CALIFORNIA COASTAL COMMISSION
SOUTH CENTRAL COAST AREA
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F19a

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Staff:	M. Jordan-V
Staff Report:	03/24/2016
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STAFF REPORT: REGULAR CALENDAR

Application No.:	**4-15-1991**
Applicant:	**Ventura Harbor Boatyard, Inc.**
Agent:	Richard Parsons
Project Location:	Ventura Harbor, 1415 Spinnaker Drive, Ventura
Project Description:	Demolish and reconstruct a travelift pier and replace an adjoining gangway and floating docks damaged in a boating accident.
Staff Recommendation:	Approval with conditions

SUMMARY OF STAFF RECOMMENDATION

Staff recommends **approval** of the proposed development with six (6) special conditions regarding (1) eelgrass survey(s), (2) pre-construction *Caulerpa taxifolia* survey, (3) construction responsibilities and debris removal, (4) inspection and maintenance, (5) conformance with the requirements of other resource agencies, and (6) assumption of risk.

The Ventura Harbor Boatyard, Inc. is proposing to demolish and reconstruct one of two fingers of a travel lift pier used to transfer boats from the water to the boatyard. The subject 61 ft. long by 8 ft. wide north finger of the travelift pier was substantially damaged in a boating accident and is no longer safe to operate. The applicant also proposes to replace an adjoining 40 ft. x 4 ft. gangway and floating docks containing boat slips A3, A4, and A5 destroyed in the same accident, in approximately the same development footprint and same slip size. This project also includes the installation of 12 precast, pre-stressed concrete piles that will be used to anchor both the new north finger of the travelift pier and the adjoining timber docks in place. In order to securely anchor the north finger of the travelift pier, the new pier will extend two feet further

north than the existing pier. The floating docks will be manufactured offsite and comprised of a timber deck and supporting concrete floats.

In order to avoid impacts to public access during construction, the applicant proposes to re-route the existing sidewalk adjacent to the boatyard on a temporary basis on Monday-Friday during construction. There will be fencing between the temporary sidewalk and the work area with signage to assure public safety. The existing sidewalk will be open on weekends and after construction work hours.

The proposed project constitutes an allowable fill of coastal waters as the project was designed to be the least environmentally damaging option and adequate mitigation measures have been provided. However, any fill has the potential to impact coastal and marine resources and the biological productivity of coastal waters. Special Conditions 1 through 6 will ensure that the proposed project will result in minimal impacts to the Ventura Harbor marine environment.

Although the Commission has previously certified a Local Coastal Program (LCP) for the City of Ventura, the proposed project will be located within an area where the Commission has retained jurisdiction over the issuance of coastal development permits. Thus, the standard of review for this project is the Chapter Three policies of the Coastal Act, with the applicable policies of the City of Ventura LCP as guidance. As conditioned, the proposed project is consistent with all applicable Chapter Three policies of the Coastal Act.

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I. MOTION AND RESOLUTION

Staff recommends that the Commission adopt the following resolution:

Motion:

*I move that the Commission **approve** Coastal Development Permit Application No. 4-15-1991 pursuant to the staff recommendation.*

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

The Commission hereby approves a coastal development permit and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgement.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions is returned to the Commission office.

2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation.** Any questions of intent of interpretation of any condition will be resolved by the Executive Director of the Commission.

4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

This permit is granted subject to the following special conditions.

1. **Pre and Post-Construction Eelgrass Survey(s)**

   A. **Pre-Construction Eelgrass Survey**. A valid pre-construction eelgrass (*Zostera marina*) survey shall be completed during the period of active growth of eelgrass (typically March through October). The pre-construction survey shall be completed prior to the beginning of construction and shall be valid until the next period of active growth. The survey shall be prepared in full compliance with the "Southern California Eelgrass Mitigation Policy" dated October 2014 (except as modified by this special condition) adopted by the National Marine Fisheries Service (see http://www.westcoast.fisheries.noaa.gov/habitat/habitat_types/seagrass_info/california_eelgrass.html) and shall be prepared in consultation with the California Department of Fish and Wildlife. The applicant shall submit the eelgrass survey for the review and approval of the Executive Director within five (5) business days of completion of each eelgrass survey and in any event no later than fifteen (15) business days prior to commencement of any development. If the eelgrass survey identifies any eelgrass within the project area which would be impacted by the proposed project, the development shall require an amendment to this permit from the Coastal Commission or a new coastal development permit in order to address and allow eelgrass mitigation measures, as described in subsection B, below. However, no amendment or new permit is needed if the Executive Director determines that no amendment or new permit is required.

   B. **Post-Construction Eelgrass Survey**. If any eelgrass is identified in the project area by the survey required in subsection A of this condition above, within one month after the conclusion of construction, the applicant shall survey the project site to determine if any eelgrass was adversely impacted. The survey shall be prepared in full compliance with the "Southern California Eelgrass Mitigation Policy" dated October 2014 (except as modified by this special condition) adopted by the National Marine Fisheries Service (see http://www.westcoast.fisheries.noaa.gov/habitat/habitat_types/seagrass_info/california_eelgrass.html) and shall be prepared in consultation with the California Department of Fish and Wildlife. The applicant shall submit the post-construction eelgrass survey for the review and approval of the Executive Director within thirty (30) days after completion of the survey. If any eelgrass has been impacted, the applicant shall replace the impacted eelgrass at a minimum 1.38:1 ratio on-site, or at another location, in accordance with the Southern California Eelgrass Mitigation Policy (SCEMP). All impacts to eelgrass habitat shall be mitigated at a

minimum ratio of 1.38:1 (mitigation:impact). The exceptions to the required 1.38:1 mitigation ratio found within SCEMP shall not apply. Implementation of mitigation shall require an amendment to this permit or a new coastal development permit unless the Executive Director determines that no amendment or new permit is required.

2. **Pre-Construction *Caulerpa Taxifolia* Survey**

   A. Not earlier than ninety (90) days and no later than thirty (30) days prior to commencement of any development authorized under this coastal development permit (the "project"), the applicant shall undertake a survey of the project area and a buffer area at least ten (10) meters beyond the project area to determine the presence of the invasive alga *Caulerpa taxifolia*. The survey shall include a visual examination of the substrate.

   B. The survey protocol shall be prepared in consultation with the Regional Water Quality Control Board, the California Department of Fish and Wildlife, and the National Marine Fisheries Service.

   C. Within five (5) business days of completion of the survey, the applicant shall submit the survey:

      (1) for the review and approval of the Executive Director; and

      (2) to the Surveillance Subcommittee of the Southern California Caulerpa Action Team (SCCAT). The SCCAT Surveillance Subcommittee may be contacted through William Paznokas, California Department of Fish & Wildlife (858-467-4218), William.Paznokas@wildlife.ca.gov) or Bryant Chesney, National Marine Fisheries Service (562-980-4037, Bryant.Chesney@noaa.gov), or their successors.

   D. If *Caulerpa taxifolia* is found within the project or buffer areas, the applicant shall not proceed with the project until: (1) the applicant provides evidence to the Executive Director that all *C. taxifolia* discovered within the project and/or buffer area has been eliminated in a manner that complies with all applicable governmental approval requirements, including but not limited to those of the California Coastal Act, or (2) the applicant has revised the project to avoid any contact with *C. taxifolia*. No revisions to the project shall occur without a Coastal Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

3. **Construction Responsibilities and Debris Removal.** By acceptance of this permit, the applicant agrees to comply with the following construction-related requirements:

   A. No demolition or construction materials, equipment, debris, or waste shall be placed or stored in the water, or where it may enter sensitive habitat, receiving waters or a storm drain, or be subject to wave, wind, rain, or tidal erosion and dispersion;

B. Any and all debris resulting from demolition or construction activities, and any remaining construction material, shall be removed from the water as quickly as possible in order to prevent the spread of invasive aquatic plant species (including but not limited to Japanese kelp), but in no case later than the end of each day;

C. Demolition or construction debris and sediment shall be removed from work areas each day that demolition or construction occurs to prevent the accumulation of sediment and other debris that may be discharged into coastal waters;

D. Machinery or construction materials not essential for project improvements will not be allowed at any time in water areas;

E. If turbid conditions are generated during construction, a silt curtain will be utilized to control turbidity;

F. Eelgrass shall not be disturbed. Anchors shall not be placed in eelgrass areas.

G. Floating booms will be used to contain debris discharged into coastal waters and any debris discharged will be removed as soon as possible but no later than the end of each day;

H. Non buoyant debris discharged into coastal waters will be recovered by divers as soon as possible after loss;

I. All trash and debris shall be disposed in the proper trash and recycling receptacles at the end of every construction day;

J. The applicant shall provide adequate disposal facilities for solid waste, including excess concrete, produced during demolition or construction;

K. Debris shall be disposed of at a legal disposal site or recycled at a recycling facility. If the disposal site is located in the coastal zone, a coastal development permit or an amendment to this permit shall be required before disposal can take place unless the Executive Director determines that no amendment or new permit is legally required;

L. All stock piles and construction materials shall be covered, enclosed on all sides, shall be located as far away as possible from drain inlets and any waterway, and shall not be stored in contact with the soil;

M. Machinery and equipment shall be maintained and washed in confined areas specifically designed to control runoff. Thinners or solvents shall not be discharged into sanitary or storm sewer systems;

N. The discharge of any hazardous materials into any receiving waters shall be prohibited;

O. Spill prevention and control measures shall be implemented to ensure the proper handling and storage of petroleum products and other construction materials.

Measures shall include a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact with runoff. The area shall be located as far away from the receiving waters and storm drain inlets as possible;

P. Best Management Practices (BMPs) and Good Housekeeping Practices (GHPs) designed to prevent spillage and/or runoff of demolition or construction-related materials, and to contain sediment or contaminants associated with demolition or construction activity, shall be implemented prior to the on-set of such activity; and

Q. Any wood treatment used shall conform to the specifications of the American Wood Preservation Association for saltwater use. Wood treated with Creosote, CCA (Chromated Copper Arsenate), or ACA (Ammoniacal Copper Arsenate) is prohibited. No wood treated with ACZA (Ammoniacal Copper Zinc Arsenate) shall be used where it could come into direct contact with the water. All treated timber shall be free of chromium and arsenic.

R. All BMPs shall be maintained in a functional condition throughout the duration of construction activity.

4. **Inspection and Maintenance Program.** Throughout the life of the development approved by this permit, the permittee shall exercise due diligence in periodically inspecting (at least once per year) the facilities that are subject to this coastal development permit. The permittees shall immediately undertake any repairs necessary to maintain the structural integrity of the docks, pilings, and utility connections, prevent leaks, and to ensure that debris does not enter the environment.

5. **Conformance with the Requirement of Other Resource Agencies.** The applicant shall comply with all permit requirements, and mitigation measures of the California Department of Fish and Wildlife, State Water Quality Control Board, Regional Water Quality Control Board, U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service with respect to preservation and protection of water quality and the marine environment. Any change in the approved project which may be required by the above-stated agencies shall be submitted to the Executive Director in order to determine if the proposed change shall require a permit amendment pursuant to the requirements of the Coastal Act and the California Code of Regulations.

6. **Assumption of Risk, Waiver of Liability and Indemnity.** By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from storm waves, tsunami, surges, and flooding; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees

incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

Prior to commencement of development, the applicant shall submit a written agreement, in a form and content acceptable to the Executive Director, incorporating all of the above terms of this condition.

IV. FINDINGS AND DECLARATIONS

A. PROJECT DESCRIPTION AND BACKGROUND

The Ventura Harbor Boatyard, Inc. is proposing to demolish and reconstruct one of two fingers of a travel lift pier used to transfer boats from the water to the boatyard. The subject 61 ft. long by 8 ft. wide by 1.5 ft. thick north finger of the travelift pier was substantially damaged in a boating accident and is no longer safe to operate. The applicant also proposes to replace an adjoining 40 ft. x 4 ft. gangway and floating docks containing boat slips A3, A4, and A5 destroyed in the same accident, in approximately the same development footprint. This project also includes the installation of 12 precast, pre-stressed concrete piles that will be used to anchor both the new north finger of the travelift pier and the adjoining timber docks in place. In order to securely anchor the north finger of the travelift pier, the new pier will extend two feet further north than the existing pier. The floating docks will be manufactured offsite and comprised of a timber deck and supporting concrete floats.

The City of Ventura's certified Land Use Plan (LUP) divides the Ventura Harbor into four areas: South Peninsula Harbor Area, Southwest Harbor Area, Central Harbor Area, and the Northeast Harbor Area. The Ventura Harbor Boatyard, Inc. is located within the Southwest Harbor Area. The Ventura Harbor consists of 200 acres of land and 120 acres of water. Development of the harbor began in 1960. The entire harbor supports approximately 1,400 boat berths, a boat launching facility, public restrooms, a boat repair yard, fuel docks, charter fishing operations, commercial fishing support facilities, and the Harbor Patrol. The Ventura Harbor Boatyard, Inc was constructed in 1981 primarily to service recreational boating and commercial fishing vessels. Central to the operations is a pier extending from the boatyard to the water which is split into two "fingers" (north and south fingers) and contains two travelifts, – one designed for smaller vessels, and the other, for larger vessels – and supporting docks which allow Ventura Harbor Boatyard, Inc. to remove and deploy vessels from and into the water respectively. The application for the proposed project concerns the smaller, northernmost of the two travelift piers.

The proposed project was necessitated after a vessel lost control and collided into the north finger of the travelift pier and adjoining timber docks. As a result, the concrete guide piles supporting the subject travelift pier suffered structural damage (as indicated by several horizontal cracks) and the adjoining timber docks containing boat slips A3, A4, and A5 were completely obliterated. The adjoining gangway also suffered some minor damage and was removed from the water for repair. All of the debris resulting from the accident was immediately removed from the marine environment.

