	60	60	59	58
	09/23/11	1:00 PM	69	65	61	60	59	58	57

At approximately 8 am on September 23rd an Auto-transport Cargo ship docked at the Nissan Automotive dock across the East Basin from the California Yacht Marina and the Holiday Harbor Marina (see Figure 1). While docked the ship continued to idle it's engines, strongly influencing daytime noise levels throughout the project area. Because of this, average daytime noise levels at each measurement site are report for periods with and without Cargo ship activities at the Automotive dock across the East Basin from the live-a-board area. Other Port activities which influenced the noise environment in the live-a-board area were material (gravel and rock) handling activities across the Cerritos Channel, train horns from the Auto dock area. Jet aircraft and helicopter over-flights also influenced the noise environment. Table 2 summarizes the calculated average daytime noise levels at each of the measurement locations. A review of this table indicates that daytime average (L_{eq}) levels are generally between 50 and 55 dBA without close-in Port noise, such as the docking of an Auto Cargo Ship, and between 58 and 64 dBA when close-in Port noise is present.

Table 2: Average Daytime Noise Levels with and without Close-in Port Noise

	Average Daytime levels without Cargo ship						
Location	**Lmax**	**L01**	**L10**	**Leq**	**L50**	**L90**	**Lmin**
ST-1	63	57	51	50	50	48	46
ST-2	80	69	55	55	52	51	49
LT-1	72	63	55	53	51	50	48
	Average Daytime levels with Cargo ship						
Location	**Lmax**	**L01**	**L10**	**Leq**	**L50**	**L90**	**Lmin**
ST-1	80	69	65	64	64	63	61
ST-2	72	65	61	60	59	58	56
LT-1	74	64	59	58	57	55	53

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Appendix E

Traffic Study

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FEHR PEERS

DRAFT
TRAFFIC TECHNICAL MEMORANDUM

Date: August 5, 2011

To: Charles Phillips, SAIC

From: Netai Basu, Anjum Bawa and Miguel Nunez

Subject: ***Traffic Impact Analysis for the Wilmington Youth Sailing Center Project***

Ref: SM11-2479

This technical memorandum summarizes the results of a traffic impact analysis conducted by Fehr & Peers in support of the environmental document for the proposed Wilmington Youth Sailing Center (WYSC) to be located at the Port of Los Angeles (POLA or Port), in the Wilmington community of Los Angeles, California. The proposed project will construct and operate facilities supporting year-round sailing courses for at-risk youth. Classes would be held after school and throughout the day in the summer and other periods when local schools are out of session. Provided below is a description of the project and its components followed by a detailed traffic impact analysis.

PROJECT DESCRIPTION

The Project site is a parcel on the northwest corner of the Shore Road & Anchorage Road near Berths 201-203. The WYSC will involve classroom instruction and on-water sailing exercises, supported by the following components:

- 5,000-square foot building for the WYSC, including 2,100-square foot community room
- On-site parking for approximately 18 cars, three vans, and an area for bus loading/unloading
- Demolish 21 existing boat slips, construct 18 new boat slips and repair five existing boat slips
- Construct a new 150-foot dock and launching platform
- On-site boat storage

Two or three sailing classes will typically be offered each day after school hours and throughout the day in the summer and other periods when local schools are out of session. The project would serve up to approximately 75 students per day. Activity at the project site would be greatest in the summer months when warm weather, longer days and the school calendar gives area youth more free time. Some related program activities are expected to occur elsewhere in the harbour, potentially near Cabrillo Beach (sailing tipping exercises, possibly swimming) and in association with the Wilmington YMCA Pool (swimming lessons). It is planned that the community room will be used for meetings or as an activity center, with most activities occurring during off-peak hours such as weekday evenings or weekends. Project completion is planned by 2014.

Vehicular access to the site is proposed via an entry-only driveway on Shore Road north of Anchorage Road, and an exit-only driveway on Anchorage Road west of Shore Road. Figure 1 shows the preliminary site plan for the project. As shown, the internal circulation road would provide access to the project site and parking area, including parking for approximately 18 cars, three vans, and an area for bus loading/unloading.

PROJECT TRAFFIC PROJECTIONS

The traffic projections for the proposed project were developed using the following three steps: estimate the trip generation of the project, determine trip distribution, and assign the project traffic to the roadway system.

TRIP GENERATION METHODOLOGY AND ANALYSIS

Trip generation estimates for the proposed project were developed based on the anticipated number of students and employees expected use the facility. Another component of the trip generation is the trips expected to be generated from the 2,100-square foot community room. The total external vehicular trips for the opening year of the Project will be a combination of employee trips, student pick-ups/drop-offs in cars, student pick-ups/drop-offs in buses or vanpools, and visitor trips to the community center.

For the purpose of this analysis, it is assumed that all employees would travel in private automobile because the Project site is not served by public transit. To provide a conservative analysis, no carpooling was assumed. A total of up to eight full-time and part-time employees are proposed to operate the WYSC. Per information provided by POLA, the WYSC will have two or three instruction times with one class in the morning (before school) and one or two classes in the afternoon. It was assumed that the afternoon classes would be conducted at the same time. For the purpose of this analysis, it is assumed that the morning class instruction would start during the morning peak hour while the afternoon class instruction would end during the afternoon peak hour. During the morning peak hour, up to eight employees are expected to arrive, each generating one inbound trip. During the afternoon peak hour, up to eight employees are expected to depart, each generating one outbound trip. With approximately 25 students anticipated for each class, it was assumed that half of the students would be dropped off in cars and the other half would arrive in up to two buses or vanpools. During the morning peak hour, vehicles dropping students off would generate one inbound and outbound trip. During the afternoon peak hour, vehicles picking students up would generate one inbound and outbound trip. During the morning peak hour, buses or vanpools are assumed to drop-off students and are expected to wait for the class to end before departing, thus generating only the inbound trip during the morning peak hour. During the afternoon peak hour, buses or vanpools are assumed to be parked on site to pick-up students after classes end, thus generating only the outbound trip during the afternoon peak hour. An average vehicle ridership (AVR) factor of 1.2 was assumed for the students in cars. A passenger car equivalent (PCE) factor of 2.0 was used to convert buses/vanpools to PCEs. Trips attributable to the 2,100-square foot community room were generated using rates recommended in the Institute of Transportation Engineers' (ITE) *Trip Generation, 8th Edition* (2008) for a Community Center (ITE land use code 495). To provide a conservative analysis of the project, no trip credit was taken for the removal of 21 existing boat slips at the project site.

Table 1 shows the trip generation estimates for the proposed Project. As shown, the WYSC is estimated to generate a total of approximately 220 weekday daily trips, of which approximately 37 trips (25 inbound/12 outbound) are expected to occur in the morning peak hour and approximately 57 trips (22 inbound/35 outbound) in the evening peak hour.

PROJECT TRAFFIC DISTRIBUTION AND ASSIGNMENT

The distribution pattern of project traffic was developed based on the location of the project relative to the Wilmington community and the areas from which employees and students would be drawn, as well as the project's location within the surrounding street network. Figure 2 shows a general distribution pattern of project-generated trips as follows:

- 35% to/from the north
- 10% to/from the west via SR 47 and I-110

- 40% to/from the west via local streets
- 10% to/from the east via SR 47 and I-710
- 5% to/from the east via local streets

Figure 2 shows the project traffic distribution used to assign project-related trips.

EXISTING TRAFFIC CONDITIONS

The Project site is accessed from Anchorage Road, which is only accessible via Henry Ford Avenue. Access to Henry Ford Avenue is provided via Anaheim Street, Alameda Street, or the SR 47 ramps at Henry Ford Avenue. The following three intersections and were selected for significant impact analysis following consultation with Port staff:

- Alameda Street & Anaheim Street (2008)
- Henry Ford Avenue & Anaheim Street (2009)
- Henry Ford Avenue & SR 47 Ramps (2009)

Due to the long-term detour of traffic in the area around the Harry Bridges Boulevard improvement project, available recent classified traffic count data was used in this analysis. Baseline data for Alameda Street & Anaheim Street was collected in January 2008 and in September 2009 for the other two study intersections. These counts were adjusted to reflect existing conditions by applying an annual growth factor of 1% per year, resulting in adjustments of 3% and 2% for the 2008 and 2009 counts, respectively.

The count data was adjusted to account for the presence of heavy trucks in the traffic stream by applying a passenger-car equivalent (PCE) factor of 2.0 to tractor-trailer combinations, and a PCE factor of 1.1 to bobtail trucks. Existing morning and evening peak hour traffic counts are provided in Attachment A. Existing morning and evening peak hour PCE volumes are provided in Attachment B-1.

The study intersections fall under the jurisdiction of the City of Los Angeles therefore the analysis presented in this document follows the guidelines requires by the Los Angeles Department of Transportation (LADOT) as specified in *Traffic Study Policies and Procedures* (LADOT, December 2010). Per LADOT requirements, the "Critical Movement Analysis (CMA) – Planning" (Transportation Research Board–Circular 212, 1980) method of intersection capacity calculation was used to analyze signalized intersections. The CMA methodology determines the intersection volume-to-capacity (V/C) ratio. The ratio is then used to find the corresponding level of service (LOS) based on the definitions in Table 2. Level of service (LOS) is a qualitative measure used to describe the traffic flow conditions, ranging from excellent (LOS A) to oversaturated (LOS F) conditions.

Table 3 summarizes the existing weekday morning and evening peak hour V/C ratios and their corresponding LOS at the analyzed intersections. As shown on Table 3, each of the study intersections is operating at good levels of service (LOS A or B). Attachment C-1 contains the detailed existing conditions CMA - LOS calculations.

Baseline Traffic Improvements

Data received from LADOT indicates that all three analyzed locations are currently operating under the Automated Traffic Surveillance and Control System (ATSAC). In accordance with LADOT procedures, a capacity increase of 7% (0.07 V/C adjustment) was applied to reflect the benefits of ATSAC control at these intersections. The intersection of Alameda Street & Anaheim Street is currently operating under the City of Los Angeles' Adaptive Traffic Control System (ATCS). In accordance with LADOT procedures, an additional capacity increase of 3% (0.03 V/C adjustment) was applied to reflect the benefits of ATCS at this intersection. Per LADOT, by the project's opening year in 2014, all three analyzed intersections will be

operating under ATSAC and ATCS, thus a capacity increase of 10% is applied to all three intersections under future conditions.

The Port is pursuing a streetscape project to improve Anchorage Road and the southern portion of Shore Drive. This project will add landscaping on the inland side of Anchorage Road and Shore Drive and improve the pavement where parking occurs. No net change in the on-street parking supply would result. No other baseline traffic improvements were assumed for this analysis.

CITY OF LOS ANGELES SIGNIFICANCE CRITERIA

The City of Los Angeles has established threshold criteria to determine significant traffic impact of a proposed Project in its jurisdiction. Under the LADOT guidelines, an intersection would be significantly impacted with an increase in V/C ratio equal to or greater than 0.04 for intersections operating at LOS C, equal to or greater than 0.02 for intersections operating at LOS D, and equal to or greater than 0.01 for intersections operating at LOS E or F after the addition of project traffic. Intersections operating at LOS A or B after the addition of the project traffic are not considered significantly impacted regardless of the increase in V/C ratio. The following summarizes the impact criteria:

LOS	Final V/C Ratio	Project Related Increase in V/C
C	>0.700 - 0.800	equal to or greater than 0.040
D	> 0.800 - 0.900	equal to or greater than 0.020
E or F	> 0.900	equal to or greater than 0.010

EXISTING (2011) PLUS PROJECT TRAFFIC IMPACT ANALYSIS

Project traffic assigned to the study intersections was added to the existing base volumes to calculate existing plus project traffic volumes. These volumes are provided in Attachment B-2 and the LOS worksheets are in Attachment C-2. Table 3 summarizes and compares the existing conditions and existing plus project conditions for the weekday morning and evening peak hours, including V/C ratios and corresponding LOS for the analyzed intersections. Based on the addition of project related traffic and corresponding changes in V/C ratios and LOS, the proposed project will not result in a significant traffic impact at any of the three analyzed intersections under existing plus project conditions.

PROJECT OPENING YEAR (2014) TRAFFIC IMPACT ANALYSIS

The intersections in this study were analyzed for cumulative base and cumulative plus project impacts at the project's opening year date of 2014. A one percent per year cumulative growth factor was applied to grow the existing 2011 baseline counts to 2014 conditions. Project traffic assigned to the study intersections was added to opening year morning and evening peak hour traffic volumes to calculate opening year plus project traffic volumes. Cumulative base and cumulative plus project volumes are provided in Attachment B-3 and Attachment B-4, respectively.

Table 4 summarizes and compares the cumulative base 2014 conditions and 2014 cumulative plus project conditions for the weekday morning and evening peak hours, including V/C ratios and corresponding LOS for the analyzed intersections. Cumulative base and cumulative plus project LOS worksheets are provided in Attachment C-3 and Attachment C-4, respectively. Based on the addition of

project-related traffic and corresponding changes in V/C ratios and LOS, the proposed project will not result in a significant traffic impact at any of the three analyzed intersections under opening Year (2014) plus project conditions.

LOS ANGELES COUNTY CONGESTION MANAGEMENT PROGRAM ANALYSIS

Based on the Transportation Impact Analysis (TIA) requirements of *2010 Congestion Management Program for Los Angeles County* (CMP) (Los Angeles County Metropolitan Transportation Authority, October 2010), detailed impact analysis is required of projects for which an environmental impact report (EIR) is prepared and if the project were estimated to generate more than 50 total peak hour trips at a CMP arterial monitoring intersection or more than 150 one-way peak hour trips at a CMP freeway monitoring location. A significant CMP impact would be identified if the project were found to result in a 0.02 increase in V/C ratio causing or worsening LOS F conditions.

The CMP arterial monitoring station closest to the project site is Pacific Coast Highway (SR 1) & Alameda Street. The CMP freeway monitoring stations closest to the project site include:

- I-110 south of C Street
- I-710 between Pacific Coast Highway and Willow Street

The trip generation analysis provided in Table 1 shows that a maximum of 35 PCE one-way trips would be generated by the Project in the peak hour; thus, the Project-generated traffic is below the 150 one-way threshold of significance for freeway segment analysis. Based on the location of the Project site in relation to the nearest CMP arterial monitoring intersection, approximately two miles away, it is concluded that the 50-trip threshold for arterial monitoring locations would not be met. Therefore no further CMP analysis is necessary, and the Project would have a less than significant impact on the CMP monitoring network.

