PUBLIC NOTICE

US Army Corps of Engineers®

LOS ANGELES DISTRICT

APPLICATION FOR PERMIT

Public Notice/Application No.: SPL-2007-01417-SDM
Comment Period: May 16, 2008 through June 17, 2008
Project Manager: Spencer MacNeil, D.Env. (805) 585-2152 Spencer.D.MacNeil@usace.army.mil

Applicant
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Location

The proposed project would occur in the Watchorn Basin, in the southwestern portion of Los Angeles Harbor, adjacent to San Pedro in the City of Los Angeles, California (Latitude: N33.72°, Longitude: W118.277°).

Activity

The proposed Cabrillo Way Marina redevelopment would include dredging up to 102,000 cubic yards (yd^3) from Watchorn Basin (an approximately 8-acre dredge area); excavating up to 175,000 yd^3 from adjacent land to create 4.50 acres of additional open water; and reusing some of the latter and other land-cut material as project area fill, including upland reuse (51,000 yd^3) and filling approximately 2.92 acres of open water (96,000 yd^3 in a confined disposal facility), which would result in a net 1.58 acres of open water/waters of the U.S. being added to Watchorn Basin (see drawings and tables). The excess material (181,000 yd^3) would be disposed of at the Anchorage Road Storage Site/other upland sites. For more information, see page 3 of this notice.

Interested parties are hereby notified that an application has been received for a Department of the Army permit for the activity described herein and shown on the attached drawing(s). Interested parties are invited to provide their views on the proposed work, which will become a part of the record and will be considered in the decision. This permit will be issued or denied under Section 10 of the River and Harbor Act of March 3, 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act of 1972 (33 U.S.C. 1344) . Comments should be mailed to:

U.S. Army Corps of Engineers, Los Angeles District
Regulatory Division
Ventura Field Office (Attention: Spencer MacNeil)
2151 Alessandro Drive, Suite 110
Ventura, California 93001

Alternatively, comments can be sent electronically to: Spencer.D.MacNeil@usace.army.mil

Evaluation Factors

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit that reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors that may be relevant to the proposal will be considered including the cumulative effects thereof. Factors that will be considered include conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people. In addition, if the proposal would discharge dredged or fill material, the evaluation of the activity will include application of the USEPA Guidelines (40 CFR 230) as required by Section 404 (b)(1) of the Clean Water Act.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Preliminary Review of Selected Factors

EIS Determination- A preliminary determination has been made that an environmental impact statement is not required for the proposed work.

Water Quality- The applicant is required to obtain water quality certification, under Section 401 of the Clean Water Act, from the California Regional Water Quality Control Board. Section 401 requires that any applicant for an individual Section 404 permit provide proof of water quality certification to the Corps of Engineers prior to permit issuance.

Coastal Zone Management- The applicant has certified that the proposed activity complies with and will be conducted in a manner that is consistent with the approved State Coastal Zone Management Program. The District Engineer hereby requests the California Coastal Commission's concurrence or nonconcurrence that the proposed project would be consistent with the Coastal Commission-approved Port Master Plan and is otherwise consistent with the Coastal Zone Management Act.

Cultural Resources- The latest version of the National Register of Historic Places (NRHP) has been consulted and this site is not listed. According to the 2003 EIR for the proposed project, the four past cultural resource studies of this area did not identify sites listed or eligible for listing on the California Register of Historical Places (CRHP) or the NRHP, which was not unexpected given the project area's artificial setting (i.e., created by filling open water in the early 1910s). Moreover, studies of the older buildings in the project area determined none met eligibility criteria for CRHP listing. However, the Corps will coordinate with the State Historic Preservation Officer regarding whether the older buildings are eligible for listing on the NRHP. This review constitutes the extent of cultural

resources investigations by the District Engineer, and he is otherwise unaware of the presence of such resources.

Endangered Species- Preliminary determinations indicate that the proposed activity would not affect federally listed endangered or threatened species, or their critical habitat. In the Port of Los Angeles, federally listed as endangered California least terns (*Sterna antillarum browni*) nest at a 15-acre preserve on Pier 400 (1 mile to the east) and forage in shallow-water areas, while endangered California brown pelicans (*Pelecanus occidentalis californicus*) forage throughout the Harbor. However, the proposed project area is not an important foraging area for either species, and both species could easily avoid this area and forage elsewhere during construction. Therefore, consultation under Section 7 of the Endangered Species Act does not appear to be required at this time.

Essential Fish Habitat - The proposed project is located within an area designated as Essential Fish Habitat (EFH) for two Fishery Management Plans, the Coastal Pelagics and Pacific Groundfish Management Plans. Based on results from the 2000 Baseline Study, there are 19 managed fish species that have been observed within San Pedro Bay, including four managed coastal pelagic fish species (northern anchovy, Pacific sardine, Pacific (chub) mackerel, and jack mackerel)) and nine managed Pacific coast groundfish species. Of these species, the most abundant is the northern anchovy, while the Pacific sardine, Pacific mackerel, and jack mackerel were also found to be moderately abundant in 2000. While none of the Pacific coast groundfish species were as abundant in outer Los Angeles harbor, Pacific sanddab were only slightly less abundant than the four managed pelagic species.