Demolition of the existing north finger of the travelift pier will consist of saw cutting the deck into large-sized pieces. Each saw-cut piece will be removed intact by a 110-ton crawler crane, positioned onto the existing landslide apron of the travelift pier. Concrete rubble will be loaded onto trucks and hauled away to the local recycling plant. The precast concrete guide piles will be removed by saw-cutting two feet below the existing mudline. The cut piles will also be loaded onto trucks and hauled to the recycling plant. Reconstruction of the subject travelift pier and adjoining timber docks will begin with the placement of unpreserved, precast, pre-stressed concrete piles. The concrete deck portion of the pier will be constructed by the cast-in-place method. The floating dock assemblies will be manufactured off site and delivered by a truck to a designated staging area where they will be off-loaded by a small shore-based crane, placed directly into the water, and assembled by hand. The concrete used for the floating docks will be six-sided precast concrete shells that encase polystyrene foam flotation billets. The dock modules will be connected together with treated timber wales. The wales will be treated with Ammoniacal Copper Zinc Arsenate (AZCA) and will not be in contact with the water.

In order to avoid impacts to public access during construction, the applicant proposes to re-route the existing sidewalk adjacent to the boatyard on a temporary basis on Monday-Friday during construction. There will be fencing between the temporary sidewalk and the work area with signage to assure public safety. The existing sidewalk will be open on weekends and after construction work hours.

Although the Commission has previously certified a Local Coastal Program (LCP) for the City of San Buenaventura (Ventura), the proposed project will be located within an area where the Commission has retained jurisdiction over the issuance of coastal development permits. Thus, the standard of review for this project is the Chapter Three policies of the Coastal Act, with the applicable policies of the City of Ventura LCP as guidance.

B. COMMERCIAL AND RECREATIONAL BOATING

Section 30234 of the Coastal Act states:

> *Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided. Proposed recreational boating facilities shall, where feasible, be designed and located in such a fashion as not to interfere with the needs of commercial fishing.*

Section 30234.5 of the Coastal Act states:

> *The economic, commercial, and recreational importance of fishing activities shall be recognized and protected.*

Coastal Act Section 30234 and 30234.5 requires that facilities serving the commercial fishing and recreational boating industries shall be protected and where feasible, upgraded.

The purpose of the proposed project is to reconstruct the small travelift pier and adjoining docks so that the Ventura Harbor Boatyard, Inc. can continue to service recreational boating and commercial fishing vessels. While the small travelift pier has been out of service, the Ventura Harbor Boatyard, Inc. has been using their larger travelift pier - at a higher operating cost as the larger travelift pier is designed to lift larger vessels weighing up to 150 tons - to provide the same services that the small travelift pier provided. The primary purpose of docks adjoining the small travelift pier was solely for the support of the travelift pier operations. The slips were, on occasion, temporarily rented to the public whenever the Ventura Harbor Boatyard, Inc. had availability. The slips are proposed to be replaced in kind in the same approximate footprint and with the same slip length as the previously existing slips. As such, the proposed project will not affect the existing mix of slip sizes within Ventura Harbor. As such, the replacement of slips will not adversely impact commercial fishing or recreational boating opportunities for a mix of vessel sizes. The proposed project will serve to repair and replace the boatyard's facilities for the support of commercial and recreation boating through the maintanence and repair of boats.

Therefore, the Commission finds that the proposed project is consistent with Coastal Act policies 30234 and 30234.5.

C. MARINE RESOURCES AND WATER QUALITY

Section 30230 of the Coastal Act states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

Section 30240 of the Coastal Act states:

> *(a) Environmentally sensitive habitat areas shall be protected against a significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
>
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent*

impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Section 30230 requires that uses of the marine environment be carried out in a manner that will sustain the biological productivity of coastal waters for long-term commercial, recreational, scientific, and educational purposes. Further, Section 30231 requires that the biological productivity and quality of coastal waters be maintained. In addition, Section 30240 of the Coastal Act states that environmentally sensitive habitat areas shall be protected and that development within or adjacent to such areas must be designed to prevent impacts which could degrade those resources.

Eelgrass

Eelgrass (*Zostera marina*) is an aquatic plant consisting of tough cellulose leaves which grows in dense beds in shallow, subtidal or intertidal unconsolidated sediments. Eelgrass is considered worthy of protection because it functions as important habitat and foraging area for a variety of fish and other wildlife, according to the Southern California Eelgrass Mitigation Policy (SCEMP) adopted by the National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (USFWS), and the California Department of Fish and Wildlife (CDFW). For instance, eelgrass beds provide areas for fish egg laying, juvenile fish rearing, and waterfowl foraging. Sensitive species, such as the California least tern, a federally listed endangered species, utilize eelgrass beds as foraging grounds.

Development contemplated in the proposed travelift pier replacement project has the potential to directly impact sensitive resources, including eelgrass, which may be present in the project area. Construction of the proposed travelift pier and adjoining timber docks includes installation of eight precast, pre-stressed, concrete foundation piles and four precast, pre-stressed guide piles into the seafloor as well as placement of docks into the waters of the Ventura Harbor**.** Installation and driving of piles can directly remove and disturb eelgrass. In addition, the docks located above these resources can reduce the light available to eelgrass and kelp by shading portions of the ocean floor. Finally, the proposed dewatering of the entire area during construction could remove or adversely impact eelgrass habitat. While there is potential for eelgrass habitat within the project area, it was not identified during a 2015 Essential Fish Habitat Evaluation completed by Pi Environmental, LLC. However, the evaluation indicates that the conditions present at the time of the survey, were not ideal for completing a thorough evaluation. Additionally, it is possible that eelgrass has established in portions of the project site since the survey was conducted. Staff notes that the Commission has routinely required surveys for eelgrass to be carried out just prior to construction of marina improvements, as a condition of approval, in order to ensure that, if eelgrass is present, mitigation measures are incorporated into the project.

Therefore, **Special Condition Two (2)** requires the applicant, within 60 days and no later than thirty (30) days prior to construction, to conduct a survey of the project area for eelgrass during the period of active growth of eelgrass (typically March through October). If the survey identifies any eelgrass within the project area which would be impacted by the proposed project, the Executive Director must be notified prior to construction. If any eelgrass is identified in the project area prior to construction, the development shall require an amendment to this permit from the Coastal Commission or a new coastal development permit. If any eelgrass is identified in the project area by the pre-construction eelgrass survey the applicants shall conduct a second

eelgrass survey within 30 days after the conclusion of construction to determine if any eelgrass was adversely impacted. All impacts to eelgrass habitat shall be mitigated at a minimum ratio of 1.38:1. Implementation of mitigation shall require an amendment to this permit or a new coastal development permit unless the Executive Director determines that no amendment or new permit is required.

Caulerpa taxifolia

The Commission further finds that the driving of piles on the sea floor could disturb and cause the spread of non-native and invasive plant species, such as *Caulerpa taxifolia*. *C. taxifolia* is a tropical green marine alga that spreads asexually from fragments and creates a dense monoculture displacing native plant and animal species. Because of toxins in its tissues, *C. taxifolia* is not eaten by herbivores in areas where it has invaded. The infestation of *C. taxifolia* has had serious negative economic and social consequences because of impacts to tourism, recreational diving, and commercial fishing in places such as the Mediterranean.1 Because of the grave risk to native habitats, in 1999 *C. taxifolia* was designated a prohibited species in the United States under the Federal Noxious Weed Act. In addition, in September 2001, the Governor signed into law AB 1334 which made it illegal in California for any person to sell, possess, import, transport, transfer, release alive in the state, or give away without consideration various Caulerpa species.

In June 2000, *C. taxifolia* was discovered in Aqua Hedionda Lagoon in San Diego County, and in August of that year an infestation was discovered in Huntington Harbor in Orange County. Genetic studies show that this is the same clone as that released in the Mediterranean. Other infestations are likely. Although a tropical species, *C. taxifolia* has been shown to tolerate water temperatures down to at least 50ºF. Although warmer southern California habitats are most

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[1] References:

Meinesz, A. (Translated by D. Simberloff) 1999. Killer Algae. University of Chicago Press

Chisholm, J.R.M., M. Marchioretti, and J.M. Jaubert. Effect of low water temperature on metabolism and growth of a subtropical strain of Caulerpa taxifolia (Chlorophyta). Marine Ecology Progress Series 201:189-198

Ceccherelli, G. and F. Cinelli. 1999. The role of vegetative fragmentation in dispersal of the invasive alga Caulerpa taxifolia in the Mediterranean. Marine Ecology Progress Series 182:299-303

Smith C.M. and L.J. Walters. 1999. Fragmentation as a strategy for Caulerpa species: Fates of fragments and implications for management of an invasive weed. Marine Ecology 20:307-319.

Jousson, O., J. Pawlowski, L. Zaninetti, A. Meinesz, and C.F. Boudouresque. 1998. Molecular evidence for the aquarium origin of the green alga Caulerpa taxifolia introduced to the Mediterranean Sea. Marine Ecology Progress Series 172:275-280.

Komatsu, T. A. Meinesz, and D. Buckles. 1997. Temperature and light responses of the alga Caulerpa taxifolia introduced into the Mediterranean Sea. Marine Ecology Progress Series 146:145-153.

Gacia, E. C. Rodriquez-Prieto, O. Delgado, and E. Ballesteros. 1996. Seasonal light and temperature responses of Caulerpa taxifolia from the northwestern Mediterranean. Aquatic Botany 53:215-225.

Belsher, T. and A. Meinesz. 1995. Deep-water dispersal of the tropical alga Caulerpa taxifolia introduced into the Mediterranean. Aquatic Botany 51:163-169.

vulnerable, until better information if available, it must be assumed that the whole California coast is at risk. All shallow marine habitats could be impacted.

In response to the threat that *C. taxifolia* poses to California's marine environment, the Southern California Caulerpa Action Team, SCCAT, was established to respond quickly and effectively to the discovery of *C. taxifolia* infestations in Southern California. The group consists of representatives from several States, federal, local and private entities. The goal of SCCAT is to completely eradicate all *C. taxifolia* infestations.

On December 30, 2015, Pi Environmental, LLC conducted an essential fish habitat evaluation to assess the potential of the proposed construction activities to impact sensitive marine species. The survey did not identify any C. taxifolia or other invasive species within the area of potential effect. Although the survey was conducted near the end of December 2015, the circumstances of the area could change, particularly if the applicant does not commence construction in a timely manner. In order to ensure that the proposed development does not inadvertently induce the dispersal of *C. taxifolia,* the Commission imposes **Special Condition Two (2)**, which requires the applicant to survey the project area for the presence of *C. taxifolia*, just prior to construction of the proposed project. If *C. taxifolia* is present in the project area, no work may commence until the applicant has either: 1) provided evidence that all *C. taxifolia* discovered within the project area has been eliminated in a manner that complies with all applicable governmental approval requirements; or (2) has revised the project to avoid any contact with *C. taxifolia.*

Construction Impacts and Maintenance Responsibilities

The proposed project is located in and over the waters of the Ventura Harbor. The associated dock structures and concrete guide piles necessary for construction of the project would be manufactured off-site and subsequently assembled on-site. Installation of the guide piles would occur from a shore-based crane. Small support skiffs and other watercraft would be utilized to install the dock structures and utilities. Construction of any kind, adjacent to or in coastal waters, has the potential to adversely impact marine resources and water quality through the introduction of pollutants associated with construction. Treatment materials have not been proposed for the concrete piles.

Storage or placement of construction materials, debris, or waste in a location subject to erosion and dispersion or which may be discharged into coastal water via rain, surf, or wind would result in adverse impacts upon the marine environment that would reduce the biological productivity of coastal waters. For instance, construction debris entering coastal waters may cover and displace soft bottom habitat. In addition, the use of machinery in coastal waters not designed for such use may result in the release of lubricants or oils that are toxic to marine life. Sediment discharged into waters may cause turbidity, which can shade and reduce the productivity of foraging avian and marine species by interfering with their ability to see food in the water column. In order to avoid adverse construction-related impacts upon marine resources, **Special Condition Three (3)** outlines construction-related requirements to provide for the safe storage of construction materials. Further, **Special Condition Three (3)** requires that the applicant dispose of all demolition and construction debris at an appropriate location. In addition, this condition also requires the incorporation of silt curtains and/or floating booms when necessary to control turbidity and debris discharge. Divers shall immediately remove any non-floatable debris not contained in such structures that sink to the ocean bottom. Lastly, **Special Condition Four (4)**

requires that the permittee inspect the facilities that are subject to this coastal development permit at least once a year. The permittee shall immediately undertake any repairs necessary to maintain the structural integrity of the docks, pilings, and utility connects, prevent leaks, and to ensure that debris does not enter the environment.

Marine resources and water quality can also be adversely affected by the use of toxic chemicals to treat wood products that come into contact with the water. The toxic chemicals can leach out of treated wood and poison marine organisms. Some wood treatments can be used if the wood does not come into contact with the water. Therefore, **Special Condition Three (3)** also requires that any wood treatment used shall conform to the specifications of the American Wood Preservation Association for saltwater use. Wood treated with Creosote, CCA (Chromated Copper Arsenate), or ACA (Ammoniacal Copper Arsenate) is prohibited, and all treated timber shall be free of chromium and arsenic. No wood treated with ACZA (Ammoniacal Copper Zinc Arsenate) shall be used where it could come into direct contact with the water. The applicant proposes to use timber treated with ACZA for the docks adjoining the travelift pier, and has indicated that the docks will not be in contact with the water. The proposed foundation and guide piles and the dock supporting the north finger of the travelift pier will be composed of precast, pre-stressed concrete materials.