PARKING AND INTERNAL CIRCULATION

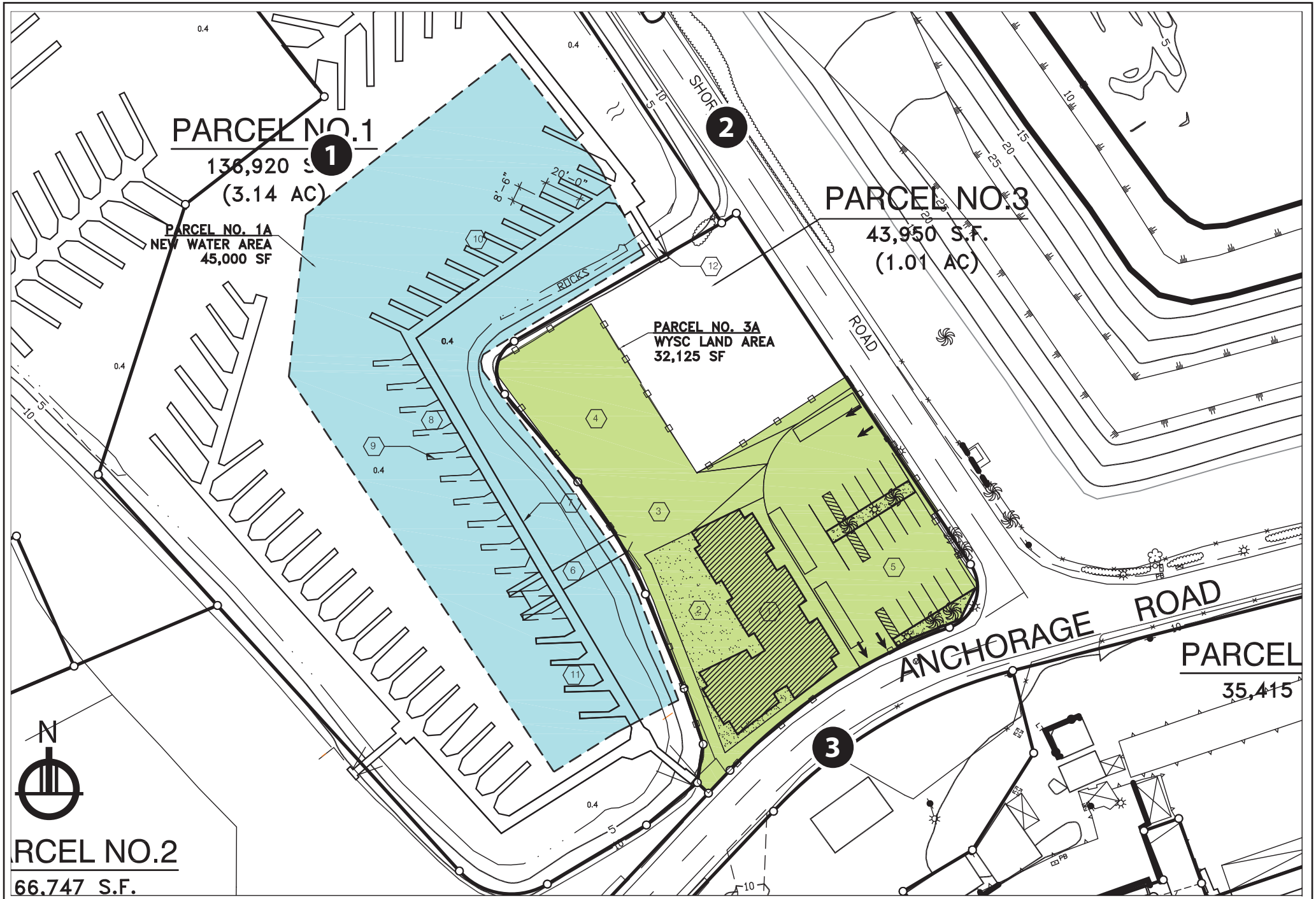
As discussed, the project will provide 18 automobile parking spaces, three spaces for van parking, and an area for bus loading/unloading. Vehicular access to the site is proposed via an entry-only driveway along Shore Road north of Anchorage Road, and an exit-only driveway along Anchorage Road west of Shore Road. Based on daily activities at the site, it is anticipated that this parking will be sufficient to accommodate parking demand on a typical day. If large events are held at the community center, parking demand may exceed the supply at the site. During such occasions, additional overflow parking would be available for visitors to the WYSC along Anchorage Road and Shore Road.

The current circulation plan for the site includes an inbound-only driveway on Shore Drive and outbound-only driveway on Anchorage Drive. While this configuration is adequate for serving on-site circulation, to provide drivers with the greatest flexibility and to avoid wrong-way travel, it is recommended that both driveways be designed to allow both inbound and outbound access for vehicles. To ensure that the passenger loading zone is utilized, it is recommended that drivers of inbound buses and vanpools be instructed to enter the site from Shore Road and exit onto Anchorage Road.

CONCLUSIONS

This study was undertaken to analyze the potential traffic impacts of the proposed construction of the Wilmington Youth Sailing Center project. The proposed project will construct and operate facilities supporting year-round after school and summer sailing courses for at-risk youth. Two to three classes per day are planned. It is expected to generate up to approximately 220 daily trips, including approximately 37 trips in the AM peak hour and approximately 57 trips in the PM peak hour. A focused traffic impact analysis was conducted for three key intersections along the primary access routes to the

site and no significant impacts were identified. The conceptual project site plan was reviewed and recommendations for minor modifications were made.



FEHR PEERS

FIGURE 1
CONCEPTUAL SITE PLAN

FEHR PEERS

FIGURE 2
PROJECT TRIP DISTRIBUTION

TABLE 1
PROJECT TRIP GENERATION ESTIMATES

Land Use	Size	ITE Code	Estimated Trip Generation						
			Daily Trips	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Proposed Project									
Community Room [a]	2.100 ksf	495	48	2	1	3	1	2	3
WYSC Classes [b]									
Students [c]	25 students		125	11	11	22	21	21	42
Faculty/Volunteers [d]	8 employees	[b]	32	8	0	8	0	8	8
Buses/Vanpools [e]	2 vehicles		16	4	0	4	0	4	4
Total Trip Generation			221	25	12	37	22	35	57

Notes:

[a] Source: *Trip Generation, 8th Edition (*Institute of Transportation Engineers [ITE], 2008). The average rates were used.

[b] Trip generation estimates for the WYSC were developed using information regarding the operation of the facility
A total of three classes were assumed per day, one in the morning peak hour and two in the evening peak hour.

[c] An average of 25 students is assumed per class, of which approximately half are assumed to be picked up/dropped off in cars. An average vehicle ridership (AVR) factor of 1.2 was applied to these students.

[d] The morning and afternoon sessions are each estimated to be staffed by up to eight individuals. An AVR factor of 1.0 was assumed for staff.

[e] Approximately half of students attending the class were assumed to arrive via bus or vanpool. Two buses were assumed to drop off students and stage onsite. A passenger car equivalent (PCE) of 2.0 was applied to each bus.

TABLE 2
LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Intersection Capacity Utilization	Definition
A	0.000-0.600	EXCELLENT. No Vehicle waits longer than one red light and no approach phase is fully used.
B	0.601-0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701-0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801-0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901-1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	A total of three clas The morning and af	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: *Transportation Research Circular No. 212, Interim Materials on Highway Capacity*, Transportation Research Board, 1980.

TABLE 3
EXISTING (2011) LEVELS OF SERVICE

No.	Intersection	Peak Hour	Existing Conditions		Existing plus Project		V/C Change	Significant Impact?
			V/C	LOS	V/C	LOS		
1**	Alameda St &	A.M.	0.503	A	0.510	A	0.007	NO
	Anaheim St	P.M.	0.673	B	0.685	B	0.012	NO
2*	Henry Ford Ave &	A.M.	0.350	A	0.355	A	0.005	NO
	Anaheim St	P.M.	0.645	B	0.651	B	0.006	NO
3*	Henry Ford Ave &	A.M.	0.195	A	0.200	A	0.005	NO
	SR-47 Ramps	P.M.	0.271	A	0.284	A	0.013	NO

Note:

* Intersection is currently operating under ATSAC system.

** Intersection is currently operating under ATSAC and ATCS systems.

TABLE 4
FUTURE (2014) LEVELS OF SERVICE

No.	Intersection	Peak Hour	Cumbase Conditions		Future plus Project		V/C Change	Significant Impact?
			V/C	LOS	V/C	LOS		
1**	Alameda St &	A.M.	0.521	A	0.528	A	0.007	NO
	Anaheim St	P.M.	0.696	B	0.708	C	0.012	NO
2**	Henry Ford Ave &	A.M.	0.332	A	0.338	A	0.006	NO
	Anaheim St	P.M.	0.635	B	0.642	B	0.007	NO
3**	Henry Ford Ave &	A.M.	0.173	A	0.178	A	0.005	NO
	SR 47 Ramps	P.M.	0.251	A	0.264	A	0.013	NO

Note:

** Intersection will operate under ATSAC and ATCS systems.

ATTACHMENT A

TRAFFIC COUNTS

WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: WILMINGTON WATERFRONT PROJECT
DATE: WEDNESDAY JANUARY 24, 2008
PERIOD: 4:00 PM TO 7:00 PM
INTERSECTION: N/S ALAMEDA STREET
E/W ANAHEIM STREET

	1 SBRT			2 SBTH			3 SBLT			4 WBRT			5 WBTH			6 WBLT		
15-MIN COUNTS	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL
400-415	16	2	18	13	17	30	1	0	1	0	0	0	104	19	123	2	18	20
415-430	5	0	5	1	8	9	1	1	2	5	0	5	167	24	191	9	26	35
430-445	11	3	14	40	19	59	3	3	6	1	3	4	162	30	192	11	17	28
445-500	31	5	36	35	17	52	3	3	6	3	3	6	180	26	206	22	17	39
500-515	20	5	25	19	10	29	3	3	6	6	2	8	164	13	177	21	10	31
515-530	21	4	25	24	14	38	2	2	4	1	2	3	102	11	113	5	6	11
530-545	19	4	23	20	8	28	2	1	3	6	2	8	126	21	147	14	14	28
545-600	11	2	13	8	4	12	0	0	0	2	2	4	140	6	146	15	8	23
600-615	10	3	13	9	9	18	3	2	5	3	2	5	108	9	117	4	6	10
615-630	7	3	10	11	6	17	1	0	1	4	1	5	96	13	109	13	4	17
630-645	8	4	12	5	6	11	1	1	2	1	1	2	90	14	104	12	6	18
645-700	8	2	10	3	3	6	0	0	0	0	2	2	88	17	105	5	7	12
HOUR TOTALS																		
400-500	63	10	73	89	61	150	8	7	15	9	6	15	613	99	712	44	78	122
415-515	67	13	80	95	54	149	10	10	20	15	8	23	673	93	766	63	70	133
430-530	83	17	100	118	60	178	11	11	22	11	10	21	608	80	688	59	50	109
445-545	91	18	109	98	49	147	10	9	19	16	9	25	572	71	643	62	47	109
500-600	71	15	86	71	36	107	7	6	13	15	8	23	532	51	583	55	38	93
515-615	61	13	74	61	35	96	7	5	12	12	8	20	476	47	523	38	34	72
530-630	47	12	59	48	27	75	6	3	9	15	7	22	470	49	519	46	32	78
545-645	36	12	48	33	25	58	5	3	8	10	6	16	434	42	476	44	24	68
600-700	33	12	45	28	24	52	5	3	8	8	6	14	382	53	435	34	23	57

PEAK HOUR
415-515
2802

	7 NBRT			8 NBTH			9 NBLT			10 EBRT			11 EBTH			12 EBLT			ALL MOVEMENTS TOTALS		
15-MIN COUNTS	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL
400-415	43	16	59	17	12	29	0	1	1	0	0	0	189	15	204	19	5	24	404	105	509
415-430	118	20	138	24	8	32	4	3	7	0	0	0	197	15	212	22	2	24	553	107	660
430-445	107	19	126	35	16	51	1	1	2	0	1	1	212	12	224	15	0	15	598	124	722
445-500	96	18	114	26	9	35	0	1	1	1	2	3	195	11	206	10	2	12	602	114	716
500-515	111	10	121	29	2	31	3	0	3	2	1	3	225	15	240	27	3	30	630	74	704
515-530	56	14	70	16	3	19	1	0	1	1	0	1	184	8	192	13	3	16	426	67	493
530-545	56	15	71	15	9	24	2	0	2	1	0	1	232	13	245	16	1	17	509	88	597
545-600	21	21	42	10	11	21	1	0	1	0	1	1	121	11	132	13	2	15	342	68	410
600-615	27	29	56	6	8	14	2	0	2	1	1	2	83	10	93	9	2	11	265	81	346
615-630	31	20	51	7	15	22	0	0	0	2	1	3	94	8	102	4	1	5	270	72	342
630-645	21	27	48	1	5	6	1	0	1	1	0	1	79	5	84	4	0	4	224	69	293
645-700	12	23	35	12	6	18	0	0	0	1	0	1	78	11	89	8	1	9	215	72	287
HOUR TOTALS																					
400-500	364	73	437	102	45	147	5	6	11	1	3	4	793	53	846	66	9	75	2157	450	2607
415-515	432	67	499	114	35	149	8	5	13	3	4	7	829	53	882	74	7	81	2383	419	2802
430-530	370	61	431	106	30	136	5	2	7	4	4	8	816	46	862	65	8	73	2256	379	2635
445-545	319	57	376	86	23	109	6	1	7	5	3	8	836	47	883	66	9	75	2167	343	2510
500-600	244	60	304	70	25	95	7	0	7	4	2	6	762	47	809	69	9	78	1907	297	2204
515-615	160	79	239	47	31	78	6	0	6	3	2	5	620	42	662	51	8	59	1542	304	1846
530-630	135	85	220	38	43	81	5	0	5	4	3	7	530	42	572	42	6	48	1386	309	1695
545-645	100	97	197	24	39	63	4	0	4	4	3	7	377	34	411	30	5	35	1101	290	1391
600-700	91	99	190	26	34	60	3	0	3	5	2	7	334	34	368	25	4	29	974	294	1268

WILTEC

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INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: FEHR AND PEERS
PROJECT: WILMINGTON WATERFRONT PROJECT
DATE: WEDNESDAY JANUARY 24, 2008
PERIOD: 7:00 AM TO 10:00 AM
INTERSECTION: N/S ALAMEDA STREET
E/W ANAHEIM STREET