Dredging, filling, dock and pile removal, and dock and bulkhead construction could affect the FMP species potentially present in the area, through habitat disturbance (e.g., pile removal and rock riprap placement), turbidity, potential suspension of contaminants from the sediments associated with dredging along the berths and disposal of the material, and vibration (sound pressure waves) from pile and sheet pile driving. These effects would be temporary, over the two-year construction period. Impacts to water quality associated with dredging activities would be minimized through implementation of requirements associated with Waste Discharge Requirements/401 water quality certification from the Regional Water Quality Control Board. Few if any individual fish would be lost because most individuals would avoid the work area, resulting in no loss of sustainable fisheries. Construction activities on land would have no direct effect on EFH. Runoff of sediments from such construction could enter Harbor waters; however, implementation of sediment control measures in conjunction with the NPDES General Construction Activities Stormwater Permit would minimize such runoff.

Overall, as discussed below, construction of the proposed project would result in a net gain of approximately 1.6 acres of water area/potential fisheries habitat for managed fish species that might use the Cabrillo Marina area, which would be considered a beneficial effect of the project.

Operation of the new marina complex and associated landside facilities would have minimal effect on EFH. Facility operations would be in conformance with requirements in the NPDES General Industrial Activities Stormwater Permit. Implementation of best management practices (BMPs) and incorporation of stormwater retention/treatment mechanisms into the project design would minimize water quality effects on EFH.

Based on the above evaluation, no significant adverse impacts to EFH are anticipated from construction and operation of the new marina complex. With this public notice, the Corps hereby requests the National Marine Fisheries Service's concurrence that the proposed project, which would be constructed subject to standard dredging requirements and implementation of BMPs and would

result in a net gain of open water, would not adversely affect areas designated as "essential fish habitat" nor species protected under the Magnuson-Stevens Conservation and Management Act.

Public Hearing- Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearing shall state with particularity the reasons for holding a public hearing.

Proposed Activity for Which a Permit is Required

The proposed waterside improvements would consist of dredging within the Watchorn Basin; creating a new water area by excavating existing land area; creating a new land area by filling an existing water area (resulting in a 1.58 acre net addition of open water to the Watchorn Basin); removing existing rock/rubble slope protection; demolishing and removing existing marina docks and concrete and timber piles; constructing new sheetpile bulkhead and rock slope protection waterfront perimeters; and constructing new docks and installing new steel piles.
The activities would more specifically include:

DREDGING/EXCAVATION AND FILL

Marina Dredge and Land Cut Areas - To develop the marina area according to current plans, the Watchorn Basin would be deepened to design depths of -12 ft Mean Lower Low Water (MLLW), with certain areas deepened to -15 ft MLLW to accommodate deeper draft vessels. The marina dredge area total volume and volumes below the high tide line (+7.2 ft MLLW), the limit of Clean Water Act Section 404 jurisdiction, and below the mean high water line (+4.8 ft MLLW), the limit of River and Harbor Act Section 10 jurisdiction, are shown in Table 1. The corresponding footprint area estimates are shown in Table 2.

Additionally, to accommodate the new marina configuration, existing land adjacent to the Watchorn Basin would be excavated to create new water areas of -12 ft and -15 ft MLLW design depths. The marina land cut area total volume and volumes below the high tide line (+7.2 ft MLLW) and below the mean high water line (+4.8 ft MLLW) are shown in Table 1. The corresponding footprint area estimates are shown in Table 2.

The proposed project includes excavating and grading upland landside areas above the high tide line. This landside material removal would be re-used within the project site as landside (upland) fill, above the high tide line.

Waterside Fill Areas - Part of the Watchorn Basin would be filled to facilitate extension of a public access promenade along the perimeter of the project and to allow the construction of a marina support facility and adequate parking.

The triangular-shaped area in the northeast corner of the Basin would be filled behind a newly constructed rock dike, using land cut (and possibly dredge) material. An additional fill area is along the southern perimeter of the Basin where the existing slopes would be replaced with steeper rock revetment slopes and/or vertical sheetpile bulkhead walls. The fill area total volume and volumes below the high tide line (+7.2 ft MLLW) and below the mean high water line (+4.8 ft MLLW) are shown in Table 1. The corresponding footprint area estimates are shown in Table 2.

Cut/Fill Balance - The net difference between the earthen (sediment/soil) material cut and fill quantities is determined by subtracting the total earthen fill volume from the total cut volume (with a

two-foot over-depth allowance), resulting in an excess cut amount of approximately 181,000 yd^3. This volume may increase if sediment testing determines the dredged and excavated material to be unsuitable for on-site use. Table 1 summarizes the dredge/cut and fill volumes, in total, below the mean high water line (+4.8 ft MLLW), the limit of River and Harbor Act Section 10 jurisdiction, and below the high tide line (+7.2 ft MLLW), the limit of Clean Water Action Section 404 jurisdiction at this location. The far right column shows the total cut volume including existing perimeter rock to be removed and the total fill volume including new rock to be imported to construct the marina perimeters.