Finally, **Special Condition Five (5)** is required to ensure that the permittee complies with all permit requirements and mitigation measures of the California Department of Fish and Wildlife, Regional Water Quality Control Board, U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service with respect to preservation and protection of water quality and marine environment. Any change in the approved project which may be required by the above-stated agencies shall be submitted to the Executive Director in order to determine if the proposed change shall require a permit amendment pursuant to the requirements of the Coastal Act and the California Code of Regulations.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Coastal Act Sections 30230, 30231, and 30240.

D. DIKING, FILLING, AND DREDGING WITHIN OPEN COASTAL WATERS

Section 30233 of the Coastal Act states, in relevant part, that:

> *(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
>
> *(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
>
> *...*
>
> *(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings*

for public recreational piers that provide public access and recreational opportunities.

...

Resources Element Policy 15.7 of City of Ventura LUP states, in relevant part, that:

A. The diking, filling or dredging of open coastal waters, wetlands, estuaries and lakes may be permitted in accordance with other applicable provisions of this Plan where there is no feasible less environmentally damaging alternative and where mitigation measures have been provided to minimize adverse environmental effects. Diking, filling or dredging shall be limited to the following:

1) New or expanded port, energy, and coastal dependent industrial facilities, including commercial fishing facilities.

...

3) The provision of new or expanded boating facilities in open coastal waters and streams and estuaries which do not involve any wetlands.

...

Coastal Act Section 30233 and City of Ventura LUP Policy 15.7(A) limit the types of development that fill open coastal waters. Both policies allow new or expanded commercial fishing and boating facilities in open coastal waters such as the Ventura Harbor, provided that these uses incorporate the least environmentally damaging designs and all feasible mitigation measures.

The proposed project includes replacement of the entire north finger of the travelift pier and adjoining gangway and floating docks. The proposed project also includes the installation of twelve new precast, pre-stressed concrete piles.

Allowable Use

Section 30233(a)(1)(3) of the Coastal Act and City of Ventura LUP Policy 15.7(A)(1)(3) allows the fill of open coastal waters, other than wetlands, such as the Ventura Harbor waterways where the subject site is located, for new or expanded boating and commercial fishing facilities. No wetlands were found on the project site. The proposed project, replacement of a public travelift pier and associated docks, constitutes a new recreational boating and commercial fishing facility. Thus, the project is an allowable use under Coastal Act Section 30233(a)(1)(3) and City of Ventura LUP Policy 15.7(A)(1)(3).

Least Environmentally Damaging Alternative

Coastal Act Section 30233(a) and City of Ventura LUP Policy 15.7(A) permit the fill of open coastal waters for specific enumerated uses where there is no least environmentally damaging alternative. The applicant is proposing to reconstruct the travelift pier and adjoining floating docks which would include the removal of 8 existing concrete piles and the placement of 12 new precast, pre-stressed concrete piles. This is the minimum number of piles necessary to support the north finger of the travelift pier and the adjoining docks. The footprint of the north finger of the travelift pier will increase by two linear feet to the north to provide support for the new piles. The adjoining floating docks will reside in the same footprint as the preexisting docks. The proposed project will use the minimum amount of fill needed to support the proposed allowable

use. As such, the proposed project provides the fewest amounts of impacts to the marine environment.

Adequate Mitigation

Additionally, Coastal Act Section 30233(a) and City of Ventura LUP Policy 15.7(A) also permits the fill of open coastal waters for specific enumerated uses when the proposed project provides adequate mitigation. Given the density of development throughout the Ventura Harbor, there are no alternative locations available for the proposed project that would provide fewer environmental impacts. Additionally, the proposed project will fill approximately the same development footprint as the preexisting travelift pier and adjoining docks. Additionally, **Special Condition One (1)** requires surveys for Eelgrass, **Special Condition Two (2)** requires surveys for *Caulerpa taxifolia*, and **Special Condition Three (3)** requires that the applicant comply with construction and debris removal responsibilities. These special conditions will assure that the construction, including the placement of pilings, will result in minimal impacts to the harbor floor and marine environment.

As such, the Commission finds that the project includes development that is allowed in open coastal waters, that it is the least environmentally damaging alternative, and that, as conditioned, all feasible mitigation measures have been included. For the reasons discussed above, the Commission finds that the project, as conditioned, is consistent with Coastal Act Section 30233 and City of Ventura LUP Policy 15.7(A). Placement of the proposed piles will displace a small amount of bottom habitat area. However, the proposed project is the least environmentally damaging, feasible design, and includes feasible mitigation measures.

E. HAZARDS

Section 30253 of the Coastal Act states, in relevant part, the new development shall:

> *(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
>
> *(2) Assure stability and structural integrity, and neither create or contribute significantly to erosion, instability, or destruction of the site or surrounding area or in any way require the construction or protective devices that would substantially alter natural landforms along bluffs and cliffs.*

Policy 15.3 of the City of Ventura LUP states:

> *New development shall be sited and designed to minimize risks to life and property in areas of high geologic, flood, and fire hazards. All new development will be evaluated in conjunction with the City's Safety Element of this Comprehensive Plan, and for its impacts to and from geologic hazards (including seismic safety, landslides, expansive soils, subsidence, etc.), flood hazards, and fire hazards. Feasible mitigation measures shall be required where necessary.*

Section 30253 of the Coastal Act indicates that new development shall minimize risks to life and property in areas of high geologic and flood hazard. Policy 15.3 of the certified LUP requires that new development be sited and designed to provide geologic stability and structural integrity, and minimize risks to life and property in areas of high geologic and flood hazard.

The proposed project has been designed to maximize the safety and stability of the travelift pier and adjoining gangway and docks. However, given that the project is located within the Ventura Harbor, a coastal area subject to natural processes such as wave action, seiches and surges, risks from potential hazards are inherent. The Coastal Act recognizes that certain types of development, such as the proposed project to replace boatyard facilities, may involve the taking of some risk. Coastal Act policies require the Commission to establish the appropriate degree of risk acceptable for the proposed development and to determine who should assume the risk. When development in areas of identified hazards is proposed, the Commission considers the hazard associated with the project site and the potential cost to the public, as well as the owner's property rights. As such, the Commission finds that due to the unforeseen possibility of storm waves, seiches, and surges, the applicant shall assume these risks as a condition of approval. Therefore, **Special Condition Six (6)** has been included to require that the applicant assume the risks of injury and damage as well as waive any claim of liability against the Commission for damage to life or property that may occur as a result of the permitted development.

For the reasons discussed above, the Commission finds that the proposed project, as conditioned, is consistent with Coastal Act Section 30253 and City of Ventura LUP Policy 15.3.

F. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096(a) of the Commission's administrative regulations requires Commission approval of a Coastal Development Permit application to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect that the activity may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. These findings address and respond to any public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As discussed in detail above, the proposed project, as conditioned, is consistent with the policies of the Coastal Act. Feasible mitigation measures, which will minimize all adverse environmental effects, have been required as special conditions.

As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required which would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found to be consistent with the requirements of the Coastal Act to conform to CEQA.

APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

Ventura Harbor Boatyard Travelift Pier Replacement Essential Fish Habitat Assessment, prepared by Pi Environmental, LLC, dated January 2016; Ventura Harbor Boatyard Travelift Pier Emergency Condition Assessment, prepared by Moffatt & Nichol, dated August 25, 2015; Ventura Harbor Boatyard Travelift Pier Construction BMPs, prepared by Noble Consultants, Inc., dated December 1, 2015; Ventura Harbor and Channel Islands Vacancy Slips, dated March 22, 2016.

Exhibit 1

CDP 4-15-1991

Vicinity Map

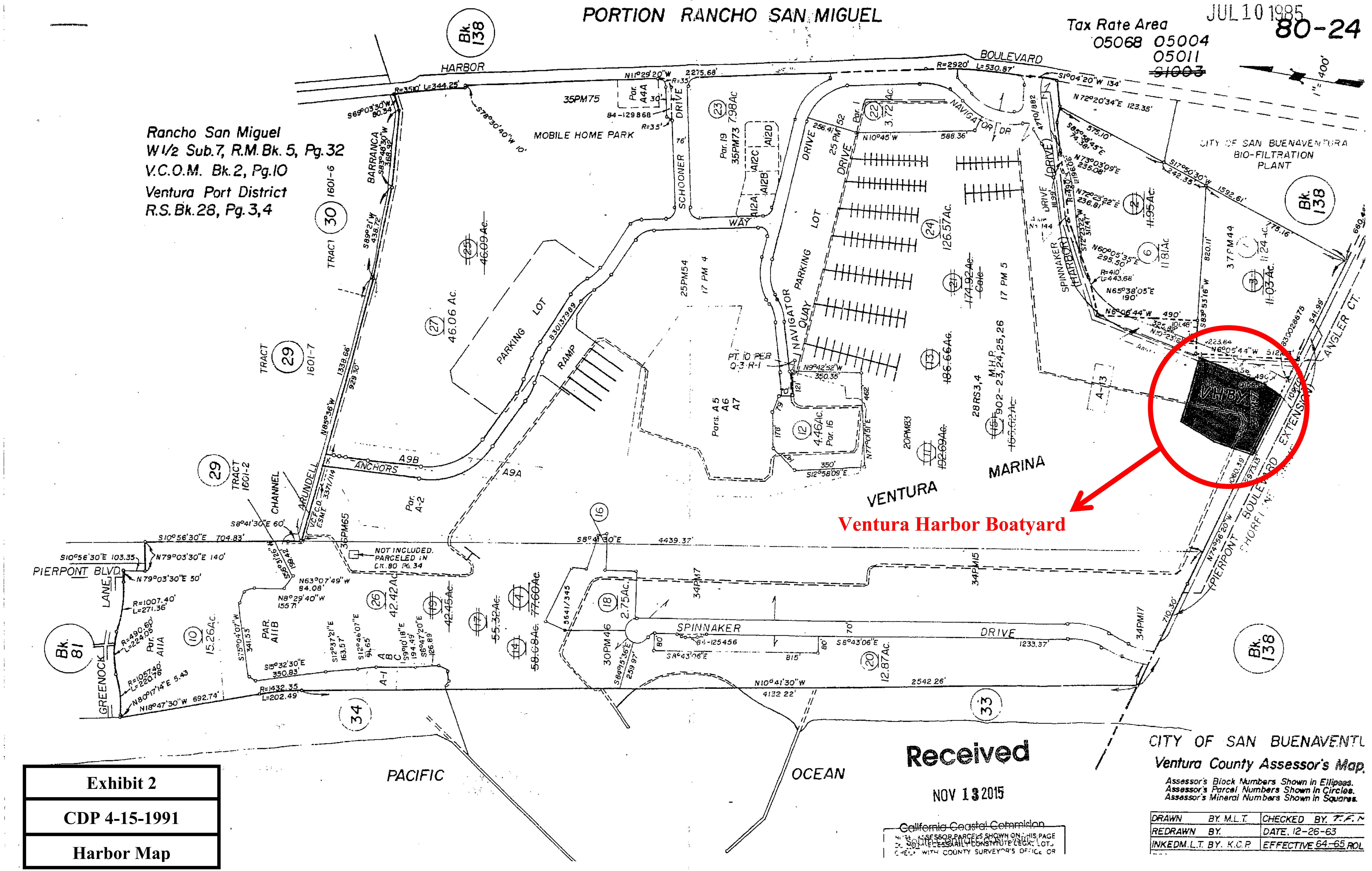


Exhibit 2

CDP 4-15-1991

Harbor Map

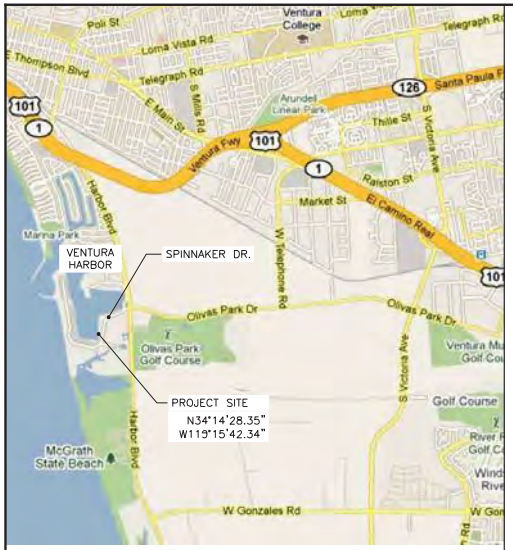
PROJECT DRAWINGS

FOR

TRAVELIFT PIER REPAIR

VENTURA HARBOR BOATYARD

1415 SPINNAKER DRIVE, VENTURA, CA. 93001



VICINITY MAP

SOURCE: GOOGLE MAPS

0 0.5 MILES

NG MAPS. SCALE – 1"=20'±

INDEX OF SHEETS

SHEET NO.	SHEET TITLE
1	TITLE SHEET
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4	SOIL BORING LOGS
5	DEMOLITION PLAN
6	EXISTING PIER RECORD DRAWINGS
7	EXISTING PIER PILE DETAILS
8	EXISTING PIER DETAILS
9	PROJECT PLAN
10	PILE PLAN
11	DECK PLAN
12	DETAILS
13	FABRICATED METAL