	1 SBRT			2 SBTH			3 SBLT			4 WBRT			5 WBTH			6 WBLT		
15-MIN COUNTS	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL
700-715	18	2	20	32	6	38	0	0	0	0	0	0	151	5	156	51	12	63
715-730	28	3	31	28	13	41	0	1	1	1	1	2	158	11	169	49	12	61
730-745	39	2	41	30	15	45	1	0	1	3	1	4	181	17	198	40	12	52
745-800	33	5	38	27	15	42	0	0	0	2	1	3	194	9	203	68	10	78
800-815	43	1	44	38	20	58	0	1	1	3	0	3	176	19	195	44	8	52
815-830	41	7	48	18	26	44	3	3	6	4	2	6	152	11	163	38	13	51
830-845	27	4	31	13	26	39	1	3	4	3	3	6	137	10	147	27	16	43
845-900	31	5	36	22	31	53	2	1	3	4	3	7	127	22	149	39	15	54
900-915	22	7	29	21	18	39	1	2	3	2	2	4	162	23	185	29	12	41
915-930	26	9	35	16	20	36	2	2	4	3	3	6	154	32	186	26	19	45
930-945	24	5	29	11	23	34	1	1	2	3	3	6	135	15	150	33	21	54
945-1000	24	5	29	21	16	37	2	1	3	6	5	11	107	18	125	22	11	33
HOUR TOTALS																		
700-800	118	12	130	117	49	166	1	1	2	6	3	9	684	42	726	208	46	254
715-815	143	11	154	123	63	186	1	2	3	9	3	12	709	56	765	201	42	243
730-830	156	15	171	113	76	189	4	4	8	12	4	16	703	56	759	190	43	233
745-845	144	17	161	96	87	183	4	7	11	12	6	18	659	49	708	177	47	224
800-900	142	17	159	91	103	194	6	8	14	14	8	22	592	62	654	148	52	200
815-815	121	23	144	74	101	175	7	9	16	13	10	23	578	66	644	133	56	189
830-930	106	25	131	72	95	167	6	8	14	12	11	23	580	87	667	121	62	183
845-945	103	26	129	70	92	162	6	6	12	12	11	23	578	92	670	127	67	194
900-1000	96	26	122	69	77	146	6	6	12	14	13	27	558	88	646	110	63	173

PEAK HOUR
715-815
2574

	7 NBRT			8 NBTH			9 NBLT			10 EBRT			11 EBTH			12 EBLT			ALL MOVEMENTS TOTALS		
15-MIN COUNTS	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL	CARS	TRUCKS	TOTAL
700-715	61	17	78	11	5	16	6	0	6	1	1	2	122	17	139	11	2	13	464	67	531
715-730	76	14	90	15	10	25	2	0	2	2	1	3	115	23	138	7	4	11	481	93	574
730-745	58	29	87	14	7	21	4	1	5	12	2	14	175	23	198	13	9	22	570	118	688
745-800	57	34	91	12	13	25	7	0	7	6	0	6	146	31	177	15	5	20	567	123	690
800-815	38	35	73	12	15	27	4	0	4	5	0	5	120	26	146	9	5	14	492	130	622
815-830	33	21	54	9	14	23	0	1	1	0	1	1	113	26	139	7	8	15	418	133	551
830-845	31	37	68	8	8	16	1	1	2	0	2	2	132	34	166	8	7	15	388	151	539
845-900	24	23	47	13	17	30	1	0	1	3	0	3	115	25	140	7	7	14	388	149	537
900-915	23	18	41	1	16	17	2	2	4	1	0	1	90	27	117	9	0	9	363	127	490
915-930	23	36	59	5	12	17	2	0	2	1	5	6	122	37	159	13	5	18	393	180	573
930-945	22	21	43	11	17	28	1	3	4	0	1	1	113	22	135	18	7	25	372	139	511
945-1000	13	22	35	6	6	12	2	0	2	2	1	3	98	26	124	8	4	12	311	115	426
HOUR TOTALS																					
700-800	252	94	346	52	35	87	19	1	20	21	4	25	558	94	652	46	20	66	2082	401	2483
715-815	229	112	341	53	45	98	17	1	18	25	3	28	556	103	659	44	23	67	2110	464	2574
730-830	186	119	305	47	49	96	15	2	17	23	3	26	554	106	660	44	27	71	2047	504	2551
745-845	159	127	286	41	50	91	12	2	14	11	3	14	511	117	628	39	25	64	1865	537	2402
800-900	126	116	242	42	54	96	6	2	8	8	3	11	480	111	591	31	27	58	1686	563	2249
815-815	111	99	210	31	55	86	4	4	8	4	3	7	450	112	562	31	22	53	1557	560	2117
830-930	101	114	215	27	53	80	6	3	9	5	7	12	459	123	582	37	19	56	1532	607	2139
845-945	92	98	190	30	62	92	6	5	11	5	6	11	440	111	551	47	19	66	1516	595	2111
900-1000	81	97	178	23	51	74	7	5	12	4	7	11	423	112	535	48	16	64	1439	561	2000

WILTEC

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INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: ITERIS
PROJECT: LONG BEACH PORT CLASSIFICATION COUNTS
DATE: THURSDAY, SEPTEMBER 17, 2009
PERIOD: 7:00 AM TO 9:00 AM
INTERSECTION: N/S HENRY FORD AVENUE
E/W ANAHEIM STREET

	1						2						3					
	SBRT						SBTH						SBLT					
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
700-715	4	0	0	0	0	4	5	3	0	6	1	15	6	2	0	4	2	14
715-730	2	1	0	0	0	3	3	6	0	8	0	17	11	0	0	4	2	17
730-745	1	2	0	0	1	4	8	10	0	7	1	26	5	4	0	6	0	15
745-800	8	0	0	0	0	8	8	17	0	11	1	37	12	3	0	4	1	20
800-815	8	2	0	0	0	10	5	12	2	10	1	30	17	0	0	1	0	18
815-830	4	0	0	0	0	4	1	14	1	18	0	34	22	4	0	3	2	31
830-845	6	2	0	0	0	8	5	12	1	10	0	28	14	3	0	1	1	19
845-900	3	1	0	1	1	6	2	12	3	20	0	37	9	5	0	3	1	18
HOUR TOTALS																		
700-800	15	3	0	0	1	19	24	36	0	32	3	95	34	9	0	18	5	66
715-815	19	5	0	0	1	25	24	45	2	36	3	110	45	7	0	15	3	70
730-830	21	4	0	0	1	26	22	53	3	46	3	127	56	11	0	14	3	84
745-845	26	4	0	0	0	30	19	55	4	49	2	129	65	10	0	9	4	88
800-900	21	5	0	1	1	28	13	50	7	58	1	129	62	12	0	8	4	86

	4						5						6					
	WBRT						WBTH						WBLT					
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
700-715	11	2	0	0	1	14	169	5	0	1	4	179	8	3	0	0	1	12
715-730	11	3	0	5	1	20	161	3	1	2	3	170	7	1	0	0	0	8
730-745	25	1	0	2	1	29	212	0	0	6	1	219	13	0	1	2	0	16
745-800	32	1	0	0	0	33	216	7	0	5	5	233	10	2	0	0	1	13
800-815	20	2	0	0	0	22	168	6	0	7	2	183	7	1	0	0	0	8
815-830	21	1	0	0	0	22	151	2	0	5	3	161	11	4	0	0	0	15
830-845	11	4	0	0	1	16	169	3	0	3	4	179	10	3	0	2	0	15
845-900	19	2	0	2	0	23	141	7	1	14	4	167	8	4	0	2	0	14
HOUR TOTALS																		
700-800	79	7	0	7	3	96	758	15	1	14	13	801	38	6	1	2	2	49
715-815	88	7	0	7	2	104	757	16	1	20	11	805	37	4	1	2	1	45
730-830	98	5	0	2	1	106	747	15	0	23	11	796	41	7	1	2	1	52
745-845	84	8	0	0	1	93	704	18	0	20	14	756	38	10	0	2	1	51
800-900	71	9	0	2	1	83	629	18	1	29	13	690	36	12	0	4	0	52

	7						8						9					
	NBRT						NBTH						NBLT					
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
700-715	9	0	0	0	1	10	7	0	0	1	0	8	15	0	0	2	1	18
715-730	8	0	0	0	1	9	6	0	0	0	0	6	10	0	0	0	1	11
730-745	4	0	0	0	0	4	1	0	0	0	0	1	7	1	0	1	0	9
745-800	8	0	0	0	2	10	5	2	0	0	2	9	16	0	0	0	3	19
800-815	12	0	0	1	0	13	0	0	0	2	2	4	8	1	0	0	0	9
815-830	3	0	3	0	0	6	3	4	0	0	0	7	18	4	0	0	1	23
830-845	6	1	3	1	0	11	1	3	0	1	0	5	13	7	0	1	0	21
845-900	11	3	5	0	0	19	5	16	0	2	1	24	12	5	0	1	3	21
HOUR TOTALS																		
700-800	29	0	0	0	4	33	19	2	0	1	2	24	48	1	0	3	5	57
715-815	32	0	0	1	3	36	12	2	0	2	4	20	41	2	0	1	4	48
730-830	27	0	3	1	2	33	9	6	0	2	4	21	49	6	0	1	4	60
745-845	29	1	6	2	2	40	9	9	0	3	4	25	55	12	0	1	4	72
800-900	32	4	11	2	0	49	9	23	0	5	3	40	51	17	0	2	4	74

	10						11						12						ALL MOVEMENTS TOTALS					
	EBRT						EBTH						EBLT											
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
700-715	59	10	0	6	0	75	123	7	0	14	2	146	7	2	0	1	0	10	423	34	0	35	13	505
715-730	72	4	0	4	5	85	180	10	1	16	5	212	9	1	0	2	1	13	480	29	2	41	19	571
730-745	56	4	2	2	2	66	145	6	0	13	3	167	12	2	0	1	0	15	489	30	3	40	9	571
745-800	39	11	0	4	2	56	133	5	0	12	4	154	12	3	0	0	1	16	499	51	0	36	22	608
800-815	12	5	1	5	2	25	156	6	0	21	3	186	8	2	0	1	0	11	421	37	3	48	10	519
815-830	15	8	2	5	2	32	121	8	2	26	1	158	7	0	0	3	0	10	377	49	8	60	9	503
830-845	19	8	3	7	3	40	125	9	1	16	1	152	7	4	0	2	0	13	386	59	8	44	10	507
845-900	10	8	0	4	4	26	103	6	1	13	2	125	7	4	0	2	0	13	330	73	10	64	16	493
HOUR TOTALS																								
700-800	226	29	2	16	9	282	581	28	1	55	14	679	40	8	0	4	2	54	1891	144	5	152	63	2255
715-815	179	24	3	15	11	232	614	27	1	62	15	719	41	8	0	4	2	55	1889	147	8	165	60	2269
730-830	122	28	5	16	8	179	555	25	2	72	11	665	39	7	0	5	1	52	1786	167	14	184	50	2201
745-845	85	32	6	21	9	153	535	28	3	75	9	650	34	9	0	6	1	50	1683	196	19	188	51	2137
800-900	56	29	6	21	11	123	505	29	4	76	7	621	29	10	0	8	0	47	1514	218	29	216	45	2022

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INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: ITERIS
PROJECT: LONG BEACH PORT CLASSIFICATION COUNTS
DATE: THURSDAY, SEPTEMBER 17, 2009
PERIOD: 4:00 PM TO 6:00 PM
INTERSECTION: N/S HENRY FORD AVENUE
E/W ANAHEIM STREET

	1						2						3					
	SBRT						SBTH						SBLT					
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
400-415	8	2	0	1	0	11	2	5	0	19	0	26	15	3	0	2	0	20
415-430	8	1	0	0	0	9	7	8	1	24	0	40	21	1	0	3	1	26
430-445	15	2	0	0	0	17	4	8	0	10	0	22	34	3	0	8	0	45
445-500	4	1	0	1	0	6	6	7	0	15	0	28	36	3	0	4	1	44
500-515	4	3	0	1	0	8	4	12	0	17	0	33	35	5	0	6	0	46
515-530	8	0	0	1	0	9	7	9	0	18	0	34	33	6	0	4	1	44
530-545	14	1	0	0	0	15	9	14	0	15	0	38	22	6	0	5	1	34
545-600	7	1	0	0	0	8	4	14	0	11	0	29	10	3	0	5	0	18
HOUR TOTALS																		
400-500	35	6	0	2	0	43	19	28	1	68	0	116	106	10	0	17	2	135
415-515	31	7	0	2	0	40	21	35	1	66	0	123	126	12	0	21	2	161
430-530	31	6	0	3	0	40	21	36	0	60	0	117	138	17	0	22	2	179
445-545	30	5	0	3	0	38	26	42	0	65	0	133	126	20	0	19	3	168
500-600	33	5	0	2	0	40	24	49	0	61	0	134	100	20	0	20	2	142

	4						5						6					
	WBRT						WBTH						WBLT					
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
400-415	27	9	0	4	2	42	155	18	0	13	0	186	12	2	0	2	0	16
415-430	22	5	0	4	2	33	162	8	0	12	3	185	8	2	1	4	0	15
430-445	37	5	0	9	1	52	178	10	1	18	1	208	13	2	0	3	0	18
445-500	21	4	0	4	0	29	185	12	0	11	0	208	6	2	0	2	0	10
500-515	28	1	0	2	1	32	194	9	0	7	4	214	10	0	0	3	0	13
515-530	13	3	0	3	1	20	127	7	2	8	2	146	9	2	0	3	2	16
530-545	14	1	0	3	0	18	124	3	0	1	0	128	8	2	0	1	0	11
545-600	17	2	0	1	0	20	124	4	1	5	1	135	6	0	1	0	0	7
HOUR TOTALS																		
400-500	107	23	0	21	5	156	680	48	1	54	4	787	39	8	1	11	0	59
415-515	108	15	0	19	4	146	719	39	1	48	8	815	37	6	1	12	0	56
430-530	99	13	0	18	3	133	684	38	3	44	7	776	38	6	0	11	2	57
445-545	76	9	0	12	2	99	630	31	2	27	6	696	33	6	0	9	2	50
500-600	72	7	0	9	2	90	569	23	3	21	7	623	33	4	1	7	2	47

	7						8						9					
	NBRT						NBTH						NBLT					
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
400-415	14	11	2	7	3	37	5	26	2	9	3	45	24	16	1	8	0	49
415-430	23	5	2	11	5	46	17	30	3	9	4	63	35	24	2	9	2	72
430-445	24	2	3	7	7	43	6	30	1	18	0	55	20	21	2	6	1	50
445-500	27	5	4	5	0	41	13	20	0	16	0	49	29	18	0	4	1	52
500-515	28	1	0	0	0	29	20	7	0	11	0	38	38	6	0	2	1	47
515-530	10	0	1	0	0	11	6	2	0	0	1	9	21	2	0	0	0	23
530-545	12	1	0	0	1	14	4	6	0	0	1	11	7	0	0	0	1	8
545-600	4	0	0	0	1	5	9	3	0	0	0	12	12	0	0	0	0	12
HOUR TOTALS																		
400-500	88	23	11	30	15	167	41	106	6	52	7	212	108	79	5	27	4	223
415-515	102	13	9	23	12	159	56	87	4	54	4	205	122	69	4	21	5	221
430-530	89	8	8	12	7	124	45	59	1	45	1	151	108	47	2	12	3	172
445-545	77	7	5	5	1	95	43	35	0	27	2	107	95	26	0	6	3	130
500-600	54	2	1	0	2	59	39	18	0	11	2	70	78	8	0	2	2	90