Table 1 – CWM Dredge/Cut and Fill Volumes

		Sediment/Soil Volume (cubic yards), No Rock Included				Volume (Design Depth Plus Two-foot Overdepth) with Rock Included (cubic yards)
		Design Depth	Design Depth Plus One-foot Overdepth	Design Depth Plus Two-foot Overdepth		
Dredge/Cut	Marina Dredge Area	76,000	89,000	102,000		
	Marina Land Cut Area	160,000	168,000	175,000		
	Landside (Upland) Cut Area*	51,000	51,000	51,000		
	Total Cut Volume	**287,000**	**308,000**	**328,000**		**341,000**
	Cut Below +7.2 ft MLLW	***234,000***	***255,000***	***275,000***		***288,000***
	Cut Below +4.8 ft MLLW	***234,000***	***255,000***	***275,000***		***288,000***
Fill	*On-site Sediment Fill Needs*					
	On-site Waterside Fill Area	96,000	96,000	96,000		
	On-site Landside Fill Area **	51,000	51,000	51,000		
	Total On-Site Fill Volume Needs	**147,000**	**147,000**	**147,000**		**214,000**
	On-Site Fill Below +7.2 ft MLLW	***81,000***	***81,000***	***81,000***		***145,000***
	On-Site Fill Below +4.8 ft MLLW	***74,000***	***74,000***	***74,000***		***132,000***
Net/Disposal/Import	**Net Cut/Fill Volume (Excess Material)**	**140,000**	**161,000**	**181,000**		
	Off-site Disposal					
	POLA Anchorage Road Facility and/or Other Upland Landfill (sediment/soil)	140,000	161,000	181,000		
	POLA Recycling Center and/or Upland Disposal Site (rock/rubble/debris)					13,000
	Rock Import to Project Site					68,000

* Cut above the High Tide Line. Material only allowed for fill above the high tide line. Overdepth allowance not required.

** Fill above the High Tide Line.

Disposal - As summarized above, up to 147,000 yd^3 of dredged/excavated material would be re-used within the CWM project site. The excess dredged/excavated material (approximately 181,000 yd^3) would be disposed at the Los Angeles Harbor Department (LAHD) Upland Disposal Site at Anchorage Road and/or another suitable upland landfill disposal site, depending upon available capacity at the Anchorage Road site at the time of project construction.

Net Water Area - The net difference between the cut and fill areas results in 1.68 acres of new water area below the mean high water line (+4.8 ft MLLW) and 1.58 acres of new water area below the high tide line (+7.2 ft MLLW). Table 2 summarizes the dredge/cut and fill footprint areas, in total, below the mean high water line and below the high tide line.

Table 2 – CWM Dredge/Cut and Fill Areas

		Area (acres)		
		Total Footprint	Footprint Below +7.2 ft MLLW	Footprint Below +4.8 ft MLLW
Dredge/ Cut	*Marina Dredge Area (No New Water Area Created)*	*8.04*	*8.04*	*8.04*
	Marina Land Cut Area	6.12	4.50	4.40
	Landside (Upland) Cut Area	*N/A*	*N/A*	*N/A*
Fill	*On-site Sediment Fill Needs*			
	On-site Waterside Fill Area	*N/A*	2.92	2.72
	On-site Landside Fill Area	*N/A*	*N/A*	*N/A*
	New Water Area Created	***N/A***	**1.58**	**1.68**

Type and Composition of Material - Recent (2008) sampling and testing of sediments from Watchorn Basin (offshore) and soils from the adjacent upland area supplement the 2004 Tier II assessment of project area sediments and soils. Watchorn Basin sediments were found to be predominantly fine-grain material with low to moderate levels of oil and grease present. Bulk sediment chemistry concentrations were compared to ERL (Effect Range-Low) and ERM (Effects Range-Median) values. Numerous contaminants were found in excess of ERL sediment screening values throughout the dredge area in 2008 and 2004. In addition, mercury, nickel, DDT, and Polycyclic Aromatic Hydrocarbon (PAH) compounds were found in excess of ERM sediment screening values, and arsenic and several PAH compounds were above residential and sometimes industrial Preliminary Remediation Goals (PRG) screening values; although all were at levels below hazardous waste criteria. DDT and PAH concentrations were more pronounced in 2008 compared to the 2004 study. According to the 2008 study, however, contaminant levels should be low enough to be placed in either a confined disposal facility (CDF) onsite (in-water) or elsewhere in the Port at an upland disposal facility, such as Anchorage Road. Specifically, chemical and biological testing on effluent elutriate extracts of collected sediments indicated that water returning to the Harbor from dredged material discharged in a CDF or at an upland location would not exceed the State's water quality objectives prior to initial mixing; nor was there observed toxicity in the undiluted elutriate extract. Moreover, analysis of soluble metals (DI-WET extracts) indicated that leaching of any metals would not exceed any of the State's water quality objectives. While the 2008 study indicated that contaminant levels of on-shore soils should not be a concern for reuse as general fill, elevated levels of arsenic and PAHs may require additional risk assessments if soils are left exposed to the general public. This also includes any sediment that may be used as landside fill. According to the 2008

study, covering the soils or sediments with at least two feet of clean soil or a layer of asphalt should alleviate human health concerns because there is no drinking water source in the vicinity.