SYMBOLS

@	AT
°	DEGREES
ϕ	DIAMETER
(E)	EXISTING
(H)	HORIZONTAL
#	NUMBER
(N)	NEW
±	PLUS OR MINUS/APPROXIMATELY
(V)	VERTICAL

ABBREVIATIONS

AC	ASBESTOS-CEMENT
ACI	AMERICAN CONCRETE INSTITUTE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
CBC	CALIFORNIA BUILDING CODE
CLR	CLEAR
CONC	CONCRETE
CONT	CONTINUOUS
CSK	COUNTERSINK
DF	DOUGLAS FIR
DI	DUCTILE IRON
DIAG	DIAGONAL
DIAM	DIAMETER
DR	PIPE DIMENSION RATIO (DIAMETER/WALL THICKNESS)
EA	EACH
EF	EACH FACE
EL;ELEV	ELEVATION
EQ SP	EQUALLY SPACED
EW	EACH WAY
FE	FLANGE END
FG	FINISHED GRADE
FH	FLAT HEAD
FL	FLOW LINE
FT	FEET
FT-LBS	FOOT-POUNDS
GLULAM	GLUED LAMINATED TIMBER
HDG	HOT DIPPED GALVANIZED
HDPE	HIGH DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
HSS	HOLLOW STRUCTURAL SECTION
HW	HIGH WATER
IN	INCHES
JT	JOINT
L	ANGLE; LEFT; LENGTH
LW	LOW WATER
MAT'L	MATERIAL
MAX	MAXIMUM
MHHW	MEAN HIGHER HIGH WATER
MHW	MEAN HIGH WATER
MIN	MINIMUM
MJ	MECHANICAL JOINT
MLLW	MEAN LOWER LOW WATER
MLW	MEAN LOW WATER
MTL	MEAN TIDE LEVEL
NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988
NGVD29	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NO	NUMBER
OC	ON CENTER
PCC	PORTLAND CEMENT CONCRETE
PE	PLAIN END
PL	PLATE
PO	PUSH ON
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	RADIUS; RIGHT
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
SCH	SCHEDULE
SS	STAINLESS STEEL
STA	STATION
TOC	TOP OF CURB
TOG	TOP OF GUTTER
TOP	TOP OF PAVEMENT
TYP	TYPICAL
UHMW	ULTA HIGH MOLECULAR WEIGHT PLASTIC
UNO	UNLESS NOTED OTHERWISE
W/	WITH
WWM	WELDED WIRE MESH

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UNDERGROUND SERVICE ALERT/USA OF SOUTHERN CALIFORNIA

NOBLE CONSULTANTS GEC

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IRVINE, CA. 92612
949•752•1530
949•752•8581 (FAX)

NO.	DATE	REVISION

DESIGNED BY TJF
DRAWN BY PGM
CHECKED BY JTM
APPROV. BY ----

VENTURA HARBOR BOATYARD

TITLE SHEET

TRAVELIFT PIER REPAIR

SHEET 1 OF 13
JOB NO. 1029-02
SCALE AS SHOWN
DATE 4 DEC 2015

Exhibit 3

CDP 4-15-1991

Project Plans

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO THE 2012 EDITION OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (SSPWC) EXCEPT AS MODIFIED OR SPECIFICALLY NOTED OTHERWISE BY THESE PLANS AND SPECIFICATIONS.

2. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE JOB SITE CONDITIONS OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS RESPONSIBILITY SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

3. CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES PER AVAILABLE RECORD DRAWINGS OBTAINED DURING DESIGN. THE CONTRACTOR SHALL CONTACT APPROPRIATE AGENCIES TO OBTAIN REVISED, UPDATED OR AS-BUILT INFORMATION AVAILABLE JUST PRIOR TO CONSTRUCTION.

4. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ALL UTILITIES AND ALL STRUCTURES FOUND AT THE SITE.

5. THE CONTRACTOR SHALL NOTIFY THE VENTURA HARBOR BOATYARD (VHBY) 48 HOURS PRIOR TO STARTING WORK SO THAT INSPECTION CAN BE PROVIDED.

6. THE CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS SHOWN WHEN IT IS OBVIOUS THAT UNKNOWN CONDITIONS AND/OR OBJECTS EXIST THAT MAY NOT HAVE BEEN KNOWN DURING THE PREPARATION OF THESE PLANS AND BROUGHT TO THE ATTENTION OF THE VHBY. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.

7. SITE ACCESS IS LIMITED. THE CONTRACTOR SHALL VERIFY ACCESSIBILITY AND MAKE ALLOWANCES IN HIS BID FOR REQUIRED CONSTRUCTION EQUIPMENT AND MATERIALS.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENFORCEMENT OF SAFETY MEASURES AND REGULATIONS. THE CONTRACTOR SHALL DESIGN, CONSTRUCT, AND MAINTAIN ALL SAFETY DEVICES INCLUDING SHORING AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE, AND FEDERAL SAFETY AND HEALTH STANDARDS AND REGULATIONS.

9. UPON COMPLETION OF EACH DAY'S WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LEAVING THE WORK AREA FREE OF HAZARDS AND SHALL PROVIDE ALL NECESSARY TEMPORARY SIGNS, WARNING DEVISES, AND BARRICADES.

10. THROUGHOUT ALL PHASES OF CONSTRUCTION, INCLUDING SUSPENSION OF WORK, UNTIL FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL KEEP THE WORK SITE CLEAN AND FREE FROM RUBBISH AND DEBRIS. THE CONTRACTOR SHALL ALSO ABATE DUST NUISANCE BY CLEANING, SWEEPING, SPRINKLING WITH WATER, USING DUST FENCES, OR OTHER METHODS AS DIRECTED BY THE VHBY THROUGHOUT THE CONSTRUCTION OPERATION.

11. THE CONTRACTOR SHALL KEEP ACCURATE, LEGIBLE, AND STRICT RECORDS OF ALL CHANGES OF WORK WHICH OCCUR DURING CONSTRUCTION ON A SET OF PROJECT PRINTS. PRIOR TO FINAL ACCEPTANCE, OF THE PROJECT, THE CONTRACTOR SHALL DELIVER AN APPROVED SET OF CERTIFIED "AS-BUILT" PLANS TO THE VHBY.

12. ANY AND ALL DAMAGE CAUSED TO VHBY FACILITIES, PUBLIC STREETS INCLUDING HAUL ROUTES, OR PRIVATE PROPERTY SHALL BE REPAIRED AT THE SOLE EXPENSE OF THE CONTRACTOR TO THE ENGINEER'S SATISFACTION.

PERMIT REQUIREMENTS:

1. THE CONTRACTOR SHALL FULLY COMPLY WITH ALL OF THE REQUIREMENTS AND SPECIAL CONDITIONS OF VHBY'S DEPARTMENT OF THE ARMY, CALIFORNIA COASTAL COMMISSION, AND CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD REGULATORY PERMITS.

2. IN ACCORDANCE WITH THE APPLICABLE SPECIAL CONDITION OF VHBY'S COASTAL DEVELOPMENT PERMIT, VHBY SHALL CONDUCT ALL EEL GRASS SURVEYS AS REQUIRED.

3. THE VHBY SHALL PERFORM A PRE-CONSTRUCTION CAULERPA TAXIFOLIA SURVEY OF THE PROJECT SITE AS REQUIRED BY REGULATORY PERMITS. THE SURVEY SHALL BE PERFORMED NO EARLIER THAN NINETY (90) DAYS AND NO LATER THAN THIRTY (30) DAYS PRIOR TO THE SCHEDULED DATE FOR ISSUANCE OF THE CONTRACTOR'S NOTICE TO PROCEED. CAULERPA HAS NEVER BEEN FOUND IN VENTURA HARBOR.

4. IF CAULERPA IS FOUND TO BE PRESENT, THE VHBY RESERVES THE RIGHT TO TERMINATE THE CONTRACT AT NO COST TO VHBY. NO PAYMENT SHALL BE MADE FOR LOST PROFIT ON THE JOB.

NPDES NOTES:

1. IN CASE OF EMERGENCY, CALL THE VENTURA PORT DISTRICT HARBOR PATROL OFFICE PHONE NUMBER AT 805-642-8618.

2. MINIMIZE SEDIMENT TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TRACKING, OR WIND.

3. FOR THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPs) AS DESCRIBED IN THE BMP FACT SHEETS PUBLISHED BY THE CALIFORNIA STORMWATER QUALITY ASSOCIATION'S (CASQA) CONSTRUCTION BMP HANDBOOK AND AS MODIFIED BY ATTACHMENT A OF THE LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD'S CERTIFICATION (FILE NO. 12-115):

   TEMPORARY NON-STORMWATER NS-1, NS-6, NS-8, NS-9, NS-10, NS-11, NS-12, NS-14, NS-15;

   TEMPORARY MATERIALS MANAGEMENT WM-1, WM-2, WM-4, WM-5, WM-8, WM-9.

4. ALL CONSTRUCTION CONTRACTOR AND SUBCONTRACTOR PERSONNEL ARE TO BE MADE AWARE OF THE REQUIRED BEST MANAGEMENT PRACTICES AND GOOD HOUSEKEEPING MEASURES FOR THE PROJECT SITE AND ANY ASSOCIATED CONSTRUCTION STAGING AREAS.

5. CONSTRUCTION SITES SHALL BE MAINTAINED IN SUCH A CONDITION THAT AN ANTICIPATED STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE. DISCHARGES OF MATERIAL OTHER THAN STORMWATER ONLY WHEN NECESSARY FOR PERFORMANCE AND COMPLETION OF CONSTRUCTION PRACTICES AND WHERE THEY DO NOT: CAUSE OR CONTRIBUTE TO A VIOLATION OF ANY WATER QUALITY STANDARD; CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR NUISANCE; OR CONTAIN A HAZARDOUS SUBSTANCE IN A QUANTITY REPORTABLE UNDER FEDERAL REGULATIONS 40 CFR PARTS 117 AND 302.

6. POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SOLID OR LIQUID CHEMICAL SPILLS; WASTES FROM PAINTS, STAINS, SEALANTS, GLUES, LIMES, PESTICIDES, HERBICIDES, WOOD PRESERVATIVES AND SOLVENTS' ASBESTOS FIBERS, PAINT FLAKES OR STUCCO FRAGMENTS; FUELS, OILS, LUBRICANTS, AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS; FERTILIZERS, VEHICLE/EQUIPMENT WASH WATER AND CONCRETE WASH WATER; CONCRETE, DETERGENT OR FLOATABLE WASTES; WASTES FROM ANY ENGINE/EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING AND SUPERCHLORINATED POTABLE WATER LINE FLUSHING.

7. DURING CONSTRUCTION, THE CONTRACTOR SHALL DISPOSE OF SUCH MATERIALS IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ON-SITE, PHYSICALLY SEPARATED FROM POTENTIAL STORMWATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.

8. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT NO ONE DUMPS CHEMICALS INTO THE STORM DRAIN SYSTEM OR THE WATERSHED SHALL AT ANYTIME.

9. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING RAINY SEASON. NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IN IMMINENT.

SITE ACCESS

1. REPRESENTATIVES OF THE VHBY, ITS CONSULTANTS, AND THE VENTURA PORT DISTRICT SHALL BE ALLOWED ACCESS TO ALL PARTS OF THE CONSTRUCTION WORK AT ANY AND ALL TIMES.

CONCRETE PILES

1. CONCRETE PILES SHALL BE MANUFACTURED BY OLDCASTLE PRECAST, FONTANA, CA.

2. PILES SHALL HAVE A TWENTY-EIGHT DAY COMPRESSIVE STRENGTH OF 6,000 POUNDS PER SQUARE INCH. THE WATER-TO-CEMENT RATIO SHALL NOT EXCEED 0.40. CONCRETE FOR PILES SHALL CONTAIN DCI CORROSION INHIBITOR MANUFACTURED BY W.R. GRACE & COMPANY AT A RATE OF TWO GALLONS PER CUBIC YARD OF CONCRETE.

3. STEEL SHALL BE:

   A. PRESTRESSING STRAND - 7-WIRE STRESS RELIEVED PER ASTM A416.

   B. SPIRAL - CONFORM TO ASTM 82.

   C. TIES - CONFORM TO ASTM A615.

   D. LIFTING LOOPS, ANCHORAGES, END FITTINGS - CONFORM TO ACI 318 FOR POST TENSIONED ASSEMBLIES.

4. IT IS RECOMMENDED THAT THE CONTRACTOR USE A JET PUMP MEETING THE FOLLOWING REQUIREMENTS: 1,000 GPM AT 300 PSI. JET PILES TO WITHIN EIGHT (8) FEET OF SPECIFIED TIP ELEVATION.

5. DRIVE PILES TO FINAL TIP ELEVATION OR PRACTICAL REFUSAL WITH AN IMPACT HAMMER WHOSE RAM WEIGHT IS NOT BE LESS THAN 25% OF THE CONCRETE PILE'S WEIGHT TO BE DRIVEN.

6. TOLERANCES IN PILE DRIVING SHALL BE: NOT MORE THAN ONE PERCENT FROM VERTICAL OR BATTER ANGLE; BUTTS SHALL BE WITHIN TWO INCHES OF LOCATION INDICATED ON THE PLANS.

CAST-IN-PLACE CONCRETE

1. CAST-IN-PLACE CONCRETE SHALL:

   A. CONTAIN TYPE II/V PORTLAND CEMENT.

   B. CONTAIN DCI CORROSION INHIBITOR AS MANUFACTURED BY W.R. GRACE & COMPANY AT A RATE OF FOUR GALLONS PER CUBIC YARD.

   C. HAVE GRADING C AGGREGATES PER SECTION 201-1.3.2 OF THE SSPWC.

   D. HAVE A 28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI.

   E. HAVE A WATER-TO-CEMENT RATIO NO GREATER THAN 0.40.

   F. POZZOLAN MAY BE USED TO REPLACE A MAXIMUM OF TWENTY (20) PERCENT OF THE REQUIRED PORTLAND CEMENT IN THE CONCRETE AT A RATIO OF 1.1 POUNDS OF POZZOLAN FOR EVERY POUND OF CEMENT REPLACED. POZZOLAN SHALL CONFORM TO ASTM C618, CLASS F, EXCEPT THAT LOSS OF IGNITION SHALL NOT EXCEED FOUR (4) PERCENT. ALL POZZOLAN USED SHALL BE MADE BY THE SAME MANUFACTURER.

2. REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL PER ASTM A615. EPOXY COAT ALL BARS PER ASTM A775. ALL TIES SHALL BE NON-METALLIC OR EPOXY COATED.

3. PERFORM ALL CONCRETE WORK PER SECTIONS 303-1 AND 303-5 OF THE SSPWC EXCEPT AS MODIFIED BY THESE PLANS.

STRUCTURAL STEEL

1. ANGLE FOR CURB SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36. ALL CURB SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION AND FINISHED WITH TWO COATS OF AN APPROVED SAFETY YELLOW MARINE GRADE EXTERIOR PAINT.

2. ALL PLATE AND BAR FOR THE EXPANSION JOINT ASSEMBLY THAT IS TO BE WELDED SHALL BE TYPE 316L STAINLESS STEEL IN CONFORMANCE WITH ASTM A240. ALL OTHER PLATE AND SHAPES SHALL BE TYPE 316 STAINLESS STEEL PER ASTM A240.

3. ALL MACHINE BOLTS AND HARDWARE SHALL BE TYPE 316 STAINLESS STEEL.

CONCRETE CRACK REPAIR

1. NEATLY SEAL AND PORT ENTIRE LENGTH OF CRACK TO BE REPAIRED WITH APPROVED EPOXY AND INJECTION PORTS PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.

2. INJECT CRACK COMPLETELY FULL WITH APPROVED INJECTION EPOXY DESIGNED FOR CONCRETE CRACK REPAIR OF OVERHEAD SURFACES. ENSURE THAT NO MATERIAL DRAINS FROM SOFFIT PORTS AFTER INJECTING CRACK COMPLETELY FULL.

3. REMOVE INJECTION PORTS AFTER SET OF INTERNAL CRACK REPAIR EPOXY.

POST-INSTALLED REINFORCEMENT BAR CONNECTIONS

1. ADHESIVE FOR POST-INSTALLED REBAR IN APRON EXTENSION AND DOWELS IN PILES SHALL BE HILTI HIT-RE 500-SD EPOXY ADHESIVE.

2. DRILL HOLES, APPLY ADHESIVE, AND INSTALL REBAR IN STRICT CONFORMANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AS SUMMARIZED BELOW:

   A. APRON EXTENSION

      1) DRILL ¾"ø HOLE FOR #5 REBAR TO SPECIFIED DEPTH.

      2) CLEAN HOLE DUST FREE WITH 90 PSI OIL-FREE COMPRESSED AIR.

      3) BRUSH HOLE TWO TIMES IN TWISTING MOTION WITH ROUND STEEL BRUSH THAT HAS A DIAMETER LARGER THAN THE HOLE DIAMETER.

      4) REPEAT STEP A2.

      5) INJECT EPOXY INTO HOLE STARTING AT THE BACK WITHOUT FORMING AIR VOIDS. FILL ¾ FULL OR AS REQUIRED TO ENSURE THAT ANNULAR SPACE BETWEEN CONCRETE AND REBAR IS COMPLETELY FULL ALONG THE EMBEDMENT DEPTH.

      6) INSERT REBAR.

   B. PILE DOWEL

      1) PREPARE DOWEL TUBE, APPLY ADHESIVE, AND INSERT #8 REBAR PER STEP NOS. A2 THROUGH A6 ABOVE. VACUUM TUBE AS NECESSARY TO REMOVE ALL DUST, DEBRIS, AND FOREIGN MATERIAL.

3. CONTRACTOR SHALL READ AND FAMILIARIZE HIMSELF WITH MANUFACTURER'S COMPLETE WRITTEN INSTRUCTIONS ON INSTALLATION OF SPECIFIED POST-INSTALLED REINFORCEMENT USING SPECIFIED ADHESIVE AND REQUIRED APPLICATION EQUIPMENT.

4. HOLES AND DOWELS TUBES SHALL BE DRY PRIOR TO APPLICATION OF ADHESIVE AND INSTALLATION OF REBAR.

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NO.	DATE	REVISION
1	10/30/15	REVISE CONCRETE PILE NOTES; ADD POST-INSTALLED REINFORCEMENT NOTES

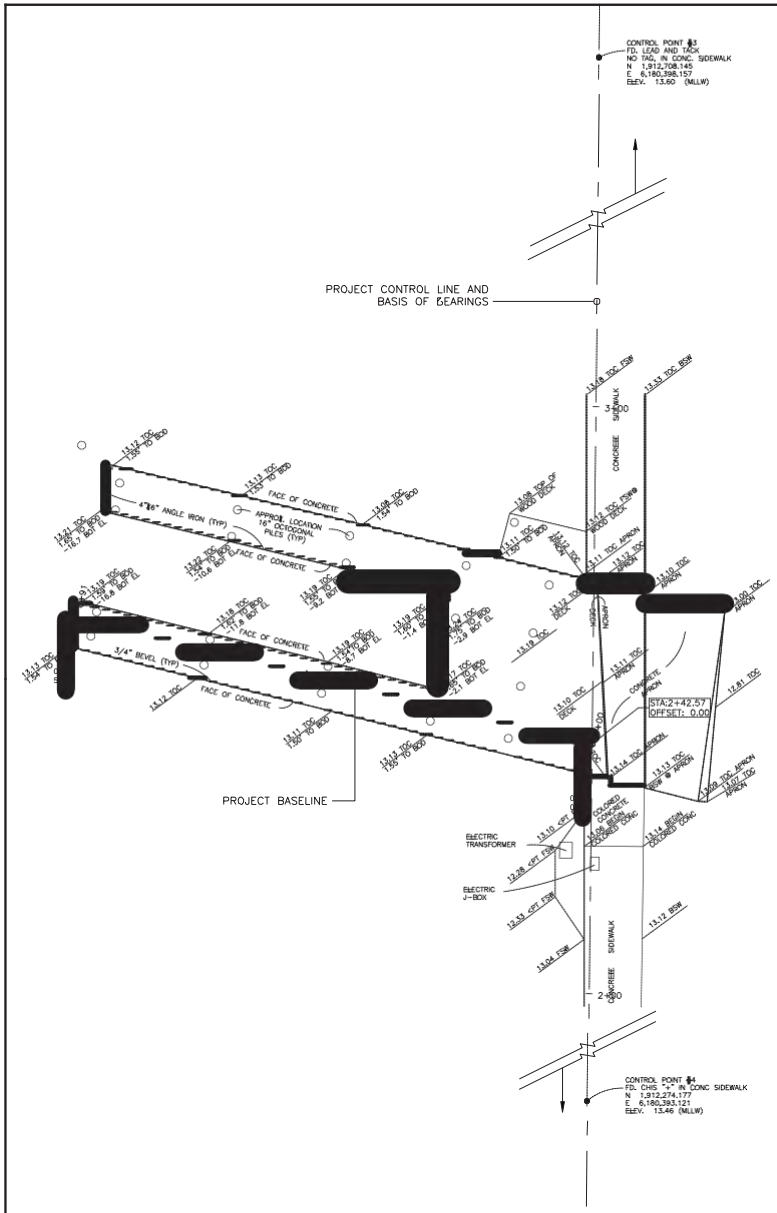
DESIGNED BY TJF
DRAWN BY PGM
CHECKED BY JTM
APPROV. BY ----

VENTURA HARBOR BOATYARD

CONSTRUCTION NOTES

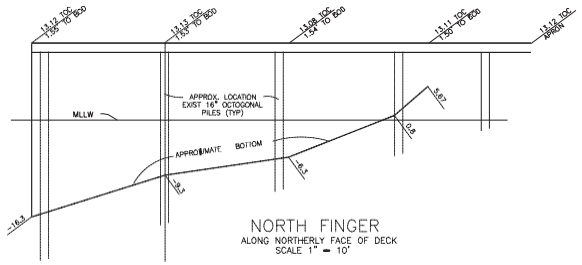
TRAVELIFT PIER REPAIR

SHEET 2 OF 13
JOB NO. 1029-02
SCALE AS SHOWN
DATE 4 DEC 2015

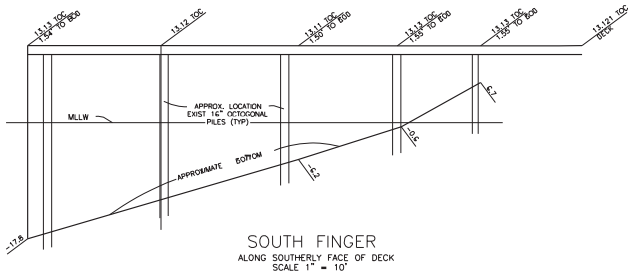


1/3 SURVEY PLAN
SCALE: 1" = 10'

0 10
FEET



A/3 NORTH FINGER PIER PROFILE
SCALE: 1" = 10'



B/3 SOUTH FINGER PIER PROFILE
SCALE: 1" = 10'

LEGEND:
TOC TOP OF CONCREEE
BOD BOTTOM OF DECK
BOT EL APPROX BOTTOM (SEE SECTIONS)

NOTES:
USED LOCAL GRID FOR CONTROL

BENCH MARK:
VCPID 687
DESIGNATION B13-102
VENTURA COUNTY BRASS DISK
LOCATED AT NORTHWESTERLY CORNER OF THE INTERSECTION OF SPINNAKER DR. AND HARBOR BLVD., 1.0' EASTERLY FROM THE B.C.R.
ELEVATION: NAVD 88 4.968 MEERS (16.30 FEET)

VERTICAL DATUM IS MEAN LOWER LOW WATER (MLLW), 1983-2001 EPOCH.

MHHW	5.46 FT	ELEVATION INFORMATION FOR STA ID 9411270 RINCON ISLAND, CA
MHW	4.70 FT	NOTE: VERTICAL DATUM FOR THIS PROJECT IS MLLW
MTL	2.85 FT	
NGVD29	2.69 FT	ELEVATION INFORMATION SOURCE: NATIONAL GEODETIC SURVEY PID = EW6485, VM = 3113, STA ID = 9411270
MLW	0.99 FT	
NAVD88	0.09 FT	
MLLW	0.00 FT	

CONTROL POINT #3
FD. LEAD AND TACK
NO TAG, IN CONC. SIDEWALK
N 1912708.145
E 6180398.157
ELEV. 13.60 (MLLW)
(LOCATED APPROX. 1.63' NORTHERLY ALONG WEST EDGE OF SIDEWALK FROM NORTHEAST CORNER OF DECK.)

CONTROL POINT #4
FD. CHIS "+" IN CONC SIDEWALK
N 1912274.177
E 6180393.121
ELEV. 13.46 (MLLW)
(LOCATED APPROX. 2.36' SOUTHERLY ALONG WEST EDGE OF SIDEWALK FROM SOUTHEAST CORNER OF DECK.)

PROJECT CONTROL

PROJECT BASELINE:

PI Station	Northing	Easting	Distance	Direction
0+00.00	1,912,516.727'	6,180,395.936'		
			90.562'	N76° 09' 30.85"W
0+90.56	1,912,538.392'	6,180,308.004'		

PROJECT CONTROL LINE AND BASIS OF BEARINGS:

PI Station	Northing	Easting	Distance	Direction
0+00.00	1,912,274.177'	6,180,393.121'		
			433.997'	N0° 39' 53.50"E
4+34.00	1,912,708.145'	6,180,398.157'		

PREPARED BY:
VICE SERVICES, INC.
* 1591 Los Angeles Ave., Suite 2 * Ventura, California * 93004 *
* Phone (805) 659-4005 *
REGISTERED CIVIL ENGINEER R.C.E. NO. 18481 DATE
R.C.E. EXPIRES

NOBLE CONSULTANTS | GEC
2201 DUPONT DRIVE, SUITE 830
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NO.	DATE	REVISION

DESIGNED BY TJF
DRAWN BY PGM
CHECKED BY JTM
APPROV. BY ----

VENTURA HARBOR BOATYARD

SITE SURVEY AND PROJECT CONTROL

TRAVELIFT PIER REPAIR

SHEET 3 OF 13
JOB NO. 1029-02
SCALE AS SHOWN
DATE 4 DEC 2015

0 100 FEET

NOTE:
MAP SHOWS APPROXIMATE LOCATIONS OF SOIL BORINGS DRILLED AND LOGGED IN 1979 BY BUENA ENGINEERS, INC. DATA SOURCE: BUENA ENGINEERS, INC., 1979, "PRELIMINARY SOIL INVESTIGATION OF A PROPOSED DEVELOPMENT AT THE VENTURA MARINA", PREPARED FOR OCEAN SERVICES CORP, JULY 1979, JOB FILE NO. B-10377-VI.

1/4 SOIL BORING LOCATIONS
SCALE: 1" = 100'±

LOG OF BORING

DATE 7-13-79 | Ventura Marina | BORING NO. 1 | Job No. B-10377-VI | LOCATION: Per Plan

DEPTH, FEET	SYMBOL	TEST BORING # per	DESCRIPTION	UNIT DRY WT. LBS/CU. FT.	MOISTURE PERCENT	SOIL TYPE	RELATIVE COMPACTION PERCENT	REMARKS AND ANALYSIS
0	R	60	Light brown fine to coarse grained sand with some gravel	1- 110.3	4.5		93	
	R	33		3- 107.1	4.7	A1	91	
5	R	23	Brown slightly silty fine to medium grained sand with trace of gravel	5- 92.6	11.1	A2	85	
10	R	40		10- 98.3	11.6		90	Free Water at 15.0'
15	R	15	Light brown medium to coarse grained sand with some gravel	20 No Return		A3		
30	S	60						
40	S	60						

2/4 BORING 1
SCALE: N.T.S.