	10						11						12						ALL MOVEMENTS TOTALS					
	EBRT						EBTH						EBLT											
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
400-415	12	5	0	5	1	23	209	7	3	6	2	227	16	2	0	4	0	22	499	106	8	80	11	704
415-430	10	1	0	5	1	17	222	12	1	3	5	243	11	1	0	5	0	17	546	98	10	89	23	766
430-445	23	5	2	5	2	37	255	9	0	8	4	276	14	2	0	5	0	21	623	99	9	97	16	844
445-500	48	7	2	4	2	63	236	14	4	11	2	267	19	3	0	3	0	25	630	96	10	80	6	822
500-515	65	10	0	6	0	81	314	5	1	6	4	330	20	2	0	0	0	22	760	61	1	61	10	893
515-530	50	10	1	7	0	68	265	4	0	8	3	280	21	4	0	0	0	25	570	49	4	52	10	685
530-545	31	12	1	6	0	50	235	3	1	7	3	249	12	4	0	4	0	20	492	53	2	42	7	596
545-600	17	11	2	8	0	38	211	2	1	11	2	227	13	4	0	0	0	17	434	44	5	41	4	528
HOUR TOTALS																								
400-500	93	18	4	19	6	140	922	42	8	28	13	1013	60	8	0	17	0	85	2298	399	37	346	56	3136
415-515	146	23	4	20	5	198	1027	40	6	28	15	1116	64	8	0	13	0	85	2559	354	30	327	55	3325
430-530	186	32	5	22	4	249	1070	32	5	33	13	1153	74	11	0	8	0	93	2583	305	24	290	42	3244
445-545	194	39	4	23	2	262	1050	26	6	32	12	1126	72	13	0	7	0	92	2452	259	17	235	33	2996
500-600	163	43	4	27	0	237	1025	14	3	32	12	1086	66	14	0	4	0	84	2256	207	12	196	31	2702

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INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: ITERIS
PROJECT: LONG BEACH PORT CLASSIFICATION COUNTS
DATE: WEDNESDAY, SEPTEMBER 16, 2009
PERIOD: 7:00 AM TO 9:00 AM
INTERSECTION: N/S HENRY FORD AVENUE
E/W SR-47 RAMPS

	1						2						3					
	SBRT						SBTH						SBLT					
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
700-715	3	0	0	0	2	5	43	7	0	9	0	59	34	6	0	3	0	43
715-730	8	0	0	0	1	9	51	10	0	7	5	73	39	0	0	6	0	45
730-745	7	0	0	0	0	7	35	14	2	13	2	66	37	4	0	7	0	48
745-800	10	0	0	0	0	10	15	21	0	5	2	43	23	8	0	7	0	38
800-815	13	0	0	0	3	16	11	17	3	11	0	42	9	3	0	5	0	17
815-830	13	0	0	0	1	14	13	16	3	16	3	51	6	7	0	3	0	16
830-845	10	0	0	0	0	10	13	15	2	19	0	49	4	9	0	9	0	22
845-900	1	0	0	0	1	2	6	16	4	16	2	44	8	5	0	10	0	23
HOUR TOTALS																		
700-800	28	0	0	0	3	31	144	52	2	34	9	241	133	18	0	23	0	174
715-815	38	0	0	0	4	42	112	62	5	36	9	224	108	15	0	25	0	148
730-830	43	0	0	0	4	47	74	68	8	45	7	202	75	22	0	22	0	119
745-845	46	0	0	0	4	50	52	69	8	51	5	185	42	27	0	24	0	93
800-900	37	0	0	0	5	42	43	64	12	62	5	186	27	24	0	27	0	78

	4						5						6					
	WBRT						WBTH						WBLT					
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
700-715	2	0	0	0	0	2	1	0	0	0	1	2	5	0	0	0	0	5
715-730	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
730-745	3	0	0	0	1	4	0	0	0	0	0	0	2	0	0	0	0	2
745-800	8	0	0	1	0	9	0	0	0	0	0	0	5	0	0	0	0	5
800-815	6	1	0	1	0	8	0	0	0	0	0	0	7	0	0	0	1	8
815-830	7	1	0	1	0	9	0	0	0	0	0	0	1	0	0	0	1	2
830-845	9	11	1	0	0	21	1	0	0	0	0	1	5	10	3	1	0	19
845-900	12	4	0	0	0	16	0	0	0	0	0	0	2	4	4	0	0	10
HOUR TOTALS																		
700-800	17	0	0	1	1	19	1	0	0	0	1	2	12	0	0	0	0	12
715-815	21	1	0	2	1	25	0	0	0	0	0	0	14	0	0	0	1	15
730-830	24	2	0	3	1	30	0	0	0	0	0	0	15	0	0	0	2	17
745-845	30	13	1	3	0	47	1	0	0	0	0	1	18	10	3	1	2	34
800-900	34	17	1	2	0	54	1	0	0	0	0	1	15	14	7	1	2	39

	7						8						9					
	NBRT						NBTH						NBLT					
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
700-715	12	0	0	2	0	14	9	3	0	0	1	13	2	0	0	0	12	14
715-730	8	1	0	1	1	11	3	0	0	0	0	3	0	0	0	0	15	15
730-745	19	0	0	1	0	20	8	3	0	0	2	13	3	0	0	0	21	24
745-800	18	0	0	0	1	19	16	0	0	3	1	20	6	0	0	0	5	11
800-815	7	2	0	1	1	11	9	1	0	0	2	12	5	0	0	0	21	26
815-830	8	0	0	0	0	8	8	7	1	2	0	18	6	0	0	0	4	10
830-845	4	5	0	1	0	10	8	13	1	0	2	24	2	0	0	0	21	23
845-900	3	4	1	2	0	10	14	9	0	3	0	26	0	0	0	0	11	11
HOUR TOTALS																		
700-800	57	1	0	4	2	64	36	6	0	3	4	49	11	0	0	0	53	64
715-815	52	3	0	3	3	61	36	4	0	3	5	48	14	0	0	0	62	76
730-830	52	2	0	2	2	58	41	11	1	5	5	63	20	0	0	0	51	71
745-845	37	7	0	2	2	48	41	21	2	5	5	74	19	0	0	0	51	70
800-900	22	11	1	4	1	39	39	30	2	5	4	80	13	0	0	0	57	70

	10						11						12						ALL MOVEMENTS TOTALS					
	EBRT						EBTH						EBLT											
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
700-715	3	0	0	0	3	6	0	0	0	0	0	0	9	0	0	0	1	10	123	16	0	14	20	173
715-730	7	0	0	0	18	25	1	0	0	0	0	1	9	0	0	0	2	11	130	11	0	14	42	197
730-745	6	0	0	0	10	16	0	0	0	0	0	0	12	0	0	0	1	13	132	21	2	21	37	213
745-800	10	0	0	0	22	32	0	0	0	0	0	0	6	0	0	0	1	7	117	29	0	16	32	194
800-815	2	0	0	0	10	12	1	0	0	0	0	1	4	0	0	0	0	4	74	24	3	18	38	157
815-830	2	0	0	0	15	17	0	0	0	0	0	0	10	0	0	0	1	11	74	31	4	22	25	156
830-845	0	0	0	0	10	10	0	0	0	0	0	0	13	0	0	0	0	13	69	63	7	30	33	202
845-900	2	0	0	0	17	19	0	0	0	0	1	1	5	0	0	0	0	5	53	42	9	31	32	167
HOUR TOTALS																								
700-800	26	0	0	0	53	79	1	0	0	0	0	1	36	0	0	0	5	41	502	77	2	65	131	777
715-815	25	0	0	0	60	85	2	0	0	0	0	2	31	0	0	0	4	35	453	85	5	69	149	761
730-830	20	0	0	0	57	77	1	0	0	0	0	1	32	0	0	0	3	35	397	105	9	77	132	720
745-845	14	0	0	0	57	71	1	0	0	0	0	1	33	0	0	0	2	35	334	147	14	86	128	709
800-900	6	0	0	0	52	58	1	0	0	0	1	2	32	0	0	0	1	33	270	160	23	101	128	682

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INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: ITERIS
PROJECT: LONG BEACH PORT CLASSIFICATION COUNTS
DATE: WEDNESDAY, SEPTEMBER 16, 2009
PERIOD: 4:00 PM TO 6:00 PM
INTERSECTION: N/S HENRY FORD AVENUE
E/W SR-47 RAMPS

	1						2						3					
	SBRT						SBTH						SBLT					
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
400-415	8	0	0	0	0	8	11	9	3	26	1	50	3	5	1	6	1	16
415-430	12	0	0	0	0	12	16	14	2	18	1	51	7	3	1	2	0	13
430-445	12	0	0	0	0	12	19	5	0	18	1	43	11	0	0	2	0	13
445-500	11	0	0	0	0	11	18	12	0	20	2	52	38	0	0	0	0	38
500-515	15	0	0	0	0	15	30	24	4	29	1	88	33	1	0	2	0	36
515-530	14	0	0	0	0	14	28	19	2	16	0	65	32	0	0	0	0	32
530-545	11	0	0	0	0	11	21	21	0	18	0	60	15	0	0	0	0	15
545-600	8	0	0	0	0	8	8	18	1	21	0	48	14	2	0	1	0	17
HOUR TOTALS																		
400-500	43	0	0	0	0	43	64	40	5	82	5	196	59	8	2	10	1	80
415-515	50	0	0	0	0	50	83	55	6	85	5	234	89	4	1	6	0	100
430-530	52	0	0	0	0	52	95	60	6	83	4	248	114	1	0	4	0	119
445-545	51	0	0	0	0	51	97	76	6	83	3	265	118	1	0	2	0	121
500-600	48	0	0	0	0	48	87	82	7	84	1	261	94	3	0	3	0	100

	4						5						6					
	WBRT						WBTH						WBLT					
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
400-415	8	22	5	9	0	44	0	1	0	0	0	1	5	5	3	2	0	15
415-430	30	17	0	16	0	63	0	0	0	0	0	0	4	2	1	0	0	7
430-445	24	17	6	17	0	64	0	0	0	0	0	0	12	7	2	0	0	21
445-500	70	21	2	12	0	105	0	0	0	0	0	0	24	6	0	2	0	32
500-515	34	8	2	8	1	53	0	0	0	0	0	0	12	6	0	1	0	19
515-530	12	2	0	5	0	19	0	0	0	0	0	0	4	2	0	0	0	6
530-545	7	1	0	2	0	10	0	0	0	0	0	0	0	0	0	1	0	1
545-600	4	2	0	0	0	6	0	0	0	0	0	0	5	0	0	0	0	5
HOUR TOTALS																		
400-500	132	77	13	54	0	276	0	1	0	0	0	1	45	20	6	4	0	75
415-515	158	63	10	53	1	285	0	0	0	0	0	0	52	21	3	3	0	79
430-530	140	48	10	42	1	241	0	0	0	0	0	0	52	21	2	3	0	78
445-545	123	32	4	27	1	187	0	0	0	0	0	0	40	14	0	4	0	58
500-600	57	13	2	15	1	88	0	0	0	0	0	0	21	8	0	2	0	31

	7						8						9					
	NBRT						NBTH						NBLT					
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
400-415	4	3	0	2	0	9	9	44	5	11	1	70	5	1	0	0	1	7
415-430	1	2	0	0	0	3	13	35	2	19	2	71	3	0	0	0	0	3
430-445	9	0	0	1	0	10	18	23	2	18	4	65	0	0	0	0	1	1
445-500	5	0	0	2	0	7	24	23	0	14	2	63	0	0	0	0	2	2
500-515	10	0	0	1	0	11	16	7	0	3	0	26	1	0	0	0	0	1
515-530	5	0	0	0	0	5	14	2	0	4	1	21	4	0	0	0	3	7
530-545	7	1	0	0	0	8	14	2	0	2	0	18	3	0	0	0	0	3
545-600	7	0	0	0	0	7	4	0	0	0	1	5	0	0	0	0	1	1
HOUR TOTALS																		
400-500	19	5	0	5	0	29	64	125	9	62	9	269	8	1	0	0	4	13
415-515	25	2	0	4	0	31	71	88	4	54	8	225	4	0	0	0	3	7
430-530	29	0	0	4	0	33	72	55	2	39	7	175	5	0	0	0	6	11
445-545	27	1	0	3	0	31	68	34	0	23	3	128	8	0	0	0	5	13
500-600	29	1	0	1	0	31	48	11	0	9	2	70	8	0	0	0	4	12

	10						11						12						ALL MOVEMENTS TOTALS					
	EBRT						EBTH						EBLT											
15-MIN COUNTS	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL	AUTOS	BOB-T	CHASS	CONT	OTHR	TOTAL
400-415	4	0	0	0	1	5	0	0	0	0	0	0	5	0	0	0	1	6	62	90	17	56	6	231
415-430	4	0	0	0	0	4	0	0	0	0	0	0	26	0	0	0	1	27	116	73	6	55	4	254
430-445	2	0	0	0	0	2	0	0	0	0	0	0	13	0	0	0	0	13	120	52	10	56	6	244
445-500	3	0	0	0	0	3	0	0	0	0	0	0	12	0	0	0	0	12	205	62	2	50	6	325
500-515	4	0	0	0	0	4	0	0	0	0	1	1	17	0	0	0	0	17	172	46	6	44	3	271
515-530	4	0	0	0	0	4	0	0	0	0	0	0	6	0	0	0	0	6	123	25	2	25	4	179
530-545	6	0	0	0	0	6	0	0	0	0	0	0	9	0	0	0	0	9	93	25	0	23	0	141
545-600	2	0	0	0	0	2	0	0	0	0	0	0	7	0	0	0	0	7	59	22	1	22	2	106
HOUR TOTALS																								
400-500	13	0	0	0	1	14	0	0	0	0	0	0	56	0	0	0	2	58	503	277	35	217	22	1054
415-515	13	0	0	0	0	13	0	0	0	0	1	1	68	0	0	0	1	69	613	233	24	205	19	1094
430-530	13	0	0	0	0	13	0	0	0	0	1	1	48	0	0	0	0	48	620	185	20	175	19	1019
445-545	17	0	0	0	0	17	0	0	0	0	1	1	44	0	0	0	0	44	593	158	10	142	13	916
500-600	16	0	0	0	0	16	0	0	0	0	1	1	39	0	0	0	0	39	447	118	9	114	9	697

ATTACHMENT B

ANALYSIS VOLUMES

B-1

EXISTING CONDITIONS

Existing PCE Volumes															
AM				**SBR**	**SBT**	**SBL**	**WBR**	**WBT**	**WBL**	**NBR**	**NBT**	**NBL**	**EBR**	**EBT**	**EBL**
ID	**N/S Street Name**	**E/W Street Name**	**TIME**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1	Alameda St	Anaheim St	AM	192	273	12	21	839	286	437	149	20	30	789	101
2	Henry Ford Ave	Anaheim St	AM	26	154	87	114	843	48	38	23	50	254	799	61
3	Henry Ford Ave	Terminal Isla Fwy Ramps	AM	32	286	203	20	2	12	69	54	65	81	1	42

Existing PCE Volumes															
PM				**SBR**	**SBT**	**SBL**	**WBR**	**WBT**	**WBL**	**NBR**	**NBT**	**NBL**	**EBR**	**EBT**	**EBL**
ID	**N/S Street Name**	**E/W Street Name**	**TIME**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1	Alameda St	Anaheim St	PM	96	209	31	32	885	209	583	190	19	11	963	91
2	Henry Ford Ave	Anaheim St	PM	44	196	187	170	884	70	187	273	254	225	1171	101
3	Henry Ford Ave	Terminal Isla Fwy Ramps	PM	51	331	109	351	0	86	36	294	7	13	1	70