Construction Approach - Waterside dredge material would be removed via a clamshell/excavator-type dredge. The dredge material would be loaded onto a barge, transported to the water's edge of the project fill area and discharged into the project fill site or discharged onto land where it would be dried and blended with other fill material. For excess material and/or if it is determined that some of the dredge material is not suitable for project reuse, the material would be transported via barge to the Port's Anchorage Road facility or a temporary on-site location. The material would then be trucked from there to either an upland landfill facility or to another approved in-harbor disposal site.

The marina land cut would be constructed using a combination of land-based excavators and clamshell dredge. The excavated material would be transported to the project's fill area using land-based equipment. The dredge material would be loaded onto a barge, transported to the water's edge of the project fill area, and discharged into the project fill site or discharged onto land where it would be dried and blended with other fill material. For excess material and/or if it is determined that some of the material is not suitable for project reuse, the material would be transported via barge to the Port's Anchorage Road facility or a temporary on-site location. The material would then be trucked to either an upland landfill facility or to another approved in-harbor disposal site.

The waterside fill area would be created by first constructing the rock dike perimeter and then filling landward of the rock.

Mitigation of Dredge and Fill Impacts on Water Quality - The Los Angeles Harbor District's obligation to protect water and biotic resources during all project-related dredging and construction activities from potential release of sediment contaminants are formalized in MM WQ-1.1 of the CEQA document (Final Supplemental Environmental Impact Report, West Channel/ Cabrillo Marina Phase II, November 2003), included with the Corps permit application. This measure requires implementation of a multi-parameter dredging monitoring program and reads as follows:

> MM WQ-1.1: During dredge and fill operations, an integrated multi-parameter monitoring program shall be implemented by the LAHD Environmental Management Division in conjunction with both USACE and LARWQCB permit requirements, wherein dredging performance is measured in situ. The objective of the monitoring program shall be adaptive management of the dredging operation, whereby potential exceedances of water quality objectives can be measured or predicted and dredging operations subsequently modified. If exceedances are observed, the LAHD's environmental Management Division shall immediately meet with the construction manager to discuss modifications of dredging operations to reduce turbidity to acceptable levels. This could include alteration of dredging methods, and/or implementation of additional BMPs such as a silt curtain.

Any remaining impacts would be below significance thresholds as a result of implementation of applicable permit conditions and mitigation measures in conformance with the identified performance standards.

EXISTING ROCK/RUBBLE/DOCKS REMOVAL

According to the applicant, the existing water's edge perimeter within the project area is mostly rock/rubble/concrete revetment slope and does not meet the proposed project's design requirements. These slopes would be removed and replaced with a new perimeter design. The total amount of rock/rubble/concrete debris to be removed is estimated to be 20,000 tons (13,000 yd^3 as shown in Table

1). Any salvageable miscellaneous concrete, rock, and asphalt pavement would be crushed and reused onsite or transported to the Port recycling facility. Remaining material would be trucked off-site to an appropriate disposal facility.

The existing 519-slip marina consists of degraded docks and concrete and timber piles. These docks and piles (approximately 500) would be demolished via a water-based operation and barged to a landside offloading area. Any salvageable miscellaneous concrete, rock, and asphalt pavement would be crushed and reused on site or transported to the Port recycling facility. Remaining material would be trucked off-site to an appropriate disposal facility.

NEW WATERFRONT PERIMETERS

The new waterfront perimeters would be a combination of rock revetment slope and bulkhead walls. A limited section of the waterfront promenade would be pile-supported over the water.

Vertical bulkheads are more costly than sloping rock revetment, but allow closer proximity of the full water depth marina basin to the landside edge. This is particularly important adjacent to boat launch areas such as the dry stand launch cranes and in areas with restricted space. A vertical sheetpile bulkhead fronted by rock revetment slope would be used for approximately 800 linear feet along this area and for an approximately 100-feet-long section at the northern end of the project site perimeter.

The perimeter of the waterside fill area would be a rock armored dike, and the remaining perimeter of the new marina area would be rock revetment slope. The new rock dike and revetment slope would consist of 1/4 ton armor stone (76,000 tons) and 12" maximum processed quarry run stone (29,000 tons) and would be underlain by filter fabric. The rock (105,000 tons or 68,000 cubic yards as shown in Table 1) would be brought to the site via barge or truck and placed by land- and/or water-based equipment.

NEW DOCKS AND PILES

The new marina would consist of 700 slips. The new docks would cover approximately 5.5 acres of water area and would involve installation of a maximum of 1,000 steel piles. Pre-cast concrete docks would be trucked to the site, offloaded, and placed into the water with a land-side crane. Docks would then be floated into place by waterside equipment (boat/tug). The piles would be installed from a water-based barge.

As mentioned above, a limited section of the waterfront promenade would be pile-supported over the water. A pile-supported promenade design is currently envisioned along a length of approximately 200 feet on the western perimeter of the land cut area. The promenade design is coordinated with adjacent projects along the waterfront of San Pedro. The new waterside promenade would cover 0.04 acres of water area and would involve installation of approximately 15 concrete piles.