LOG OF BORING

DATE 7-13-79 | Ventura Marina | BORING NO. 1 Con't | Job No. | LOCATION:

DEPTH, FEET	SYMBOL	TEST BORING # per	DESCRIPTION	UNIT DRY WT. LBS/CU. FT.	MOISTURE PERCENT	SOIL TYPE	RELATIVE COMPACTION PERCENT	REMARKS AND ANALYSIS
50	S	50						
55			Light brown medium to coarse grained sand with some gravel					
60	S	86				A3		
65								
70	S	240						
73	S	200						Total Depth = 76.0'

R = Modified California Sampler
S = Standard Penetration Sampler

3/4 BORING 1 (CONT.)
SCALE: N.T.S.

LOG OF BORING

DATE 7-13-79 | Ventura Marina | BORING NO. 2 | Job No. B-10377-VI | LOCATION: Per Plan

DEPTH, FEET	SYMBOL	TEST BORING # per	DESCRIPTION	UNIT DRY WT. LBS/CU. FT.	MOISTURE PERCENT	SOIL TYPE	RELATIVE COMPACTION PERCENT	REMARKS AND ANALYSIS
0		73	Brown slightly silty fine to medium grained sand w/t gravel	1- 112.1	4.1	A2	100	
		60	Light brown medium to coarse grained sand with some gravel	3- 108.2	8.0		94	
5		50		5- 104.8	5.9	A3	91	
10		60	Gray slightly silty fine to medium grained sand with trace of gravel	10- No Return		A4		Free Water at 10.0'
15		41	Light brown medium to coarse grained sand with some gravel	15- No Return		A3		
20								Total Depth 20.0'

4/4 BORING 2
SCALE: N.T.S.

LOG OF BORING

DATE 7-13-79 | Ventura Marina | BORING NO. 3 | Job No. B-10377-VI | LOCATION: Per Plan

DEPTH, FEET	SYMBOL	TEST BORING # per	DESCRIPTION	UNIT DRY WT. LBS/CU. FT.	MOISTURE PERCENT	SOIL TYPE	RELATIVE COMPACTION PERCENT	REMARKS AND ANALYSIS
0			See Below			A3		
		60	See Below	1- 109.3	4.2	A6	100	
		25		3- 108.6	5.8		99	
5		23		5- 100.2	2.8		92	
10		50	Brown slightly silty fine to medium grained sand with trace of gravel	10- 103.3	6.8	A2	95	Heavy cobble from ten to 14 feet
15								
20		40		15- No Return		A3		Free Water at 20.0'
25			Light brown medium to coarse grained sand with some gravel					
30								Total Depth 30.0'

Soil A3: Tan slightly silty fine sand

Soil A6: Brown silty very clayey very fine sand

5/4 BORING 3
SCALE: N.T.S.

LOG OF BORING

DATE 7-13-79 | Ventura Marina | BORING NO. 4 and 5 | Job No. B-10377-VI | LOCATION: Per Plan

DEPTH, FEET	SYMBOL	TEST BORING # per	DESCRIPTION	UNIT DRY WT. LBS/CU. FT.	MOISTURE PERCENT	SOIL TYPE	RELATIVE COMPACTION PERCENT	REMARKS AND ANALYSIS
			Boring No. 4					
0		57	Brown slightly silty fine to medium grained sand with trace of gravel	1- 104.1	2.0	A2	95	
		50		3- 118.1	7.1		100	
5		45	Light brown medium to coarse grained sand with some gravel	3- No Return		A3		
10		40	Gray slightly silty fine to medium grained sand with trace of gravel	10- No Return		A4		Free Water at 11.0'
15			Light brown medium to coarse grained sand with some gravel			A3		
20								Total Depth 20.0'
			Boring No. 5					
0		45	Brown slightly silty fine to medium grained sand with	1- 112.3	5.8	A2	100	
		35	trace of gravel	3- No Return				
5		40		5- 115.4	10.4	A4	92	
10			Gray slightly silty fine to medium grained sand with trace of gravel	10- No Return				Free Water 12.0'
15								Total Depth at 15.0'

6/4 BORING 4 AND 5
SCALE: N.T.S.

NOTE:
LOGS FOR BORING NOS. 6, 7, 8, AND 9 NOT SHOWN. SHALLOW BORINGS DRILLED TO 15 FEET BELOW EXISTING GRADE.

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NO.	DATE	REVISION

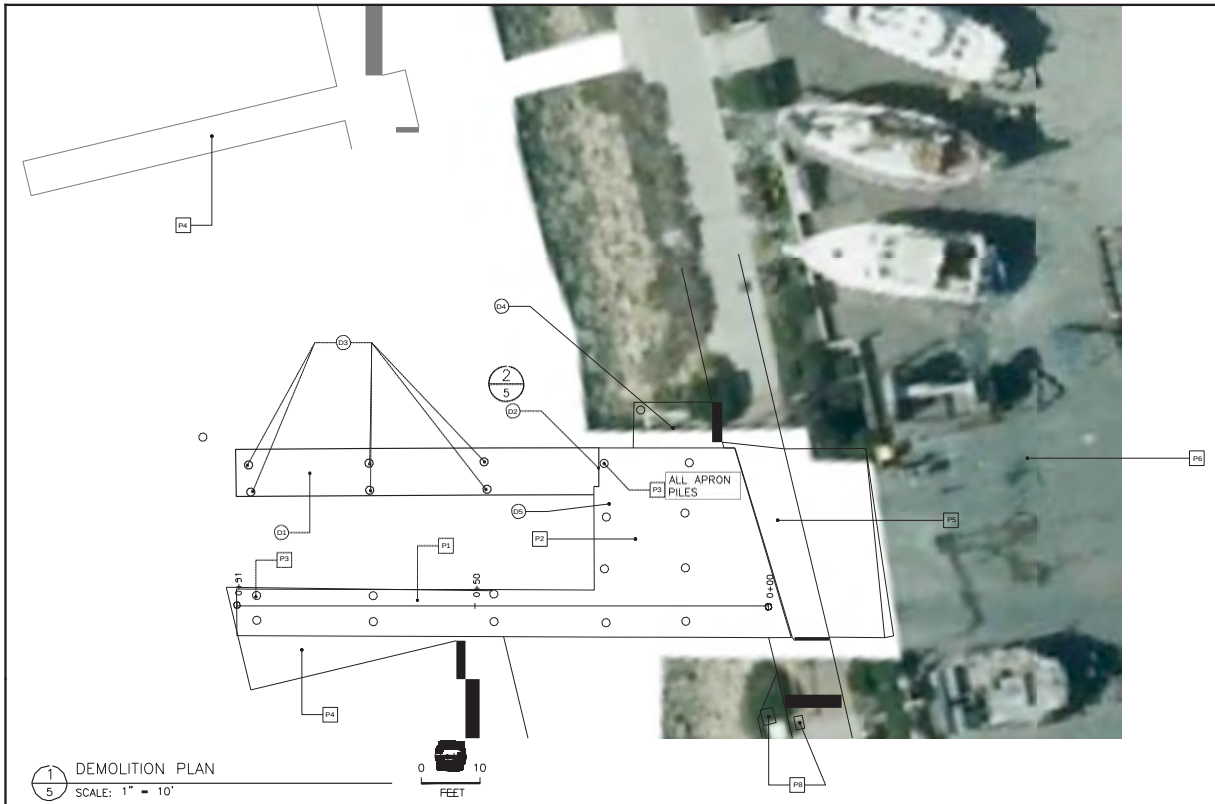
DESIGNED BY TJF
DRAWN BY PGM
CHECKED BY JTM
APPROV. BY ----

VENTURA HARBOR BOATYARD

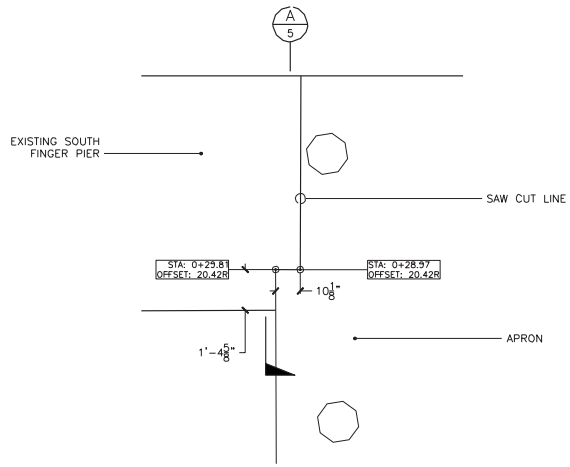
SOIL BORING LOGS

TRAVELIFT PIER REPAIR

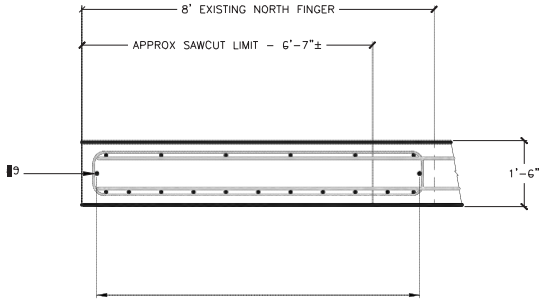
SHEET 4 OF 13
JOB NO. 1029-02
SCALE AS SHOWN
DATE 4 DEC 2015



1/5 DEMOLITION PLAN
SCALE: 1" = 10'



2/5 SAW CUT DETAIL
SCALE: 1" = 2'-0"



A/5 SAW CUT SECTION DETAIL
SCALE: 3/4" = 1'-0"

DEMOLITION SCHEDULE

NO.	ITEM
D1	REMOVE AND DISPOSE OF ALL REINFORCED CONCRETE NORTH FINGER PIER, METAL CURB, AND ALL ASSOCIATED HARDWARE WITHIN THE LIMITS SHOWN.
D2	NEATLY SAW CUT DEMOLITION LIMIT LINE.
D3	COMPLETELY REMOVE AND DISPOSE OF PRESTRESSED CONCRETE PILES TO DEPTH OF TWO (2) FEET BELOW EXISTING MUDLINE
D4	COMPLETELY REMOVE AND DISPOSE OF TIMBER GANGWAY LANDING, TIMBER AND METAL DECK FRAMING, GUARDRAIL, GANGWAY HANGER, AND ASSOCIATED HARDWARE. CORE AND REMOVE THREADED INSERTS FOR HANGER BRACKETS ON APRON DECK TO DEPTH OF 3 INCHES AND FILL HOLES WITH NON-SHRINK GROUT.
D5	REMOVE L6x4 CURB APPROACH. CORE AND REMOVE 2"ø ANCHOR BOLTS TO DEPTH OF 3 INCHES BELOW DECK SURFACE AND FILL HOLE WITH NON-SHRINK GROUT.

ITEMS TO PROTECT IN PLACE

NO.	ITEM
P1	EXISTING SOUTH FINGER PIER
P2	EXISTING APRON
P3	EXISTING SOUTH FINGER PIER AND APRON FOUNDATION PILES
P4	EXISTING TIMBER FLOATING DOCKS/GUIDE PILES
P5	EXISTING SIDEWALK
P6	EXISTING BOATYARD IMPROVEMENTS
P7	EXISTING LANDSCAPE
P8	EXISTING VALVE BOXES, TRANSFORMER, AND UTILITIES

DEMOLITION NOTES:

1. CONTRACTOR SHALL PROVIDE AND PLACE SHORING AS REQUIRED TO PREVENT DAMAGE OR MOVEMENT TO STRUCTURES AND IMPROVEMENTS THAT ARE TO REMAIN.
2. CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN BARRICADES, GUARD RAILS, AND FENCING TO PROTECT THE GENERAL PUBLIC, WORKERS, AND ADJACENT PROPERTY TO COMPLY WITH ALL APPLICABLE SAFETY LAWS AND REGULATIONS.
3. REMOVE EXISTING NORTH FINGER PIER, FOUNDATION PILES TWO FOOT BELOW EXISTING MUDLINE ELEVATION, DEBRIS, AND MISCELLANEOUS METAL IN THEIR ENTIRETY BAYWARD OF THE SAW CUT LINE AS SHOWN.
4. NEAT STRAIGHT LINE SAWCUTS SHALL BE PROVIDED FOR ANY REMOVAL OF CONCRETE PAVEMENT, GUTTER, OR STAIRS.
5. REMOVE AND TRANSPORT DEBRIS AND RUBBISH IN A MANNER THAT WILL PREVENT SPILLAGE ON BEACH, STREETS, AND ADJACENT AREAS. DEMOLISHED ITEMS AND DEBRIS OTHER THAN SOIL SHALL NOT BE LEFT ON THE JOB SITE FOR MORE THAN THREE DAYS. ALL REMOVED MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR. CONTRACTOR SHALL DISPOSE OF SUCH MATERIALS OFF THE JOB SITE AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE WASTE MANAGEMENT REQUIREMENTS.
6. DEBRIS SHALL NOT BE ALLOWED TO FALL INTO THE WATER AT ANY TIME. IMMEDIATELY RECOVER AND DISPOSE OF ANY MATERIAL.