B-2

EXISTING PLUS PROJECT CONDITIONS

Existing + Project															
AM				SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
ID	N/S Street Name	E/W Street Name	TIME	1	2	3	4	5	6	7	8	9	10	11	12
1	Alameda St	Anaheim St	AM	192	273	12	21	847	294	445	149	20	30	793	101
2	Henry Ford Ave	Anaheim St	AM	26	154	87	114	843	50	42	23	65	261	799	61
3	Henry Ford Ave	Terminal Isla Fwy Ramps	AM	42	286	203	20	2	12	69	54	67	86	1	62

Existing +Project															
PM				SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
ID	N/S Street Name	E/W Street Name	TIME	1	2	3	4	5	6	7	8	9	10	11	12
1	Alameda St	Anaheim St	PM	96	209	31	32	892	216	594	190	19	11	974	91
2	Henry Ford Ave	Anaheim St	PM	44	196	187	170	884	75	190	273	267	246	1171	101
3	Henry Ford Ave	Terminal Isla Fwy Ramps	PM	79	331	109	351	0	86	36	294	14	17	1	88

B-3

CUMULATIVE BASE CONDITIONS

AM				Cumulative Base Volumes											
				SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
ID	N/S Street Name	E/W Street Name	TIME	1	2	3	4	5	6	7	8	9	10	11	12
1	Alameda St	Anaheim St	AM	197	281	13	21	865	295	450	154	20	31	813	104
2	Henry Ford Ave	Anaheim St	AM	27	158	90	117	868	50	39	23	52	262	823	63
3	Henry Ford Ave	Terminal Isla Fwy Ramps	AM	33	294	209	21	2	13	72	55	67	83	1	43

PM				Cumulative Base Volumes											
				SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
ID	N/S Street Name	E/W Street Name	TIME	1	2	3	4	5	6	7	8	9	10	11	12
1	Alameda St	Anaheim St	PM	96	209	31	32	885	209	583	190	19	11	963	91
2	Henry Ford Ave	Anaheim St	PM	44	196	187	170	884	70	187	273	254	225	1171	101
3	Henry Ford Ave	Terminal Isla Fwy Ramps	PM	51	331	109	351	0	86	36	294	7	13	1	70

B-4

CUMULATIVE PLUS PROJECT CONDITIONS

Cumulative plus Project Volumes															
AM				SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
ID	N/S Street Name	E/W Street Name	TIME	1	2	3	4	5	6	7	8	9	10	11	12
1	Alameda St	Anaheim St	AM	197	281	13	21	873	303	458	154	20	31	817	104
2	Henry Ford Ave	Anaheim St	AM	27	158	90	117	868	52	43	23	67	269	823	63
3	Henry Ford Ave	Terminal Isla Fwy Ramps	AM	43	294	209	21	2	13	72	55	69	88	1	63

Cumulative plus Project Volumes															
PM				SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
ID	N/S Street Name	E/W Street Name	TIME	1	2	3	4	5	6	7	8	9	10	11	12
1	Alameda St	Anaheim St	PM	99	215	32	33	918	222	611	195	19	12	1003	93
2	Henry Ford Ave	Anaheim St	PM	45	202	192	175	911	77	196	281	274	252	1206	104
3	Henry Ford Ave	Terminal Isla Fwy Ramps	PM	81	341	112	362	0	88	37	302	14	18	1	90

ATTACHMENT C

LOS WORKSHEETS

C-1

EXISTING CONDITIONS

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
1	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

No. of Phases			3			3			3			3			0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?			2			2			0			0			0
Override Capacity			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	20	1	20	0	20	20	0	20	0	**0**	0	20	0	**0**	0	20	0	**0**
	Left-Through		0							0				0				0	
	Through	149	2	75	0	149	75	0	149	0	0	0	149	0	0	0	149	0	0
	Through-Right		0							0				0				0	
	Right	437	1	**280**	0	437	**280**	0	437	0	0	0	437	0	0	0	437	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	12	1	**12**	0	12	**12**	0	12	0	0	0	12	0	0	0	12	0	0
	Left-Through		0							0				0				0	
	Through	273	2	137	0	273	137	0	273	0	**0**	0	273	0	**0**	0	273	0	**0**
	Through-Right		0							0				0				0	
	Right	192	1	142	0	192	142	0	192	0	0	0	192	0	0	0	192	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	101	1	101	0	101	101	0	101	0	0	0	101	0	0	0	101	0	0
	Left-Through		0							0				0				0	
	Through	789	1	**410**	0	789	**410**	0	789	0	**0**	0	789	0	**0**	0	789	0	**0**
	Through-Right		1							0				0				0	
	Right	30	0	0	0	30	0	0	30	0	0	0	30	0	0	0	30	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	286	2	**157**	0	286	**157**	0	286	0	**0**	0	286	0	**0**	0	286	0	**0**
	Left-Through		0							0				0				0	
	Through	839	1	430	0	839	430	0	839	0	0	0	839	0	0	0	839	0	0
	Through-Right		1							0				0				0	
	Right	21	0	0	0	21	0	0	21	0	0	0	21	0	0	0	21	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		292	*North-South:*		292	*North-South:*			0	*North-South:*			0	*North-South:*			0
		East-West:		567	*East-West:*		567	*East-West:*			0	*East-West:*			0	*East-West:*			0
		SUM:		859	*SUM:*		859	*SUM:*			0	*SUM:*			0	*SUM:*			0
VOLUME/CAPACITY *(V/C)* RATIO:				0.603			0.603				0.000				0.000				
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.503			0.503				0.000				0.000				0.000
LEVEL OF SERVICE (LOS):				A			A				A				A				A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
1	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			3			3			3				3					0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 3 SB-- / EB-- 0 WB--		0	NB-- 3 SB-- / EB-- 0 WB--		0	NB-- 0 SB-- / EB-- 0 WB--		0		NB-- 0 SB-- / EB-- 0 WB--		0		NB-- 0 SB-- / EB-- 0 WB--		0
	ATSAC-1 or ATSAC+ATCS-2?			2			2			0				0					0
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	19	1	19	0	19	19	0	19	0	0	0	19	0	0	0	19	0	0
	Left-Through		0							0				0				0	
	Through	190	2	95	0	190	95	0	190	0	0	0	190	0	0	0	190	0	0
	Through-Right		0							0				0				0	
	Right	583	1	468	0	583	468	0	583	0	0	0	583	0	0	0	583	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	31	1	31	0	31	31	0	31	0	0	0	31	0	0	0	31	0	0
	Left-Through		0							0				0				0	
	Through	209	2	105	0	209	105	0	209	0	0	0	209	0	0	0	209	0	0
	Through-Right		0							0				0				0	
	Right	96	1	51	0	96	51	0	96	0	0	0	96	0	0	0	96	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	91	1	91	0	91	91	0	91	0	0	0	91	0	0	0	91	0	0
	Left-Through		0							0				0				0	
	Through	963	1	487	0	963	487	0	963	0	0	0	963	0	0	0	963	0	0
	Through-Right		1							0				0				0	
	Right	11	0	0	0	11	0	0	11	0	0	0	11	0	0	0	11	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	209	2	115	0	209	115	0	209	0	0	0	209	0	0	0	209	0	0
	Left-Through		0							0				0				0	
	Through	885	1	459	0	885	459	0	885	0	0	0	885	0	0	0	885	0	0
	Through-Right		1							0				0				0	
	Right	32	0	0	0	32	0	0	32	0	0	0	32	0	0	0	32	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		499	North-South:		499	North-South:		0		North-South:		0		North-South:			0
		East-West:		602	East-West:		602	East-West:		0		East-West:		0		East-West:			0
		SUM:		1101	SUM:		1101	SUM:		0		SUM:		0		SUM:			0
	VOLUME/CAPACITY (V/C) RATIO:			0.773			0.773			0.000				0.000					
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.673			0.673			0.000				0.000					0.000
	LEVEL OF SERVICE (LOS):			B			B			A				A					A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
2	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:	GJ	Project:	2479

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			3			3			3				3					0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1				1					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- / EB-- 1 WB--		0 / 0	NB-- 0 SB-- / EB-- 1 WB--		0 / 0	NB-- 0 SB-- / EB-- 0 WB--		0 / 0		NB-- 0 SB-- / EB-- 0 WB--		0 / 0		NB-- 0 SB-- / EB-- 0 WB--		0 / 0	
	ATSAC-1 or ATSAC+ATCS-2?			1			1			0				0					0
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	50	1	**28**	0	50	**28**	0	50	0	0	0	50	0	0	0	50	0	**0**
	Left-Through		1							0				0				0	
	Through	23	1	23	0	23	23	0	23	0	**0**	0	23	0	**0**	0	23	0	0
	Through-Right		0							0				0				0	
	Right	38	1	14	0	38	14	0	38	0	0	0	38	0	0	0	38	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	87	1	**87**	0	87	**87**	0	87	0	0	0	87	0	0	0	87	0	0
	Left-Through		0							0				0				0	
	Through	154	2	60	0	154	60	0	154	0	**0**	0	154	0	**0**	0	154	0	**0**
	Through-Right		1							0				0				0	
	Right	26	0	0	0	26	0	0	26	0	0	0	26	0	0	0	26	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	61	1	**61**	0	61	**61**	0	61	0	0	0	61	0	0	0	61	0	0
	Left-Through		0							0				0				0	
	Through	799	2	400	0	799	400	0	799	0	**0**	0	799	0	**0**	0	799	0	**0**
	Through-Right		0							0				0				0	
	Right	254	1	0	0	254	0	0	254	0	0	0	254	0	0	0	254	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	48	1	48	0	48	48	0	48	0	**0**	0	48	0	**0**	0	48	0	**0**
	Left-Through		0							0				0				0	
	Through	843	2	**422**	0	843	**422**	0	843	0	0	0	843	0	0	0	843	0	0
	Through-Right		0							0				0				0	
	Right	114	1	71	0	114	71	0	114	0	0	0	114	0	0	0	114	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		115	*North-South:*		115	*North-South:*		0		*North-South:*		0		*North-South:*		0	
		East-West:		483	*East-West:*		483	*East-West:*		0		*East-West:*		0		*East-West:*		0	
		SUM:		598	*SUM:*		598	*SUM:*		0		*SUM:*		0		*SUM:*		0	
	VOLUME/CAPACITY *(V/C)* RATIO:			0.420			0.420			0.000				0.000					
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.350			0.350			0.000				0.000					0.000
	LEVEL OF SERVICE (LOS):			A			A			A				A					A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
2	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:	GJ	Project:	2479

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			3			3			3				3					0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1				1					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- EB-- 1 WB--		0	NB-- 0 SB-- EB-- 1 WB--		0	NB-- 0 SB-- EB-- 0 WB--		0		NB-- 0 SB-- EB-- 0 WB--		0		NB-- 0 SB-- EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			1			1			0				0					0
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	254	1	**176**	0	254	**176**	0	254	0	0	0	254	0	0	0	254	0	**0**
	Left-Through		1							0				0				0	
	Through	273	1	176	0	273	176	0	273	0	**0**	0	273	0	**0**	0	273	0	0
	Through-Right		0							0				0				0	
	Right	187	1	152	0	187	152	0	187	0	0	0	187	0	0	0	187	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	187	1	**187**	0	187	**187**	0	187	0	0	0	187	0	0	0	187	0	0
	Left-Through		0							0				0				0	
	Through	196	2	80	0	196	80	0	196	0	**0**	0	196	0	**0**	0	196	0	**0**
	Through-Right		1							0				0				0	
	Right	44	0	0	0	44	0	0	44	0	0	0	44	0	0	0	44	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	101	1	101	0	101	101	0	101	0	0	0	101	0	0	0	101	0	0
	Left-Through		0							0				0				0	
	Through	1171	2	**586**	0	1171	**586**	0	1171	0	**0**	0	1171	0	**0**	0	1171	0	**0**
	Through-Right		0							0				0				0	
	Right	225	1	137	0	225	137	0	225	0	0	0	225	0	0	0	225	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	70	1	**70**	0	70	**70**	0	70	0	**0**	0	70	0	**0**	0	70	0	**0**
	Left-Through		0							0				0				0	
	Through	884	2	442	0	884	442	0	884	0	0	0	884	0	0	0	884	0	0
	Through-Right		0							0				0				0	
	Right	170	1	77	0	170	77	0	170	0	0	0	170	0	0	0	170	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		363	*North-South:*		363	*North-South:*		0		*North-South:*		0		*North-South:*		0	
		East-West:		656	*East-West:*		656	*East-West:*		0		*East-West:*		0		*East-West:*		0	
		SUM:		1019	*SUM:*		1019	*SUM:*		0		*SUM:*		0		*SUM:*		0	
	VOLUME/CAPACITY *(V/C)* RATIO:			0.715			0.715			0.000				0.000					
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.645			0.645			0.000				0.000					0.000
	LEVEL OF SERVICE (LOS):			B			B			A				A					A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
3	East-West Street:	Terminal Isla Fwy Ramps	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4					0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			3			3			3				3					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 1 SB--		0	NB-- 1 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		1	EB-- 0 WB--		1	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			1			1			0				0					0
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	65	1	**65**	0	65	**65**	0	65	0	0	0	65	0	0	0	65	0	**0**
	Left-Through		0							0				0				0	
	Through	54	2	27	0	54	27	0	54	0	**0**	0	54	0	**0**	0	54	0	0
	Through-Right		0							0				0				0	
	Right	69	1	0	0	69	0	0	69	0	0	0	69	0	0	0	69	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	203	1	**203**	0	203	**203**	0	203	0	0	0	203	0	0	0	203	0	0
	Left-Through		0							0				0				0	
	Through	286	2	143	0	286	143	0	286	0	**0**	0	286	0	**0**	0	286	0	**0**
	Through-Right		0							0				0				0	
	Right	32	1	11	0	32	11	0	32	0	0	0	32	0	0	0	32	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	42	1	42	0	42	42	0	42	0	0	0	42	0	0	0	42	0	0
	Left-Through		0							0				0				0	
	Through	1	0	**82**	0	1	**82**	0	1	0	**0**	0	1	0	**0**	0	1	0	**0**
	Through-Right		1							0				0				0	
	Right	81	0	0	0	81	0	0	81	0	0	0	81	0	0	0	81	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	12	0	12	0	12	12	0	12	0	0	0	12	0	0	0	12	0	**0**
	Left-Through		1							0				0				0	
	Through	2	0	**14**	0	2	**14**	0	2	0	**0**	0	2	0	**0**	0	2	0	0
	Through-Right		0							0				0				0	
	Right	20	1	0	0	20	0	0	20	0	0	0	20	0	0	0	20	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		268	*North-South:*		268	*North-South:*		0		*North-South:*		0		*North-South:*		0	
		East-West:		96	*East-West:*		96	*East-West:*		0		*East-West:*		0		*East-West:*		0	
		SUM:		364	*SUM:*		364	*SUM:*		0		*SUM:*		0		*SUM:*		0	
	VOLUME/CAPACITY *(V/C)* RATIO:			0.265			0.265			0.000				0.000					
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.195			0.195			0.000				0.000					0.000
	LEVEL OF SERVICE (LOS):			A			A			A				A					A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
3	East-West Street:	Terminal Isla Fwy Ramps	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4					0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			3			3			3				3					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 1 SB--		0	NB-- 1 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		1	EB-- 0 WB--		1	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			1			1			0				0					0
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	7	1	7	0	7	7	0	7	0	0	0	7	0	0	0	7	0	0
	Left-Through		0							0				0				0	
	Through	294	2	147	0	294	147	0	294	0	0	0	294	0	0	0	294	0	0
	Through-Right		0							0				0				0	
	Right	36	1	0	0	36	0	0	36	0	0	0	36	0	0	0	36	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	109	1	109	0	109	109	0	109	0	0	0	109	0	0	0	109	0	0
	Left-Through		0							0				0				0	
	Through	331	2	166	0	331	166	0	331	0	0	0	331	0	0	0	331	0	0
	Through-Right		0							0				0				0	
	Right	51	1	16	0	51	16	0	51	0	0	0	51	0	0	0	51	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	70	1	70	0	70	70	0	70	0	0	0	70	0	0	0	70	0	0
	Left-Through		0							0				0				0	
	Through	1	0	14	0	1	14	0	1	0	0	0	1	0	0	0	1	0	0
	Through-Right		1							0				0				0	
	Right	13	0	0	0	13	0	0	13	0	0	0	13	0	0	0	13	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	86	0	86	0	86	86	0	86	0	0	0	86	0	0	0	86	0	0
	Left-Through		1							0				0				0	
	Through	0	0	86	0	0	86	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	351	1	0	0	351	0	0	351	0	0	0	351	0	0	0	351	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		313	North-South:		313	North-South:		0		North-South:		0		North-South:			0
		East-West:		156	East-West:		156	East-West:		0		East-West:		0		East-West:			0
		SUM:		469	SUM:		469	SUM:		0		SUM:		0		SUM:			0
	VOLUME/CAPACITY (V/C) RATIO:			0.341			0.341			0.000				0.000					
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.271			0.271			0.000				0.000					0.000
	LEVEL OF SERVICE (LOS):			A			A			A				A					A