Project Schedule and Construction Phasing - Construction is expected to begin for this project in fall 2008 and is expected to finish in late 2010. Construction would be completed over three phases, based on three areas within the project site (see drawings).

Basic Project Purpose- The basic project purpose comprises the fundamental, essential, or irreducible purpose of the proposed project, and is used by the Corps to determine whether the applicant's project is water dependent. The basic project purpose for the proposed project is marina redevelopment, which is a water-dependent activity. Because it is a water-dependent activity and

would not impact a special aquatic site, it is not necessary to rebut the presumption there are practicable alternatives available that would not involve regulated discharges in special aquatic sites.

Overall Project Purpose- The overall project purpose serves as the basis for the Corps' 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the applicant's goals for the project, and which allows a reasonable range of alternatives to be analyzed. The overall project purpose for the proposed project is to redevelop Cabrillo Way Marina in Los Angeles Harbor's Watchorn Basin into a full-service, modern marina through in-water and water-adjacent activities.

Additional Project Information

Project Background - Development of the Cabrillo Way Marina (CWM) represents the second phase of improvements within the West Channel / Cabrillo Beach Recreational Complex of the Port of Los Angeles. Cabrillo Marina Phase I was constructed in 1986.

The proposed Cabrillo Way Marina (Phase II) development is located on the easterly side of the West Channel in the Watchorn Basin, adjacent to the existing (Phase I) Cabrillo Marina. According to the applicant, the CWM target of 700 new slips and 400 dry storage spaces is driven by market survey findings of the projected demand for these types of vessel storage facilities in Los Angeles Harbor from the current 2007 market demand levels through construction and throughout the projection period to 2020.

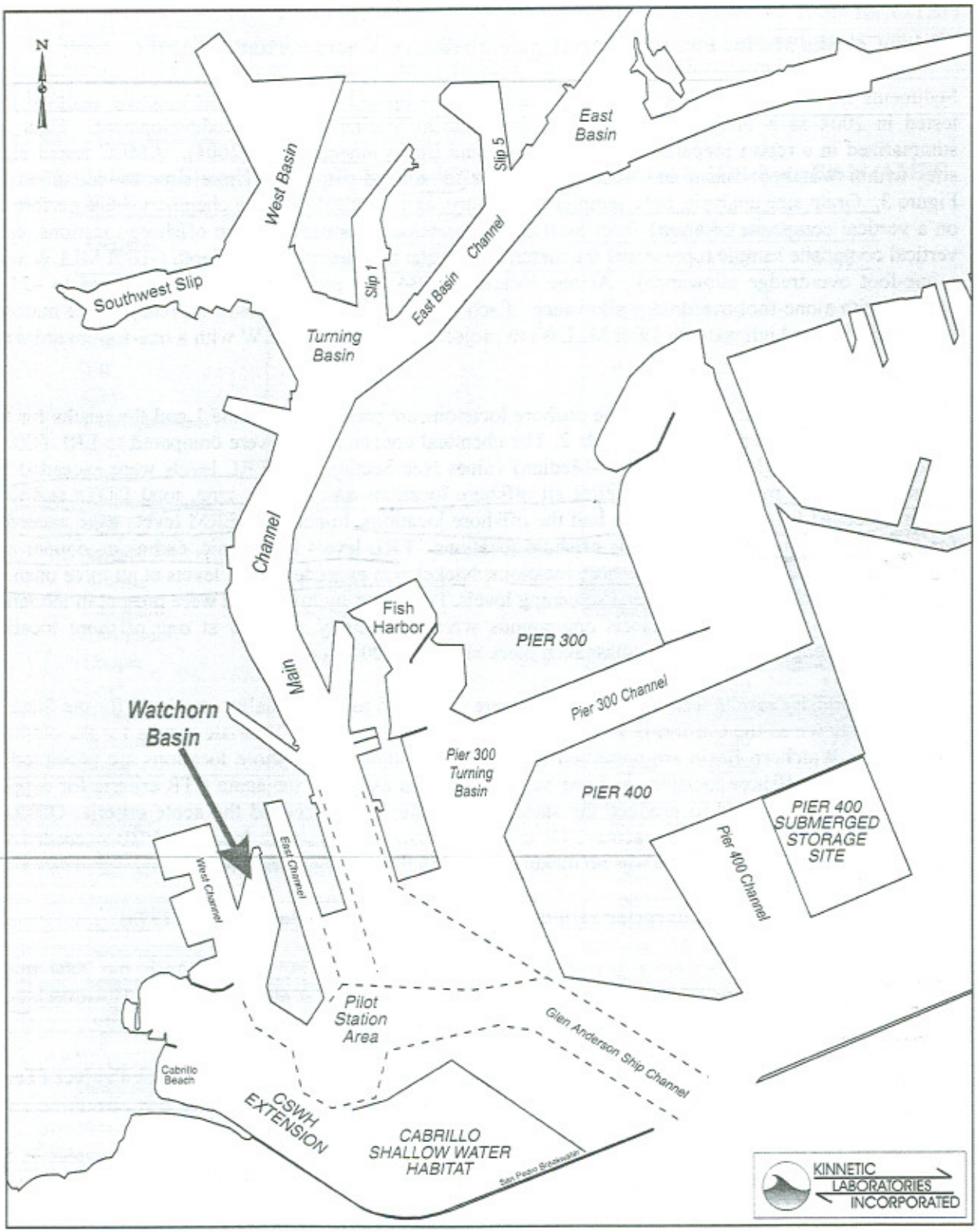
The proposed Cabrillo Way Marina site is currently occupied by existing marina boat slips, parking areas, lifeguard and fire stations, and warehouses for storage, cargo-handling, and transshipment activities. The adjacent San Pedro Boat Works is no longer in operation. A total of 519 wet slips are in the existing marina within the proposed (Phase II) CWM project site. Construction phasing must address relocating and maintaining services for these existing marina tenants.