REGISTERED PROFESSIONAL ENGINEER
JON T. MOORE
No. C25673
Exp. 12/31/17
CIVIL
STATE OF CALIFORNIA

NOBLE CONSULTANTS | GEC
2201 DUPONT DRIVE, SUITE 830
IRVINE, CA. 92612
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NO.	DATE	REVISION

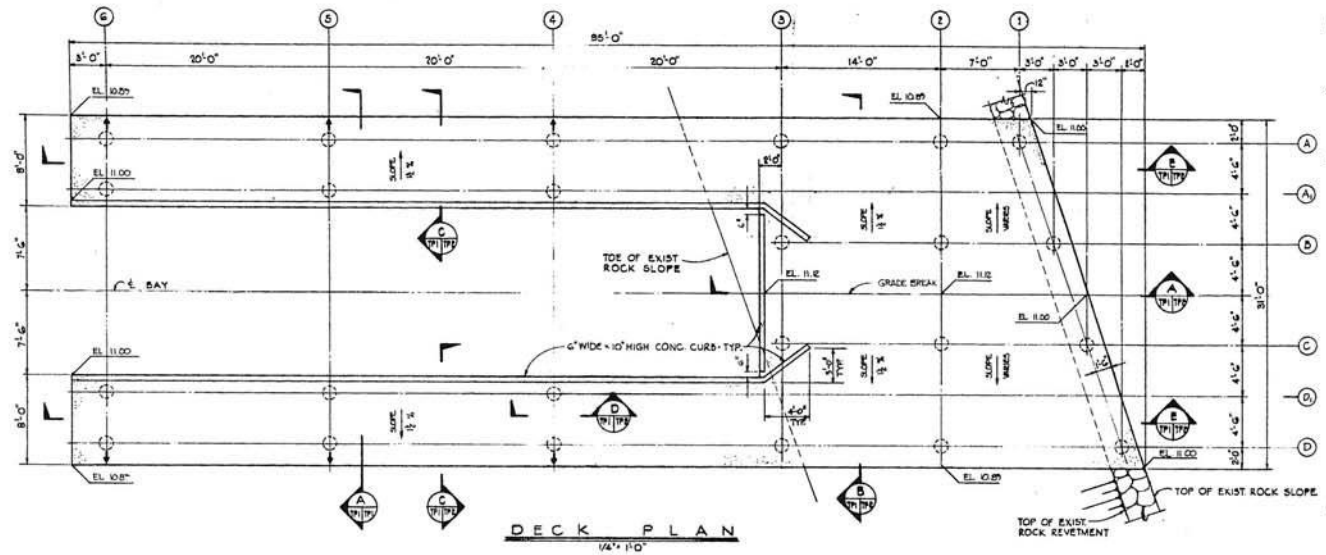
DESIGNED BY TJF
DRAWN BY PGM
CHECKED BY JTM
APPROV. BY ----

VENTURA HARBOR BOATYARD

DEMOLITION PLAN

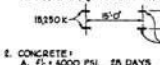
TRAVELIFT PIER REPAIR

SHEET 5 OF 13
JOB NO. 1029-02
SCALE AS SHOWN
DATE 4 DEC 2015

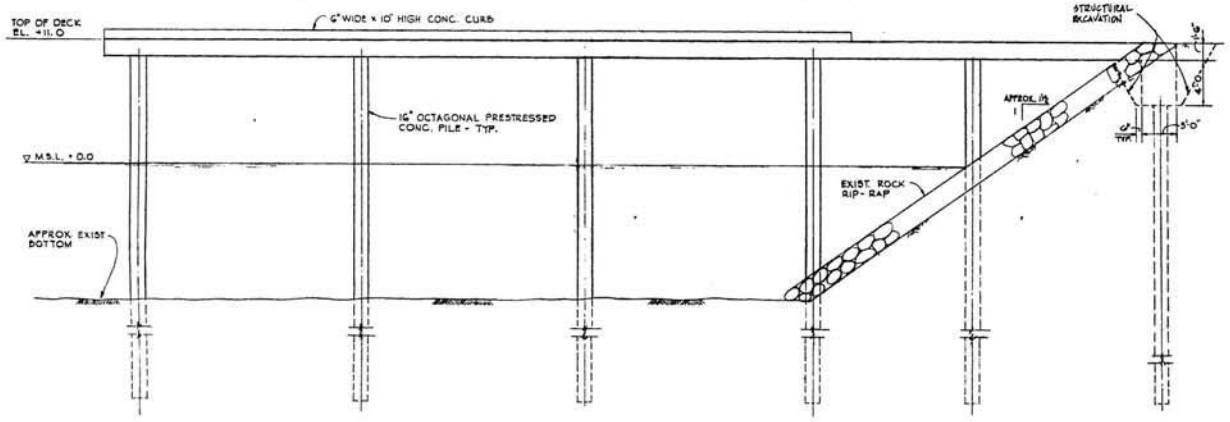


DECK PLAN
1/4" = 1'-0"

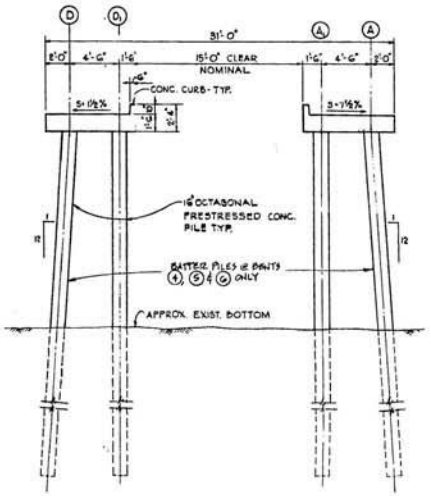
STRUCTURAL NOTES

1. DESIGN LOAD:
   A. TRAVELIFT (STRADDLE TYPE MOBILE BOAT HOIST MODEL 30 AMO


2. CONCRETE:
   A. f'_c = 4000 PSI 28 DAYS
   B. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾" ø ALL INSIDE CORNERS SHALL HAVE 2"x2" TRIANGULAR FILLET UNLESS OTHERWISE NOTED.
   C. CONSTRUCTION JOINTS SHALL BE PERMITTED ONLY UPON APPROVAL BY THE ENGINEER.
3. REINFORCING:
   A. REINFORCING SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60. (SUPPLEMENT I.)
   B. REINFORCING PLACING:
      a. ALL REINFORCING SHALL BE EQUALLY SPACED THROUGHOUT THE DECK SLAB UNLESS OTHERWISE NOTED.
      b. REINFORCING SHALL BE SUPPORTED BY MASONRY BLOCKS # HAVE 2 INCH MINIMUM CONCRETE COVER UNLESS OTHERWISE NOTED.
      c. ALL REINFORCING HOOKS OR BENDS SHALL BE "STANDARD" AS DESCRIBED IN ACI 318-77 UNLESS OTHERWISE NOTED.
   C. PIER DECK SLAB REINFORCING SPLICES:
      a. TRANSVERSE REINFORCING - BOTTOM BARS MAY BE SPLICED AT BENT PILE CENTERLINE. SPLICES SHALL BE ALTERNATED # NO MORE THAN ONE HALF OF THE REINFORCEMENT SHALL BE SPLICED AT ONE PILE BENT. TOP BARS MAY BE SPLICED MID-WAY BETWEEN PILE BENTS. SPLICES SHALL BE ALTERNATED # NO MORE THAN ONE HALF OF THE REINFORCEMENT SHALL BE SPLICED AT ONE LONGITUDINAL MIDDLE STRIP.
      b. LONGITUDINAL REINFORCING - BOTTOM BARS SHALL BE SPLICED IN PILE BENT CENTERLINE. SPLICES SHALL BE ALTERNATED # NO MORE THAN ONE HALF OF THE REINFORCEMENT SHALL BE SPLICED AT ONE PILE BENT. TOP BARS SHALL BE SPLICED MIDWAY BETWEEN BENTS. SPLICES SHALL BE ALTERNATED # NO MORE THAN ONE HALF THE REINFORCEMENT SHALL BE SPLICED IN ONE TRANSVERSE MIDDLE STRIP.
      c. LAP SPLICES SHALL BE FORTY FIVE DIAMETERS (45ø) FOR #8 # SMALLER BARS # 60 DIAMETERS (60ø) FOR #9 # LARGER BARS.
   D. REINFORCING SHALL NOT BE CUT UNLESS OTHERWISE SHOWN.
4. FOR PRESTRESSED CONCRETE PILE NOTES SEE SHEET EP-4.



ELEVATION
1/4" = 1'-0"



SECTION A
1/4" = 1'-0"

DATUM: MEAN SEA LEVEL (M.S.L.)

SPECIFIED MINIMUM PILE TIP ELEVATIONS		
BENT NO.	LOCATION OF PILES	TIP ELEV.
1	A THRU D	-70
5	"	-50
9	"	-35
4 THRU 6	A, A1, D & D1	-55

SOURCE:
DRAWINGS FROM MOFFATT AND NICHOL, ENGINEERS, 1980. TRAVELIFT PIER FOR PARCELS 3A1 AND 3A2. JOB NO. L-1906. 9 JUL 1980.

1/G EXISTING PIER PLAN AND PROFILE
SCALE: N.T.S.

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NO.	DATE	REVISION

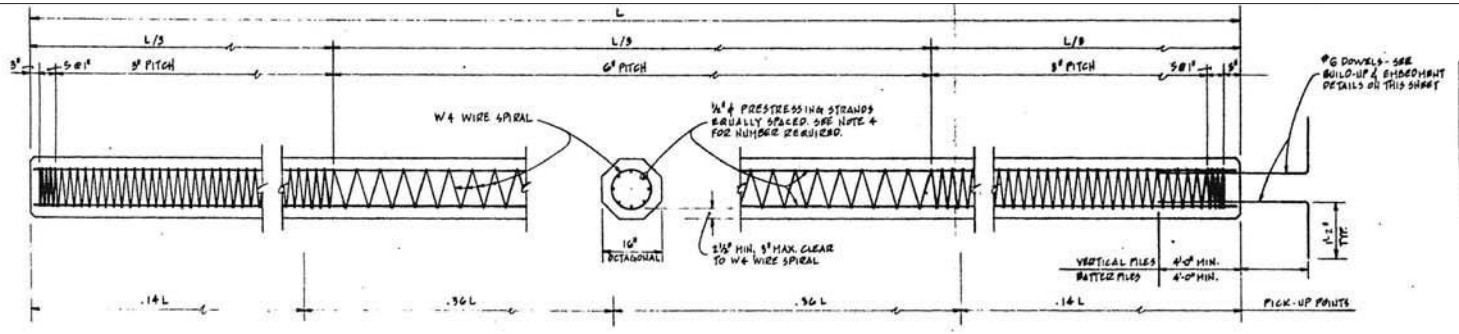
DESIGNED BY TJF
DRAWN BY PGM
CHECKED BY JTM
APPROV. BY ----

VENTURA HARBOR BOATYARD

EXISTING PIER RECORD DRAWINGS

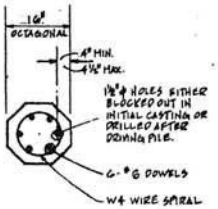
TRAVELIFT PIER REPAIR

SHEET 6 OF 13
JOB NO. 1029-02
SCALE AS SHOWN
DATE 4 DEC 2015



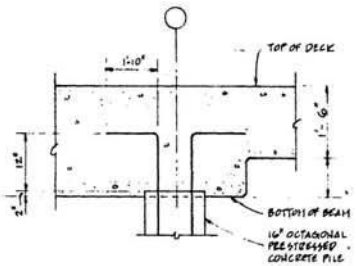
TYPICAL 16" OCTAGONAL PRESTRESSED CONCRETE PILE

NO SCALE

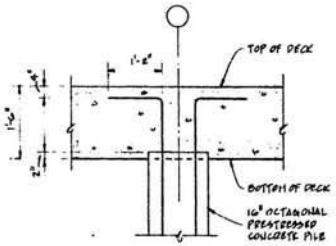


PILE DRIVING NOTES:

1. CONCRETE PILES SHALL BE DRIVEN WITH AN APPROVED STEAM HAMMER DELIVERING MIN. 24000 FOOT-POUNDS OF ENERGY PER BLOW. PILES SHALL BE DRIVEN TO REFUSAL. REFUSAL IS DEFINED AS 50 CONTINUOUS BLOWS FOR A PENETRATION OF 6 INCHES OR LESS. REFUSAL SHALL BE DETERMINED FOR OTHER DRIVING ENERGIES INCLUDING DIESEL HAMMERS.
2. SEE SHEET TP-1 FOR SPECIFIED MINIMUM PILE TIP ELEVATIONS.
3. JETTING WILL BE PERMITTED ONLY UPON APPROVAL BY THE ENGINEER.
4. TOPS OF ALL CONCRETE PILES AT CUT-OFF ELEVATION SHALL NOT BE MORE THAN 4" HORIZONTALLY MISALIGNED IN ANY DIRECTION.
5. PILES SHALL NOT BE INSTALLED OUT OF PLUMB OR AT A VARIANCE FROM THE INDICATED BATTER BY MORE THAN TWO PERCENT (2%) OF PILE LENGTH.
6. ALL PILE DRIVING PROCEDURES SHALL BE APPROVED BY THE ENGINEER.



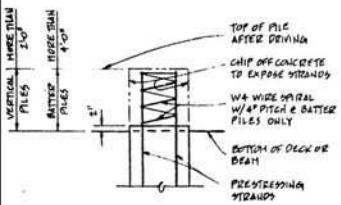
VERTICAL PILES AT BEAM



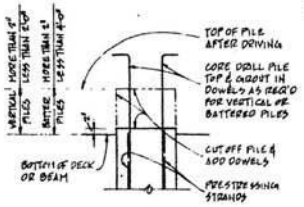
VERTICAL PILES AT DECK

PRESTRESSED CONCRETE PILE NOTES:

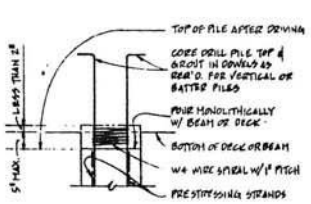
1. CONCRETE:
   - a. f'c = 4000 PSI @ TRANSFER
     f'c = 4000 PSI @ TIME OF MOVING PILE
     f'c = 5000 PSI @ 30 DAYS @ TIME OF DRIVING PILE
   - b. EFFECTIVE CONCRETE PRESTRESS AFTER LOSSES: 800 PSI
2. REINFORCING:
   - a. PRESTRESSING STEEL SHALL CONFORM TO ASTM A 416 GRADE 270
   - b. MILD STEEL DOWELS - ASTM A 615 GRADE 60
   - c. MILD STEEL SPIRALS - ASTM A 82
3. FINAL STRESS IN PRESTRESSING STEEL: SEE SPECIFICATION
4. NUMBER OF PRESTRESSING STRANDS REQUIRED: MIN. 6 - 7 WIRE ½"ϕ STRANDS $A = .153\ IN^2$
5. SECTION PROPERTIES:
   - a. AREA = 212 IN^2
   - b. I = 3592 IN^4
6. IF MORE THAN 5 FEET BUILDUP IS REQUIRED, PILE WILL BE REJECTED
7. PROVIDE EPOXY-RESIN BINDER ON CONTACT SURFACE OF PILES PRIOR TO PLACING CONCRETE FOR MONOLITHIC & INDEPENDENT BUILD-UPS.
8. #6 DOWELS ARE NOT REQUIRED FOR PILES WHOSE CUT-OFF LENGTH CONFORM TO 'NO BUILD-UP (CASE I)'.