PROJECT IMPACT

Change in v/c due to project:	0.000	Δv/c after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

C-2

EXISTING PLUS PROJECT CONDITIONS

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
1	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

No. of Phases			3			3			3			3			0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?			2			2			0			0			0
Override Capacity			0			0			0			0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	20	1	20	0	20	20	0	20	0	**0**	0	20	0	**0**	0	20	0	**0**
	Left-Through		0							0				0				0	
	Through	149	2	75	0	149	75	0	149	0	0	0	149	0	0	0	149	0	0
	Through-Right		0							0				0				0	
	Right	445	1	**283**	0	445	**283**	0	445	0	0	0	445	0	0	0	445	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	12	1	**12**	0	12	**12**	0	12	0	0	0	12	0	0	0	12	0	0
	Left-Through		0							0				0				0	
	Through	273	2	137	0	273	137	0	273	0	**0**	0	273	0	**0**	0	273	0	**0**
	Through-Right		0							0				0				0	
	Right	192	1	142	0	192	142	0	192	0	0	0	192	0	0	0	192	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	101	1	101	0	101	101	0	101	0	0	0	101	0	0	0	101	0	0
	Left-Through		0							0				0				0	
	Through	793	1	**412**	0	793	**412**	0	793	0	**0**	0	793	0	**0**	0	793	0	**0**
	Through-Right		1							0				0				0	
	Right	30	0	0	0	30	0	0	30	0	0	0	30	0	0	0	30	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	294	2	**162**	0	294	**162**	0	294	0	**0**	0	294	0	**0**	0	294	0	**0**
	Left-Through		0							0				0				0	
	Through	847	1	434	0	847	434	0	847	0	0	0	847	0	0	0	847	0	0
	Through-Right		1							0				0				0	
	Right	21	0	0	0	21	0	0	21	0	0	0	21	0	0	0	21	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		295	*North-South:*		295	*North-South:*			0	*North-South:*			0	*North-South:*			0
		East-West:		574	*East-West:*		574	*East-West:*			0	*East-West:*			0	*East-West:*			0
		SUM:		869	*SUM:*		869	*SUM:*			0	*SUM:*			0	*SUM:*			0
VOLUME/CAPACITY *(V/C)* RATIO:				0.610			0.610				0.000				0.000				
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.510			0.510				0.000				0.000				0.000
LEVEL OF SERVICE (LOS):				A			A				A				A				A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
1	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

No. of Phases			3			3			3			3			0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 3	SB--	0	NB-- 3	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB--	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB--	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			0			0			0
Override Capacity			0			0			0			0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	19	1	19	0	19	19	0	19	0	**0**	0	19	0	**0**	0	19	0	**0**
	Left-Through		0							0				0				0	
	Through	190	2	95	0	190	95	0	190	0	0	0	190	0	0	0	190	0	0
	Through-Right		0							0				0				0	
	Right	594	1	**475**	0	594	**475**	0	594	0	0	0	594	0	0	0	594	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	31	1	**31**	0	31	**31**	0	31	0	0	0	31	0	0	0	31	0	0
	Left-Through		0							0				0				0	
	Through	209	2	105	0	209	105	0	209	0	**0**	0	209	0	**0**	0	209	0	**0**
	Through-Right		0							0				0				0	
	Right	96	1	51	0	96	51	0	96	0	0	0	96	0	0	0	96	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	91	1	91	0	91	91	0	91	0	0	0	91	0	0	0	91	0	0
	Left-Through		0							0				0				0	
	Through	974	1	**493**	0	974	**493**	0	974	0	**0**	0	974	0	**0**	0	974	0	**0**
	Through-Right		1							0				0				0	
	Right	11	0	0	0	11	0	0	11	0	0	0	11	0	0	0	11	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	216	2	**119**	0	216	**119**	0	216	0	**0**	0	216	0	**0**	0	216	0	**0**
	Left-Through		0							0				0				0	
	Through	892	1	462	0	892	462	0	892	0	0	0	892	0	0	0	892	0	0
	Through-Right		1							0				0				0	
	Right	32	0	0	0	32	0	0	32	0	0	0	32	0	0	0	32	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		506	*North-South:*		506	*North-South:*			0	*North-South:*			0	*North-South:*			0
		East-West:		612	*East-West:*		612	*East-West:*			0	*East-West:*			0	*East-West:*			0
		SUM:		1118	*SUM:*		1118	*SUM:*			0	*SUM:*			0	*SUM:*			0
VOLUME/CAPACITY *(V/C)* RATIO:				0.785			0.785				0.000				0.000				
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.685			0.685				0.000				0.000				0.000
LEVEL OF SERVICE (LOS):				B			B				A				A				A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
2	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:	GJ	Project:	2479

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			3			3			3				3					0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1				1					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- / EB-- 1 WB--		0 / 0	NB-- 0 SB-- / EB-- 1 WB--		0 / 0	NB-- 0 SB-- / EB-- 0 WB--		0 / 0		NB-- 0 SB-- / EB-- 0 WB--		0 / 0		NB-- 0 SB-- / EB-- 0 WB--		0 / 0	
	ATSAC-1 or ATSAC+ATCS-2?			1			1			0				0					0
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	65	1	**36**	0	65	**36**	0	65	0	0	0	65	0	0	0	65	0	**0**
	Left-Through		1							0				0				0	
	Through	23	1	23	0	23	23	0	23	0	**0**	0	23	0	**0**	0	23	0	0
	Through-Right		0							0				0				0	
	Right	42	1	17	0	42	17	0	42	0	0	0	42	0	0	0	42	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	87	1	**87**	0	87	**87**	0	87	0	0	0	87	0	0	0	87	0	0
	Left-Through		0							0				0				0	
	Through	154	2	60	0	154	60	0	154	0	**0**	0	154	0	**0**	0	154	0	**0**
	Through-Right		1							0				0				0	
	Right	26	0	0	0	26	0	0	26	0	0	0	26	0	0	0	26	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	61	1	**61**	0	61	**61**	0	61	0	0	0	61	0	0	0	61	0	0
	Left-Through		0							0				0				0	
	Through	799	2	400	0	799	400	0	799	0	**0**	0	799	0	**0**	0	799	0	**0**
	Through-Right		0							0				0				0	
	Right	261	1	0	0	261	0	0	261	0	0	0	261	0	0	0	261	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	50	1	50	0	50	50	0	50	0	**0**	0	50	0	**0**	0	50	0	**0**
	Left-Through		0							0				0				0	
	Through	843	2	**422**	0	843	**422**	0	843	0	0	0	843	0	0	0	843	0	0
	Through-Right		0							0				0				0	
	Right	114	1	71	0	114	71	0	114	0	0	0	114	0	0	0	114	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		123	*North-South:*		123	*North-South:*		0		*North-South:*		0		*North-South:*		0	
		East-West:		483	*East-West:*		483	*East-West:*		0		*East-West:*		0		*East-West:*		0	
		SUM:		606	*SUM:*		606	*SUM:*		0		*SUM:*		0		*SUM:*		0	
	VOLUME/CAPACITY *(V/C)* RATIO:			0.425			0.425			0.000				0.000					
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.355			0.355			0.000				0.000					0.000
	LEVEL OF SERVICE (LOS):			A			A			A				A					A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
2	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:	GJ	Project:	2479

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			3			3			3				3					0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1				1					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- EB-- 1 WB--		0	NB-- 0 SB-- EB-- 1 WB--		0	NB-- 0 SB-- EB-- 0 WB--		0		NB-- 0 SB-- EB-- 0 WB--		0		NB-- 0 SB-- EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			1			1			0				0					0
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	267	1	**180**	0	267	**180**	0	267	0	0	0	267	0	0	0	267	0	**0**
	Left-Through		1							0				0				0	
	Through	273	1	180	0	273	180	0	273	0	**0**	0	273	0	**0**	0	273	0	0
	Through-Right		0							0				0				0	
	Right	190	1	153	0	190	153	0	190	0	0	0	190	0	0	0	190	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	187	1	**187**	0	187	**187**	0	187	0	0	0	187	0	0	0	187	0	0
	Left-Through		0							0				0				0	
	Through	196	2	80	0	196	80	0	196	0	**0**	0	196	0	**0**	0	196	0	**0**
	Through-Right		1							0				0				0	
	Right	44	0	0	0	44	0	0	44	0	0	0	44	0	0	0	44	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	101	1	101	0	101	101	0	101	0	0	0	101	0	0	0	101	0	0
	Left-Through		0							0				0				0	
	Through	1171	2	**586**	0	1171	**586**	0	1171	0	**0**	0	1171	0	**0**	0	1171	0	**0**
	Through-Right		0							0				0				0	
	Right	246	1	0	0	246	0	0	246	0	0	0	246	0	0	0	246	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	75	1	**75**	0	75	**75**	0	75	0	**0**	0	75	0	**0**	0	75	0	**0**
	Left-Through		0							0				0				0	
	Through	884	2	442	0	884	442	0	884	0	0	0	884	0	0	0	884	0	0
	Through-Right		0							0				0				0	
	Right	170	1	77	0	170	77	0	170	0	0	0	170	0	0	0	170	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		367	*North-South:*		367	*North-South:*		0		*North-South:*		0		*North-South:*		0	
		East-West:		661	*East-West:*		661	*East-West:*		0		*East-West:*		0		*East-West:*		0	
		SUM:		1028	*SUM:*		1028	*SUM:*		0		*SUM:*		0		*SUM:*		0	
	VOLUME/CAPACITY *(V/C)* RATIO:			0.721			0.721			0.000				0.000					
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.651			0.651			0.000				0.000					0.000
	LEVEL OF SERVICE (LOS):			B			B			A				A					A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
3	East-West Street:	Terminal Isla Fwy Ramps	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4					0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			3			3			3				3					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 1 SB--		0	NB-- 1 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		1	EB-- 0 WB--		1	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			1			1			0				0					0
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	67	1	**67**	0	67	**67**	0	67	0	0	0	67	0	0	0	67	0	**0**
	Left-Through		0							0				0				0	
	Through	54	2	27	0	54	27	0	54	0	**0**	0	54	0	**0**	0	54	0	0
	Through-Right		0							0				0				0	
	Right	69	1	0	0	69	0	0	69	0	0	0	69	0	0	0	69	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	203	1	**203**	0	203	**203**	0	203	0	0	0	203	0	0	0	203	0	0
	Left-Through		0							0				0				0	
	Through	286	2	143	0	286	143	0	286	0	**0**	0	286	0	**0**	0	286	0	**0**
	Through-Right		0							0				0				0	
	Right	42	1	11	0	42	11	0	42	0	0	0	42	0	0	0	42	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	62	1	62	0	62	62	0	62	0	0	0	62	0	0	0	62	0	0
	Left-Through		0							0				0				0	
	Through	1	0	**87**	0	1	**87**	0	1	0	**0**	0	1	0	**0**	0	1	0	**0**
	Through-Right		1							0				0				0	
	Right	86	0	0	0	86	0	0	86	0	0	0	86	0	0	0	86	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	12	0	12	0	12	12	0	12	0	0	0	12	0	0	0	12	0	**0**
	Left-Through		1							0				0				0	
	Through	2	0	**14**	0	2	**14**	0	2	0	**0**	0	2	0	**0**	0	2	0	0
	Through-Right		0							0				0				0	
	Right	20	1	0	0	20	0	0	20	0	0	0	20	0	0	0	20	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		270	*North-South:*		270	*North-South:*		0		*North-South:*		0		*North-South:*		0	
		East-West:		101	*East-West:*		101	*East-West:*		0		*East-West:*		0		*East-West:*		0	
		SUM:		371	*SUM:*		371	*SUM:*		0		*SUM:*		0		*SUM:*		0	
	VOLUME/CAPACITY *(V/C)* RATIO:			0.270			0.270			0.000				0.000					
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.200			0.200			0.000				0.000					0.000
	LEVEL OF SERVICE (LOS):			A			A			A				A					A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
3	East-West Street:	Terminal Isla Fwy Ramps	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4					0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			3			3			3				3					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 1 SB--		0	NB-- 1 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		1	EB-- 0 WB--		1	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			1			1			0				0					0
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	14	1	14	0	14	14	0	14	0	0	0	14	0	0	0	14	0	**0**
	Left-Through		0							0				0				0	
	Through	294	2	**147**	0	294	**147**	0	294	0	**0**	0	294	0	**0**	0	294	0	0
	Through-Right		0							0				0				0	
	Right	36	1	0	0	36	0	0	36	0	0	0	36	0	0	0	36	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	109	1	109	0	109	109	0	109	0	0	0	109	0	0	0	109	0	0
	Left-Through		0							0				0				0	
	Through	331	2	**166**	0	331	**166**	0	331	0	**0**	0	331	0	**0**	0	331	0	**0**
	Through-Right		0							0				0				0	
	Right	79	1	35	0	79	35	0	79	0	0	0	79	0	0	0	79	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	88	1	**88**	0	88	**88**	0	88	0	0	0	88	0	0	0	88	0	0
	Left-Through		0							0				0				0	
	Through	1	0	18	0	1	18	0	1	0	**0**	0	1	0	**0**	0	1	0	**0**
	Through-Right		1							0				0				0	
	Right	17	0	0	0	17	0	0	17	0	0	0	17	0	0	0	17	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	86	0	**86**	0	86	**86**	0	86	0	0	0	86	0	0	0	86	0	**0**
	Left-Through		1							0				0				0	
	Through	0	0	86	0	0	86	0	0	0	**0**	0	0	0	**0**	0	0	0	0
	Through-Right		0							0				0				0	
	Right	351	1	0	0	351	0	0	351	0	0	0	351	0	0	0	351	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		313	*North-South:*		313	*North-South:*		0		*North-South:*		0		*North-South:*			0
		East-West:		174	*East-West:*		174	*East-West:*		0		*East-West:*		0		*East-West:*			0
		SUM:		487	*SUM:*		487	*SUM:*		0		*SUM:*		0		*SUM:*			0
	VOLUME/CAPACITY *(V/C)* RATIO:			0.354			0.354			0.000				0.000					
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.284			0.284			0.000				0.000					0.000
	LEVEL OF SERVICE (LOS):			A			A			A				A					A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