The Final Supplemental Environmental Impact Statement (FSEIR) was approved in 2003 and provides the general guidance for the project development. A number of key modifications to the project were requested by the Port of Los Angeles subsequent to the FSEIR, including elimination of the dry stack boat storage facility and keeping the adjacent SSA warehouse in operation. The Port's Environmental Management Division prepared an addendum to the FSEIR in April 2008.

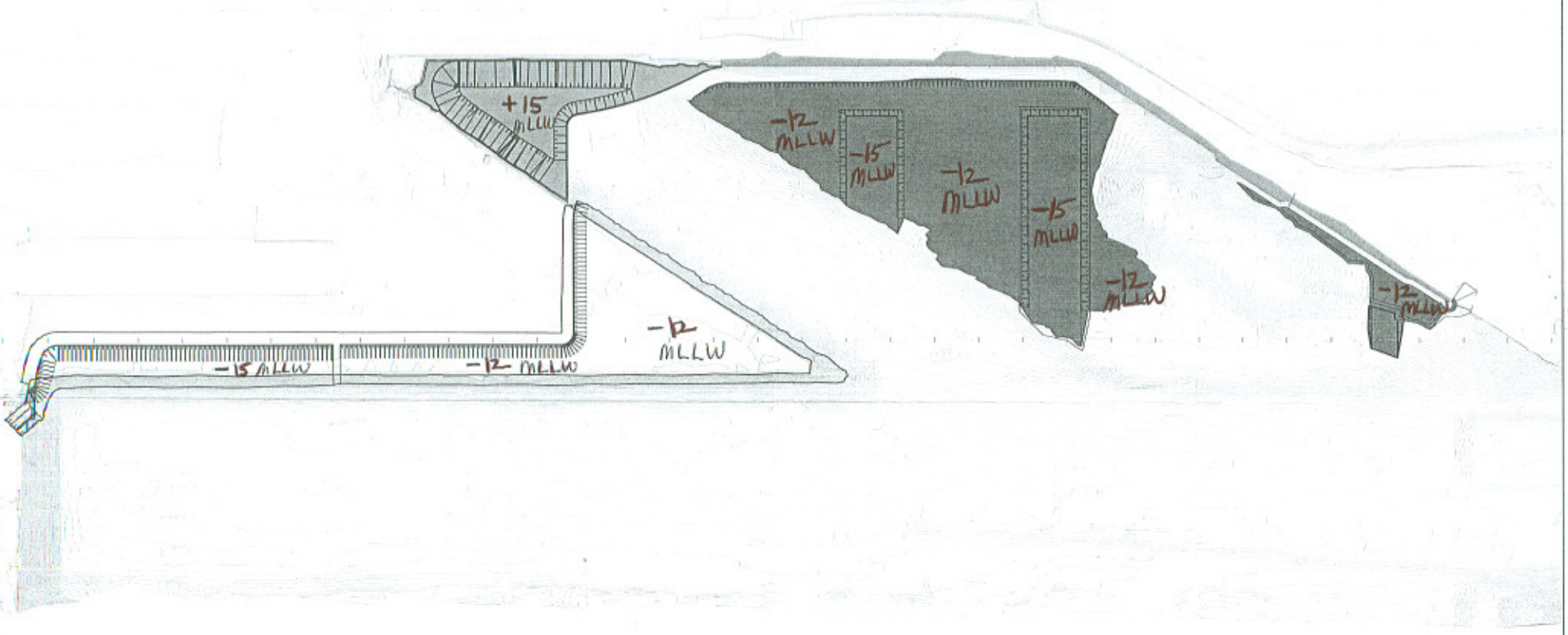
Proposed Special Conditions

Because the proposed project would involve dredging and other work and structures in navigable waters, any Corps permit issued would, at a minimum, include our standard Section 10 and dredging conditions to ensure navigation and the marine ecosystem are protected. Compensatory mitigation for discharges in waters is not proposed because the project would result in a net gain (1.58 acres) in waters of the U.S.

For additional information please call Dr. Spencer D. MacNeil of my staff at (805) 585-2152 or via E-mail at Spencer.D.MacNeil@usace.army.mil. This public notice is issued by the Chief, Regulatory Division.