C-3

CUMULATIVE BASE CONDITIONS

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
1	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			3			3			3				3					0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 3 SB--		0	NB-- 3 SB--		0	NB-- 0 SB--			0	NB-- 0 SB--			0	NB-- 0 SB--			0
		EB-- 0 WB--		0	EB-- 0 WB--		0	EB-- 0 WB--			0	EB-- 0 WB--			0	EB-- 0 WB--			0
	ATSAC-1 or ATSAC+ATCS-2?			2			2				0				0				0
	Override Capacity			0			0				0				0				0
NORTHBOUND	Left	20	1	20	0	20	20	0	20	0	**0**	0	20	0	**0**	0	20	0	**0**
	Left-Through		0							0				0				0	
	Through	154	2	77	0	154	77	0	154	0	0	0	154	0	0	0	154	0	0
	Through-Right		0							0				0				0	
	Right	450	1	**288**	0	450	**288**	0	450	0	0	0	450	0	0	0	450	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	13	1	**13**	0	13	**13**	0	13	0	0	0	13	0	0	0	13	0	0
	Left-Through		0							0				0				0	
	Through	281	2	141	0	281	141	0	281	0	**0**	0	281	0	**0**	0	281	0	**0**
	Through-Right		0							0				0				0	
	Right	197.0	1	145	0	197	145	0	197	0	0	0	197	0	0	0	197	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	104	1	104	0	104	104	0	104	0	0	0	104	0	0	0	104	0	0
	Left-Through		0							0				0				0	
	Through	813	1	**422**	0	813	**422**	0	813	0	**0**	0	813	0	**0**	0	813	0	**0**
	Through-Right		1							0				0				0	
	Right	31	0	0	0	31	0	0	31	0	0	0	31	0	0	0	31	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	295	2	**162**	0	295	**162**	0	295	0	**0**	0	295	0	**0**	0	295	0	**0**
	Left-Through		0							0				0				0	
	Through	865	1	443	0	865	443	0	865	0	0	0	865	0	0	0	865	0	0
	Through-Right		1							0				0				0	
	Right	21	0	0	0	21	0	0	21	0	0	0	21	0	0	0	21	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		301	*North-South:*		301	*North-South:*			0	*North-South:*			0	*North-South:*			0
		East-West:		584	*East-West:*		584	*East-West:*			0	*East-West:*			0	*East-West:*			0
		SUM:		885	*SUM:*		885	*SUM:*			0	*SUM:*			0	*SUM:*			0
	VOLUME/CAPACITY *(V/C)* RATIO:			0.621			0.621				0.000				0.000				
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.521			0.521				0.000				0.000				0.000
	LEVEL OF SERVICE (LOS):			A			A				A				A				A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
1	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

No. of Phases			3			3			3			3			0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB--	0	NB--	3	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				0				0				0
Override Capacity				0				0				0				0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	19	1	19	0	19	19	0	19	0	**0**	0	19	0	**0**	0	19	0	**0**
Left-Through		0							0				0				0	
Through	195	2	98	0	195	98	0	195	0	0	0	195	0	0	0	195	0	0
Through-Right		0							0				0				0	
Right	600	1	**482**	0	600	**482**	0	600	0	0	0	600	0	0	0	600	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	32	1	**32**	0	32	**32**	0	32	0	0	0	32	0	0	0	32	0	0
Left-Through		0							0				0				0	
Through	215	2	108	0	215	108	0	215	0	**0**	0	215	0	**0**	0	215	0	**0**
Through-Right		0							0				0				0	
Right	99	1	53	0	99	53	0	99	0	0	0	99	0	0	0	99	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	93	1	93	0	93	93	0	93	0	0	0	93	0	0	0	93	0	0
Left-Through		0							0				0				0	
Through	992	1	**502**	0	992	**502**	0	992	0	**0**	0	992	0	**0**	0	992	0	**0**
Through-Right		1							0				0				0	
Right	12	0	0	0	12	0	0	12	0	0	0	12	0	0	0	12	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	215	2	**118**	0	215	**118**	0	215	0	**0**	0	215	0	**0**	0	215	0	**0**
Left-Through		0							0				0				0	
Through	911	1	472	0	911	472	0	911	0	0	0	911	0	0	0	911	0	0
Through-Right		1							0				0				0	
Right	33	0	0	0	33	0	0	33	0	0	0	33	0	0	0	33	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		514	*North-South:*		514		*North-South:*		0		*North-South:*		0		*North-South:*		0
	East-West:		620	*East-West:*		620		*East-West:*		0		*East-West:*		0		*East-West:*		0
	SUM:		1134	*SUM:*		1134		*SUM:*		0		*SUM:*		0		*SUM:*		0
VOLUME/CAPACITY *(V/C)* RATIO:			0.796			0.796				0.000				0.000				
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.696			0.696				0.000				0.000				0.000
LEVEL OF SERVICE (LOS):			B			B				A				A				A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
2	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:	GJ	Project:	2479

No. of Phases			3			3			3			3			0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1			1			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0	NB-- 0 SB--	0
	EB-- 1 WB--	0	EB-- 1 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0	EB-- 0 WB--	0
ATSAC-1 or ATSAC+ATCS-2?		2		2		0		0		0		0
Override Capacity		0		0		0		0		0		0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	52	1	**29**	0	52	**29**	0	52	0	0	0	52	0	0	0	52	0	**0**
Left-Through		1							0				0				0	
Through	23	1	23	0	23	23	0	23	0	**0**	0	23	0	**0**	0	23	0	0
Through-Right		0							0				0				0	
Right	39	1	14	0	39	14	0	39	0	0	0	39	0	0	0	39	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	90	1	**90**	0	90	**90**	0	90	0	0	0	90	0	0	0	90	0	0
Left-Through		0							0				0				0	
Through	158	2	62	0	158	62	0	158	0	**0**	0	158	0	**0**	0	158	0	**0**
Through-Right		1							0				0				0	
Right	27	0	0	0	27	0	0	27	0	0	0	27	0	0	0	27	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	63	1	**63**	0	63	**63**	0	63	0	0	0	63	0	0	0	63	0	0
Left-Through		0							0				0				0	
Through	823	2	412	0	823	412	0	823	0	**0**	0	823	0	**0**	0	823	0	**0**
Through-Right		0							0				0				0	
Right	262	1	0	0	262	0	0	262	0	0	0	262	0	0	0	262	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	50	1	50	0	50	50	0	50	0	**0**	0	50	0	**0**	0	50	0	**0**
Left-Through		0							0				0				0	
Through	868	2	**434**	0	868	**434**	0	868	0	0	0	868	0	0	0	868	0	0
Through-Right		0							0				0				0	
Right	117	1	72	0	117	72	0	117	0	0	0	117	0	0	0	117	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		119	*North-South:*		119	*North-South:*			0	*North-South:*			0	*North-South:*			0
	East-West:		497	*East-West:*		497	*East-West:*			0	*East-West:*			0	*East-West:*			0
	SUM:		616	*SUM:*		616	*SUM:*			0	*SUM:*			0	*SUM:*			0
VOLUME/CAPACITY *(V/C)* RATIO:			0.432			0.432				0.000				0.000				
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.332			0.332				0.000				0.000				0.000
LEVEL OF SERVICE (LOS):			A			A				A				A				A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
2	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:	GJ	Project:	2479

No. of Phases			3			3			3			3			0			0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1			1			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 1	WB--	0	EB-- 1	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			0			0			0			0
Override Capacity			0			0			0			0			0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	261	1	**181**	0	261	**181**	0	261	0	0	0	261	0	0	0	261	0	**0**
	Left-Through		1							0				0				0	
	Through	281	1	181	0	281	181	0	281	0	**0**	0	281	0	**0**	0	281	0	0
	Through-Right		0							0				0				0	
	Right	193	1	157	0	193	157	0	193	0	0	0	193	0	0	0	193	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	192	1	**192**	0	192	**192**	0	192	0	0	0	192	0	0	0	192	0	0
	Left-Through		0							0				0				0	
	Through	202	2	82	0	202	82	0	202	0	**0**	0	202	0	**0**	0	202	0	**0**
	Through-Right		1							0				0				0	
	Right	45	0	0	0	45	0	0	45	0	0	0	45	0	0	0	45	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	104	1	104	0	104	104	0	104	0	0	0	104	0	0	0	104	0	0
	Left-Through		0							0				0				0	
	Through	1206	2	**603**	0	1206	**603**	0	1206	0	**0**	0	1206	0	**0**	0	1206	0	**0**
	Through-Right		0							0				0				0	
	Right	231	1	0	0	231	0	0	231	0	0	0	231	0	0	0	231	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	72	1	**72**	0	72	**72**	0	72	0	**0**	0	72	0	**0**	0	72	0	**0**
	Left-Through		0							0				0				0	
	Through	911	2	456	0	911	456	0	911	0	0	0	911	0	0	0	911	0	0
	Through-Right		0							0				0				0	
	Right	175	1	79	0	175	79	0	175	0	0	0	175	0	0	0	175	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		373	*North-South:*		373	*North-South:*			0	*North-South:*			0	*North-South:*			0
		East-West:		675	*East-West:*		675	*East-West:*			0	*East-West:*			0	*East-West:*			0
		SUM:		1048	*SUM:*		1048	*SUM:*			0	*SUM:*			0	*SUM:*			0
VOLUME/CAPACITY *(V/C)* RATIO:				0.735			0.735				0.000				0.000				
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.635			0.635				0.000				0.000				0.000
LEVEL OF SERVICE (LOS):				B			B				A				A				A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
3	East-West Street:	Terminal Isla Fwy Ramps	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

No. of Phases			4			4			4			4			0			0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			3			3			3			3			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 1	SB--	0	NB-- 1	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	1	EB-- 0	WB--	1	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			0			0			0			0
Override Capacity			0			0			0			0			0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	67	1	**67**	0	67	**67**	0	67	0	0	0	67	0	0	0	67	0	**0**
	Left-Through		0							0				0				0	
	Through	55	2	28	0	55	28	0	55	0	**0**	0	55	0	**0**	0	55	0	0
	Through-Right		0							0				0				0	
	Right	72	1	0	0	72	0	0	72	0	0	0	72	0	0	0	72	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	209	1	**209**	0	209	**209**	0	209	0	0	0	209	0	0	0	209	0	0
	Left-Through		0							0				0				0	
	Through	294	2	147	0	294	147	0	294	0	**0**	0	294	0	**0**	0	294	0	**0**
	Through-Right		0							0				0				0	
	Right	33	1	12	0	33	12	0	33	0	0	0	33	0	0	0	33	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	43	1	43	0	43	43	0	43	0	0	0	43	0	0	0	43	0	0
	Left-Through		0							0				0				0	
	Through	1	0	**84**	0	1	**84**	0	1	0	**0**	0	1	0	**0**	0	1	0	**0**
	Through-Right		1							0				0				0	
	Right	83	0	0	0	83	0	0	83	0	0	0	83	0	0	0	83	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	13	0	13	0	13	13	0	13	0	0	0	13	0	0	0	13	0	**0**
	Left-Through		1							0				0				0	
	Through	2	0	**15**	0	2	**15**	0	2	0	**0**	0	2	0	**0**	0	2	0	0
	Through-Right		0							0				0				0	
	Right	21	1	0	0	21	0	0	21	0	0	0	21	0	0	0	21	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		276	*North-South:*		276	*North-South:*			0	*North-South:*			0	*North-South:*			0
		East-West:		99	*East-West:*		99	*East-West:*			0	*East-West:*			0	*East-West:*			0
		SUM:		375	*SUM:*		375	*SUM:*			0	*SUM:*			0	*SUM:*			0
VOLUME/CAPACITY *(V/C)* RATIO:				0.273			0.273				0.000				0.000				
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.173**			**0.173**				**0.000**				**0.000**				**0.000**
LEVEL OF SERVICE (LOS):				**A**			**A**				**A**				**A**				**A**

PROJECT IMPACT

Change in *v/c* due to project:	0.000	∆*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
3	East-West Street:	Terminal Isla Fwy Ramps	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

No. of Phases			4			4			4			4			0			0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			3			3			3			3			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 1	SB--	0	NB-- 1	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 0	WB--	1	EB-- 0	WB--	1	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			0			0			0			0
Override Capacity			0			0			0			0			0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	7	1	7	0	7	7	0	7	0	0	0	7	0	0	0	7	0	**0**
	Left-Through		0							0				0				0	
	Through	302	2	**151**	0	302	**151**	0	302	0	**0**	0	302	0	**0**	0	302	0	0
	Through-Right		0							0				0				0	
	Right	37	1	0	0	37	0	0	37	0	0	0	37	0	0	0	37	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	112	1	112	0	112	112	0	112	0	0	0	112	0	0	0	112	0	0
	Left-Through		0							0				0				0	
	Through	341	2	**171**	0	341	**171**	0	341	0	**0**	0	341	0	**0**	0	341	0	**0**
	Through-Right		0							0				0				0	
	Right	53	1	17	0	53	17	0	53	0	0	0	53	0	0	0	53	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	72	1	**72**	0	72	**72**	0	72	0	0	0	72	0	0	0	72	0	0
	Left-Through		0							0				0				0	
	Through	1	0	15	0	1	15	0	1	0	**0**	0	1	0	**0**	0	1	0	**0**
	Through-Right		1							0				0				0	
	Right	14	0	0	0	14	0	0	14	0	0	0	14	0	0	0	14	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	88	0	**88**	0	88	**88**	0	88	0	0	0	88	0	0	0	88	0	**0**
	Left-Through		1							0				0				0	
	Through	0	0	88	0	0	88	0	0	0	**0**	0	0	0	**0**	0	0	0	0
	Through-Right		0							0				0				0	
	Right	362	1	0	0	362	0	0	362	0	0	0	362	0	0	0	362	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		322	*North-South:*		322	*North-South:*			0	*North-South:*			0	*North-South:*			0
		East-West:		160	*East-West:*		160	*East-West:*			0	*East-West:*			0	*East-West:*			0
		SUM:		482	*SUM:*		482	*SUM:*			0	*SUM:*			0	*SUM:*			0
VOLUME/CAPACITY *(V/C)* RATIO:				0.351			0.351				0.000				0.000				
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.251			0.251				0.000				0.000				0.000
LEVEL OF SERVICE (LOS):				A			A				A				A				A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