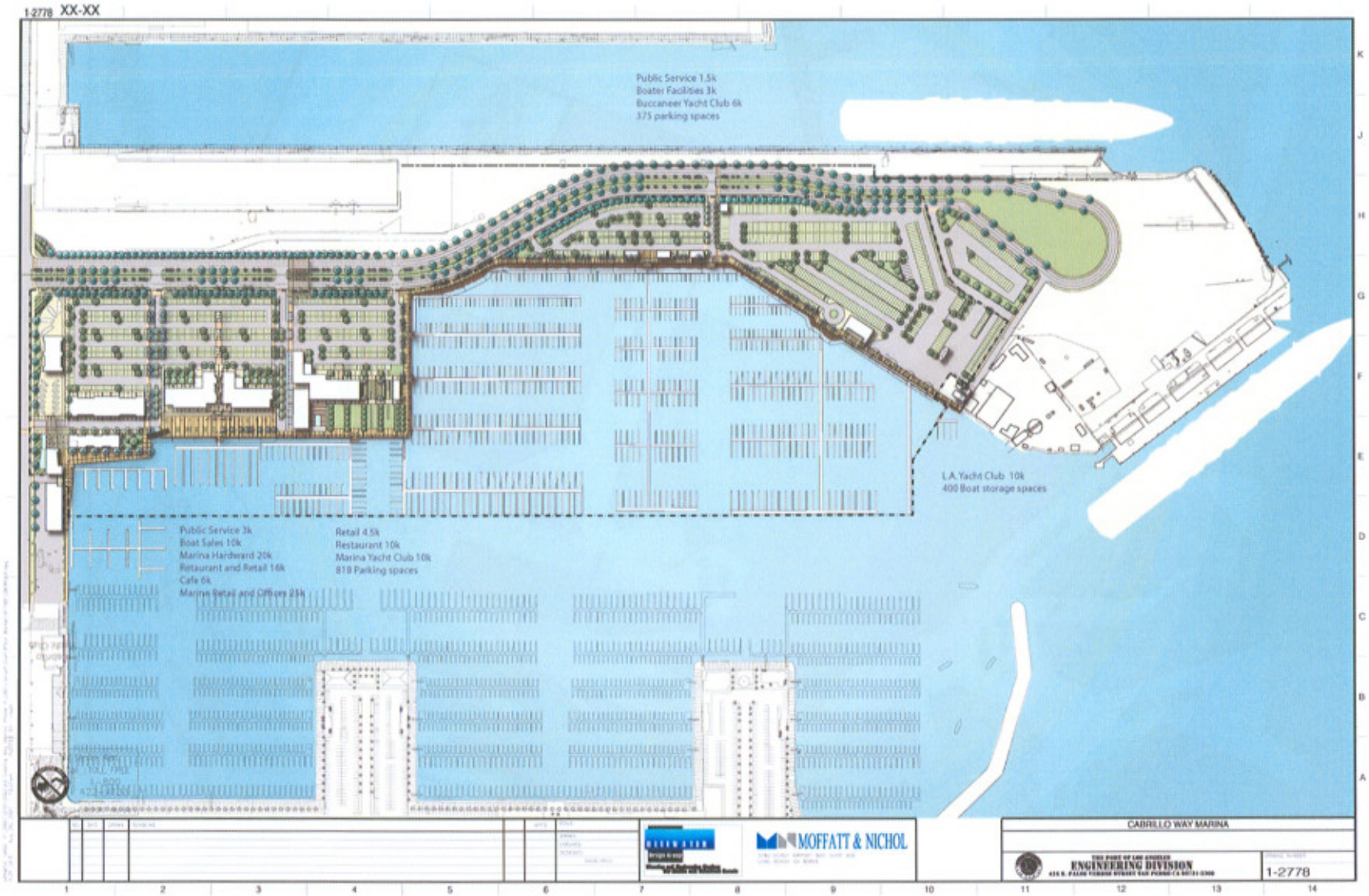
Location of Watchorn Basin.



MLLW = Mean Lower Low Water

Marina Dredge Areas
Marina Land Cut Area
On-Site Waterside Fill Areas

Cabrillo Way Marina
Earthwork/Dredging Plan Exhibit
April 2008



Conceptual Design of the Cabrillo Way Marina Development.