C-4

CUMULATIVE PLUS PROJECT CONDITIONS

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
1	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

No. of Phases			3			3			3			3			0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 3	SB--	0	NB-- 3	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB--	SB--	0
	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB--	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			0			0			0
Override Capacity			0			0			0			0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	20	1	20	0	20	20	0	20	0	**0**	0	20	0	**0**	0	20	0	**0**
	Left-Through		0							0				0				0	
	Through	154	2	77	0	154	77	0	154	0	0	0	154	0	0	0	154	0	0
	Through-Right		0							0				0				0	
	Right	458	1	**291**	0	458	**291**	0	458	0	0	0	458	0	0	0	458	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	13	1	**13**	0	13	**13**	0	13	0	0	0	13	0	0	0	13	0	0
	Left-Through		0							0				0				0	
	Through	281	2	141	0	281	141	0	281	0	**0**	0	281	0	**0**	0	281	0	**0**
	Through-Right		0							0				0				0	
	Right	197	1	145	0	197	145	0	197	0	0	0	197	0	0	0	197	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	104	1	104	0	104	104	0	104	0	0	0	104	0	0	0	104	0	0
	Left-Through		0							0				0				0	
	Through	817	1	**424**	0	817	**424**	0	817	0	**0**	0	817	0	**0**	0	817	0	**0**
	Through-Right		1							0				0				0	
	Right	31	0	0	0	31	0	0	31	0	0	0	31	0	0	0	31	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	303	2	**167**	0	303	**167**	0	303	0	**0**	0	303	0	**0**	0	303	0	**0**
	Left-Through		0							0				0				0	
	Through	873	1	447	0	873	447	0	873	0	0	0	873	0	0	0	873	0	0
	Through-Right		1							0				0				0	
	Right	21	0	0	0	21	0	0	21	0	0	0	21	0	0	0	21	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		304	*North-South:*		304	*North-South:*			0	*North-South:*			0	*North-South:*			0
		East-West:		591	*East-West:*		591	*East-West:*			0	*East-West:*			0	*East-West:*			0
		SUM:		895	*SUM:*		895	*SUM:*			0	*SUM:*			0	*SUM:*			0
VOLUME/CAPACITY *(V/C)* RATIO:				0.628			0.628				0.000				0.000				
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.528			0.528				0.000				0.000				0.000
LEVEL OF SERVICE (LOS):				A			A				A				A				A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Alameda St	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
1	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			3			3			3				3					0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 3 SB-- EB-- 0 WB--		0	NB-- 3 SB-- EB-- 0 WB--		0	NB-- 0 SB-- EB-- 0 WB--		0		NB-- 0 SB-- EB-- 0 WB--		0		NB-- 0 SB-- EB-- 0 WB--		0
	ATSAC-1 or ATSAC+ATCS-2?			2			2			0				0					0
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	19	1	19	0	19	19	0	19	0	**0**	0	19	0	**0**	0	19	0	**0**
	Left-Through		0							0				0				0	
	Through	195	2	98	0	195	98	0	195	0	0	0	195	0	0	0	195	0	0
	Through-Right		0							0				0				0	
	Right	611	1	**489**	0	611	**489**	0	611	0	0	0	611	0	0	0	611	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	32	1	**32**	0	32	**32**	0	32	0	0	0	32	0	0	0	32	0	0
	Left-Through		0							0				0				0	
	Through	215	2	108	0	215	108	0	215	0	**0**	0	215	0	**0**	0	215	0	**0**
	Through-Right		0							0				0				0	
	Right	99	1	53	0	99	53	0	99	0	0	0	99	0	0	0	99	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	93	1	93	0	93	93	0	93	0	0	0	93	0	0	0	93	0	0
	Left-Through		0							0				0				0	
	Through	1003	1	**508**	0	1003	**508**	0	1003	0	**0**	0	1003	0	**0**	0	1003	0	**0**
	Through-Right		1							0				0				0	
	Right	12	0	0	0	12	0	0	12	0	0	0	12	0	0	0	12	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	222	2	**122**	0	222	**122**	0	222	0	**0**	0	222	0	**0**	0	222	0	**0**
	Left-Through		0							0				0				0	
	Through	918	1	476	0	918	476	0	918	0	0	0	918	0	0	0	918	0	0
	Through-Right		1							0				0				0	
	Right	33	0	0	0	33	0	0	33	0	0	0	33	0	0	0	33	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		521	*North-South:*		521	*North-South:*			0	*North-South:*			0	*North-South:*			0
		East-West:		630	*East-West:*		630	*East-West:*			0	*East-West:*			0	*East-West:*			0
		SUM:		1151	*SUM:*		1151	*SUM:*			0	*SUM:*			0	*SUM:*			0
	VOLUME/CAPACITY *(V/C)* RATIO:			0.808			0.808				0.000				0.000				
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.708			0.708				0.000				0.000				0.000
	LEVEL OF SERVICE (LOS):			C			C				A				A				A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
2	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:	GJ	Project:	2479

No. of Phases			3			3			3			3			0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1			1			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 1	WB--	0	EB-- 1	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			0			0			0
Override Capacity			0			0			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	67	1	**37**	0	67	**37**	0	67	0	0	0	67	0	0	0	67	0	**0**
	Left-Through		1							0				0				0	
	Through	23	1	23	0	23	23	0	23	0	**0**	0	23	0	**0**	0	23	0	0
	Through-Right		0							0				0				0	
	Right	43	1	17	0	43	17	0	43	0	0	0	43	0	0	0	43	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	90	1	**90**	0	90	**90**	0	90	0	0	0	90	0	0	0	90	0	0
	Left-Through		0							0				0				0	
	Through	158	2	62	0	158	62	0	158	0	**0**	0	158	0	**0**	0	158	0	**0**
	Through-Right		1							0				0				0	
	Right	27	0	0	0	27	0	0	27	0	0	0	27	0	0	0	27	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	63	1	**63**	0	63	**63**	0	63	0	0	0	63	0	0	0	63	0	0
	Left-Through		0							0				0				0	
	Through	823	2	412	0	823	412	0	823	0	**0**	0	823	0	**0**	0	823	0	**0**
	Through-Right		0							0				0				0	
	Right	269	1	0	0	269	0	0	269	0	0	0	269	0	0	0	269	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	52	1	52	0	52	52	0	52	0	**0**	0	52	0	**0**	0	52	0	**0**
	Left-Through		0							0				0				0	
	Through	868	2	**434**	0	868	**434**	0	868	0	0	0	868	0	0	0	868	0	0
	Through-Right		0							0				0				0	
	Right	117	1	72	0	117	72	0	117	0	0	0	117	0	0	0	117	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*			127	*North-South:*		127	*North-South:*			0	*North-South:*			0	*North-South:*			0
	East-West:			497	*East-West:*		497	*East-West:*			0	*East-West:*			0	*East-West:*			0
	SUM:			624	*SUM:*		624	*SUM:*			0	*SUM:*			0	*SUM:*			0
VOLUME/CAPACITY *(V/C)* RATIO:				0.438			0.438				0.000				0.000				
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.338			0.338				0.000				0.000				0.000
LEVEL OF SERVICE (LOS):				A			A				A				A				A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
2	East-West Street:	Anaheim St	Projection Year:	2014	Peak Hour:		Reviewed by:	GJ	Project:	2479

No. of Phases			3			3			3			3			0			0
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1			1			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0	NB-- 0	SB--	0
	EB-- 1	WB--	0	EB-- 1	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0	EB-- 0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			0			0			0			0
Override Capacity			0			0			0			0			0			0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	274	1	**185**	0	274	**185**	0	274	0	0	0	274	0	0	0	274	0	**0**
	Left-Through		1							0				0				0	
	Through	281	1	185	0	281	185	0	281	0	**0**	0	281	0	**0**	0	281	0	0
	Through-Right		0							0				0				0	
	Right	196	1	158	0	196	158	0	196	0	0	0	196	0	0	0	196	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	192	1	**192**	0	192	**192**	0	192	0	0	0	192	0	0	0	192	0	0
	Left-Through		0							0				0				0	
	Through	202	2	82	0	202	82	0	202	0	**0**	0	202	0	**0**	0	202	0	**0**
	Through-Right		1							0				0				0	
	Right	45	0	0	0	45	0	0	45	0	0	0	45	0	0	0	45	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	104	1	104	0	104	104	0	104	0	0	0	104	0	0	0	104	0	0
	Left-Through		0							0				0				0	
	Through	1206	2	**603**	0	1206	**603**	0	1206	0	**0**	0	1206	0	**0**	0	1206	0	**0**
	Through-Right		0							0				0				0	
	Right	252	1	0	0	252	0	0	252	0	0	0	252	0	0	0	252	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	77	1	**77**	0	77	**77**	0	77	0	**0**	0	77	0	**0**	0	77	0	**0**
	Left-Through		0							0				0				0	
	Through	911	2	456	0	911	456	0	911	0	0	0	911	0	0	0	911	0	0
	Through-Right		0							0				0				0	
	Right	175	1	79	0	175	79	0	175	0	0	0	175	0	0	0	175	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		377	*North-South:*		377	*North-South:*			0	*North-South:*			0	*North-South:*			0
		East-West:		680	*East-West:*		680	*East-West:*			0	*East-West:*			0	*East-West:*			0
		SUM:		1057	*SUM:*		1057	*SUM:*			0	*SUM:*			0	*SUM:*			0
VOLUME/CAPACITY *(V/C)* RATIO:				0.742			0.742				0.000				0.000				
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.642			0.642				0.000				0.000				0.000
LEVEL OF SERVICE (LOS):				B			B				A				A				A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
3	East-West Street:	Terminal Isla Fwy Ramps	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4					0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			3			3			3				3					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 1 SB--		0	NB-- 1 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		1	EB-- 0 WB--		1	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			0				0					0
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	69	1	**69**	0	69	**69**	0	69	0	0	0	69	0	0	0	69	0	**0**
	Left-Through		0							0				0				0	
	Through	55	2	28	0	55	28	0	55	0	**0**	0	55	0	**0**	0	55	0	0
	Through-Right		0							0				0				0	
	Right	72	1	0	0	72	0	0	72	0	0	0	72	0	0	0	72	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	209	1	**209**	0	209	**209**	0	209	0	0	0	209	0	0	0	209	0	0
	Left-Through		0							0				0				0	
	Through	294	2	147	0	294	147	0	294	0	**0**	0	294	0	**0**	0	294	0	**0**
	Through-Right		0							0				0				0	
	Right	43	1	12	0	43	12	0	43	0	0	0	43	0	0	0	43	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	63	1	63	0	63	63	0	63	0	0	0	63	0	0	0	63	0	0
	Left-Through		0							0				0				0	
	Through	1	0	**89**	0	1	**89**	0	1	0	**0**	0	1	0	**0**	0	1	0	**0**
	Through-Right		1							0				0				0	
	Right	88	0	0	0	88	0	0	88	0	0	0	88	0	0	0	88	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	13	0	13	0	13	13	0	13	0	0	0	13	0	0	0	13	0	**0**
	Left-Through		1							0				0				0	
	Through	2	0	**15**	0	2	**15**	0	2	0	**0**	0	2	0	**0**	0	2	0	0
	Through-Right		0							0				0				0	
	Right	21	1	0	0	21	0	0	21	0	0	0	21	0	0	0	21	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		278	*North-South:*		278		*North-South:*		0		*North-South:*		0		*North-South:*		0
		East-West:		104	*East-West:*		104		*East-West:*		0		*East-West:*		0		*East-West:*		0
		SUM:		382	*SUM:*		382		*SUM:*		0		*SUM:*		0		*SUM:*		0
	VOLUME/CAPACITY *(V/C)* RATIO:			0.278			0.278				0.000				0.000				
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.178			0.178				0.000				0.000				0.000
	LEVEL OF SERVICE (LOS):			A			A				A				A				A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Henry Ford Ave	Year of Count:	2011	Ambient Growth: (%):		Conducted by:	SR	Date:	8/1/2011
3	East-West Street:	Terminal Isla Fwy Ramps	Projection Year:	2014	Peak Hour:		Reviewed by:		Project:	2479

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4					0
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			3			3			3				3					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 1 SB--		0	NB-- 1 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		1	EB-- 0 WB--		1	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			0				0					0
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	14	1	14	0	14	14	0	14	0	0	0	14	0	0	0	14	0	**0**
	Left-Through		0							0				0				0	
	Through	302	2	**151**	0	302	**151**	0	302	0	**0**	0	302	0	**0**	0	302	0	0
	Through-Right		0							0				0				0	
	Right	37	1	0	0	37	0	0	37	0	0	0	37	0	0	0	37	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	112	1	112	0	112	112	0	112	0	0	0	112	0	0	0	112	0	0
	Left-Through		0							0				0				0	
	Through	341	2	**171**	0	341	**171**	0	341	0	**0**	0	341	0	**0**	0	341	0	**0**
	Through-Right		0							0				0				0	
	Right	81	1	36	0	81	36	0	81	0	0	0	81	0	0	0	81	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	90	1	**90**	0	90	**90**	0	90	0	0	0	90	0	0	0	90	0	0
	Left-Through		0							0				0				0	
	Through	1	0	19	0	1	19	0	1	0	**0**	0	1	0	**0**	0	1	0	**0**
	Through-Right		1							0				0				0	
	Right	18	0	0	0	18	0	0	18	0	0	0	18	0	0	0	18	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	88	0	**88**	0	88	**88**	0	88	0	0	0	88	0	0	0	88	0	**0**
	Left-Through		1							0				0				0	
	Through	0	0	88	0	0	88	0	0	0	**0**	0	0	0	**0**	0	0	0	0
	Through-Right		0							0				0				0	
	Right	362	1	0	0	362	0	0	362	0	0	0	362	0	0	0	362	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		322	*North-South:*		322	*North-South:*		0		*North-South:*		0		*North-South:*			0
		East-West:		178	*East-West:*		178	*East-West:*		0		*East-West:*		0		*East-West:*			0
		SUM:		500	*SUM:*		500	*SUM:*		0		*SUM:*		0		*SUM:*			0
	VOLUME/CAPACITY *(V/C)* RATIO:			0.364			0.364			0.000				0.000					
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.264			0.264			0.000				0.000					0.000
	LEVEL OF SERVICE (LOS):			A			A			A				A					A

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

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