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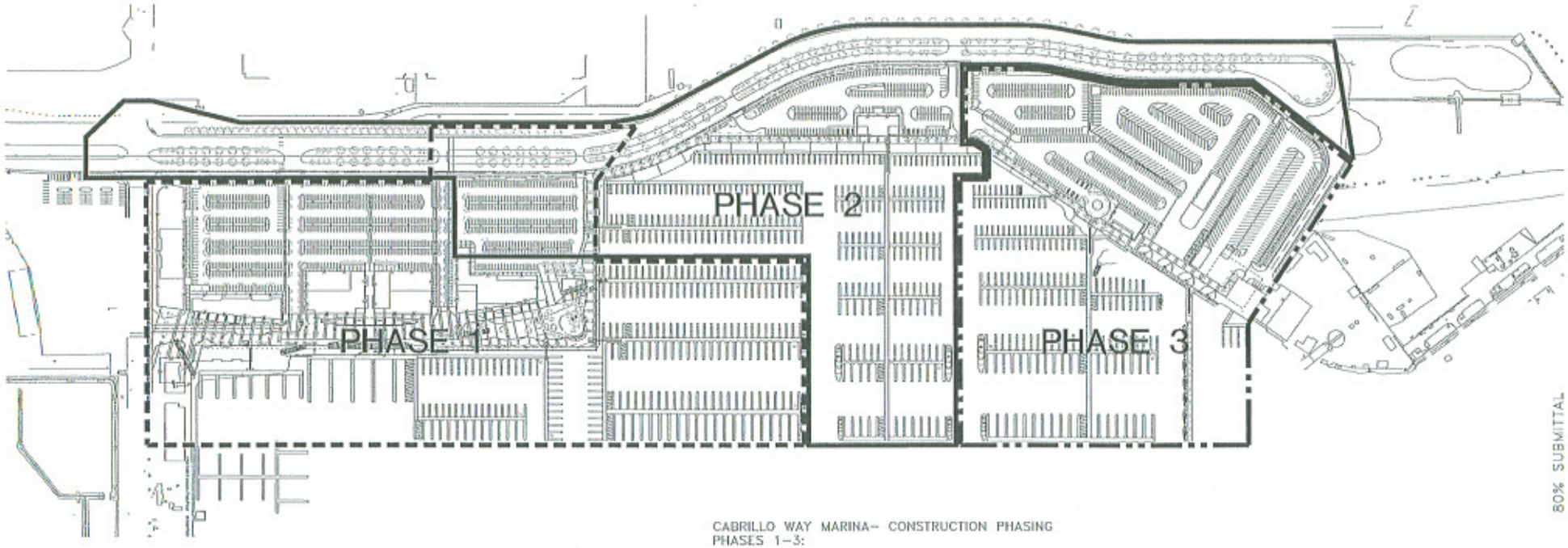

80% SUBMITTAL

CABRILLO WAY MARINA– CONSTRUCTION PHASING
PHASES 1–3:

1. CONTRACTOR MOBILIZATION ON-SITE
2. CUT AND CAP EXISTING UTILITIES IN EXCAVATION AND REMOVAL LOCATIONS
3. DEMO EXISTING STRUCTURES IN REMOVAL AREAS (LAND & WATER SIDES) AND DISPOSE OFF-SITE
4. REMOVE CONCRETE RUBBLE FROM EXISTING SLOPES AND TRANSPORT OFF-SITE
5. EXCAVATE EXISTING SLOPES / STOCKPILE MATERIAL / PLACEMENT MATERIAL IN FILL AREAS OR OFF-SITE
6. PLACE ROCK FOR SLOPE PROTECTION AND FILL CONTAINMENT
7. DREDGE REQUIRED AREAS AND PLACE IN FILL SITE OR PLACE ON LAND– DRY AND BLEND FOR FILL OR BARGE AND OFF-LOAD MATERIAL AT POLA STORAGE SITE (ANCHORAGE RD.)
8. INSTALL SOIL IMPROVEMENTS (WHERE REQUIRED)
9. INSTALL PERIMETER WALL STRUCTURES (WALLS AND GRADE BEAMS)

LANDSIDE AND WATERSIDE CONSTRUCTION MAY PROCEED CONCURRENTLY

LANDSIDE CONSTRUCTION

10. LANDSIDE ROUGH GRADING (CUT / FILL)
11. INSTALL REQUIRED LANDSIDE UTILITIES (STORM DRAINS, SEWER, ELECTRICAL, WATER, FIRE, TELEPHONE, CABLE)
12. LANDSIDE FINE GRADING, CONSTRUCT PROMENADE WALK, INSTALL CURB, GUTTER, PLANTERS, PAVING
13. CONSTRUCT NEW ROADWAY
14. INSTALL ROADWAY LIGHTING AND TRAFFIC SIGNAGE
15. INSTALL LANDSCAPING AND IRRIGATION SYSTEMS

WATERSIDE CONSTRUCTION

16. DREDGING
17. INSTALL WATERSIDE PILES / FLOATS / GANGWAYS
18. CONNECT LANDSIDE UTILITIES TO DOCK SYSTEM
19. MOVE EXISTING BOATS ON SITE TO ACCOMMODATE NEW CONSTRUCTION / PUBLIC ACCESS TO SLIPS
20. CONSTRUCT LANDSIDE BOAT HOISTING EQUIPMENT / SYSTEM
21. DEMOBILIZATION

Underground Service Alert
Call :TOLL FREE
1-800
422-4133
TWO WORKING DAYS BEFORE YOU DIG

NO.	DATE	DRAWN	REVISIONS –	APP'D

SCALE: 1:250
DRAWN: G.
CHECKED: J.
DESIGNED: RS
ENGR/ARCH
RCE

MOFFATT & NICHOL
2100 MAIN AIRPORT WAY, SUITE 100
LONG BEACH, CA 90806

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY A. BAUSTERT
No. C0[illegible]
EXP. 3/31/16
CIVIL
STATE OF CALIFORNIA

N

SCALE: 1"=150'

CABRILLO WAY MARINA

CONSTRUCTION PHASING PLAN

THE PORT OF LOS ANGELES
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