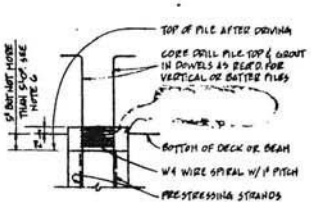
NO BUILD-UP (CASE I)



NO BUILD-UP (CASE II)



MONOLITHIC BUILD-UP



INDEPENDENT BUILD-UP

PILE BUILD-UP & EMBEDMENT

NO SCALE

SOURCE: MOFFATT AND NICHOL, ENGINEERS, 1980.

1/7 EXISTING PIER PILES DETAIL

SCALE: N.T.S.

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NO.	DATE	REVISION

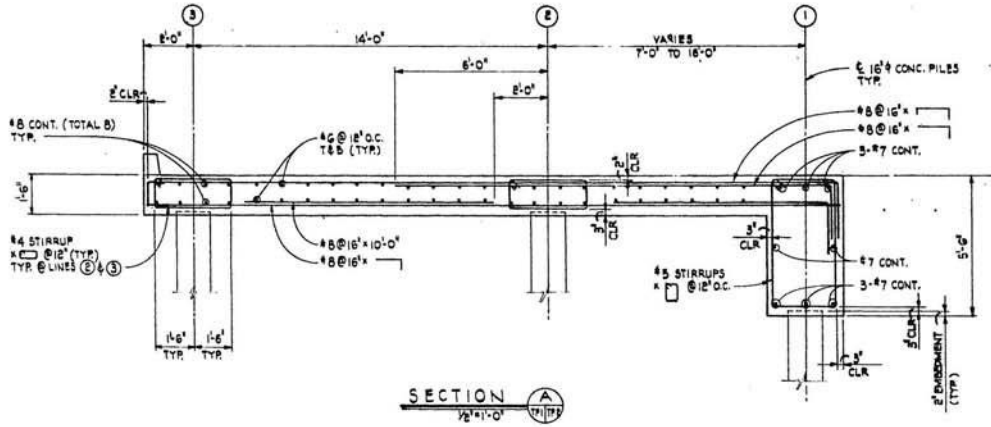
DESIGNED BY TJF
DRAWN BY PGM
CHECKED BY JTM
APPROV. BY ----

VENTURA HARBOR BOATYARD

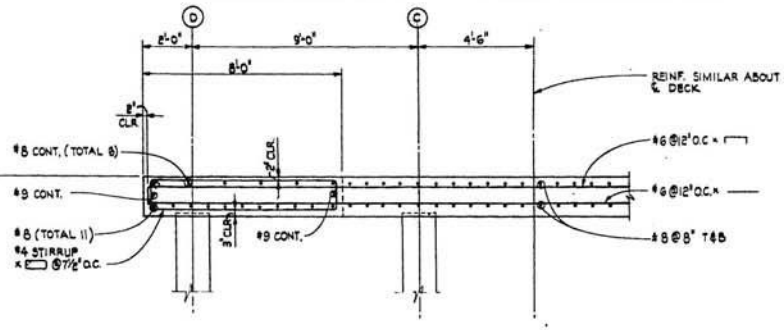
EXISTING PIER PILE DETAILS

TRAVELIFT PIER REPAIR

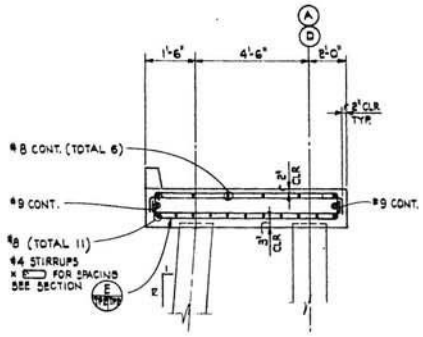
SHEET 7 OF 13
JOB NO. 1029-02
SCALE AS SHOWN
DATE 4 DEC 2015



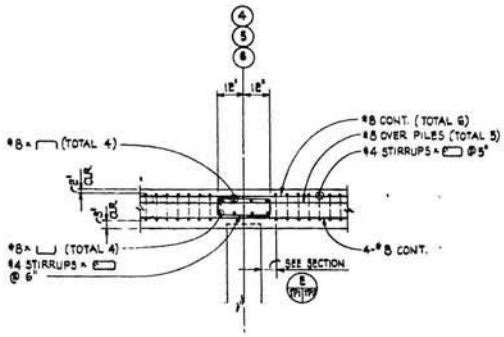
SECTION A
1/2" = 1'-0"



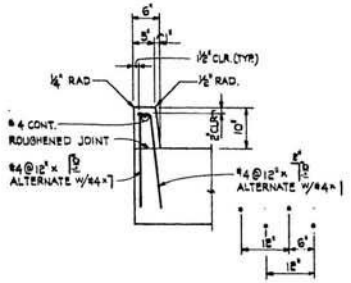
SECTION B
1/2" = 1'-0"



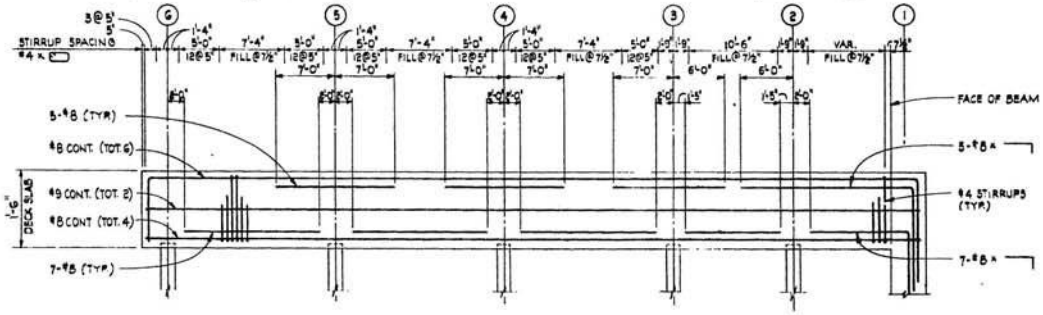
SECTION C
1/2" = 1'-0"



SECTION D
1/2" = 1'-0"



TYPICAL CURB DETAIL
1" = 1'-0"



SCHEMATIC SECTION E
NO SCALE

SOURCE: MOFFATT AND NICHOL, ENGINEERS, 1980.

1/8 EXISTING PIER DETAILS
SCALE: N.T.S.

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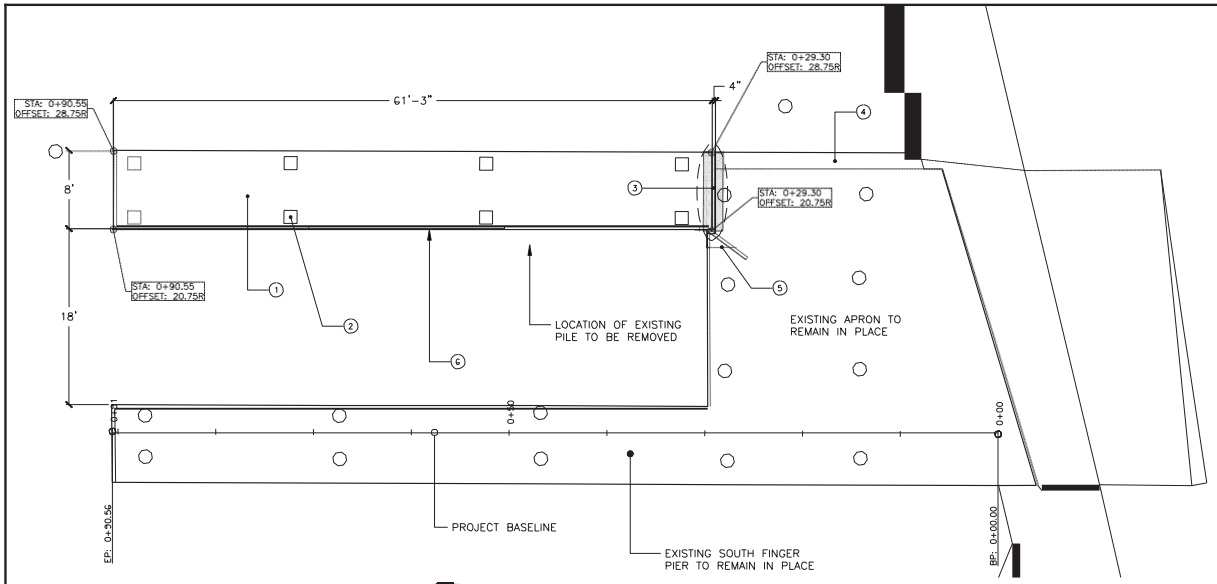
APPROV. BY ----

VENTURA HARBOR BOATYARD

EXISTING PIER DETAILS

TRAVELIFT PIER REPAIR

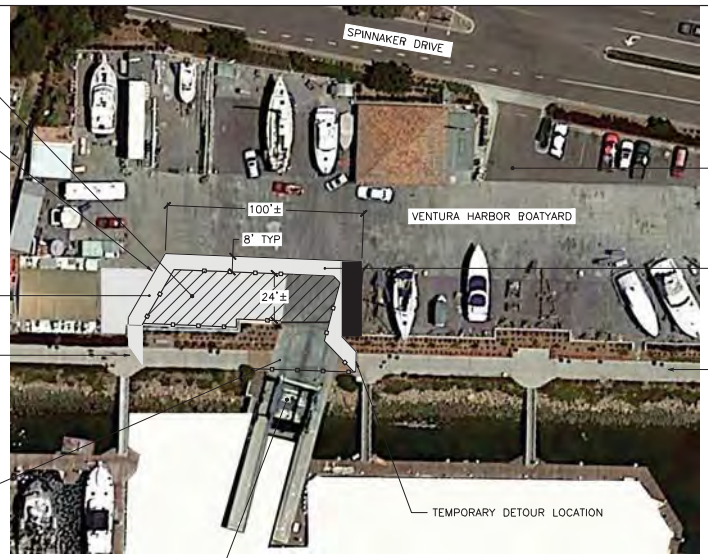
SHEET 8 OF 13
JOB NO. 1029-02
SCALE AS SHOWN
DATE 4 DEC 2015



1/9 PROJECT PLAN
SCALE: 1" = 6'
0 6 FEET

CONSTRUCTION SCHEDULE:

ITEM	DESCRIPTION	
1	NORTH FINGER PIER	1/11
2	16-IN SQUARE FOUNDATION PILE	2/10
3	EXPANSION PLATE (BY VHBY)	3/12
4	APRON EXTENSION	1/12
5	3' LONG SOFFIT EPOXY INJECTION CRACK REPAIR	1/12
6	L6x4x½ CURB (BY VHBY, CONTRACTOR TO SET ANCHOR BOLTS)	2/12



CONTRACTOR STAGING AND STORAGE AREA ENCLOSED WITH TEMPORARY CHAIN LINK FENCE COVERED WITH FABRIC

OUTER PERIMETER OF TEMPORARY SIDEWALK LINED WITH TEMPORARY PEDESTRIAN FENCE BARRICADE.

TEMPORARY SIDEWALK BYPASS MONDAY THROUGH FRIDAY

TEMPORARY DETOUR LOCATION

EXISTING SIDEWALK SHALL BE OPEN ON WEEKENDS AND AFTER WORK HOURS. TEMPORARY CHAIN LINK FENCE SHALL BE ERECTED TO BLOCK ACCESS TO TRAVELIFT PIER WORK AREA DURING WEEKENDS AND AFTER WORK HOURS.

VENTURA HARBOR BOATYARD MATERIALS DELIVERY

DOUBLE-SWING GATE FOR EQUIPMENT AND MATERIALS DELIVERY.

EXISTING PUBLIC SIDEWALK

TEMPORARY DETOUR LOCATION

EXISTING TRAVELIFT PIER APRON WORK AREA

2/9 STAGING AND STORAGE AREA PLAN
SCALE: 1" = 30'
0 30 FEET

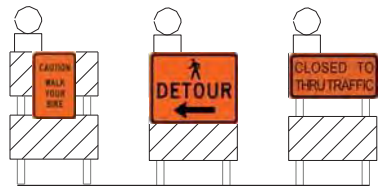
NOTES:

1. FLAGMEN SHALL ACCOMPANY ALL EQUIPMENT CROSSING TEMPORARY PEDESTRIAN SIDEWALK OR EXISTING SIDEWALK AT ALL TIMES.
2. BARRICADE EACH END OF PUBLIC SIDEWALK AT TEMPORARY DETOUR LOCATIONS WITH AT LEAST THREE TYPE II BARRICADES WITH WARNING LIGHTS. FABRICATE, INSTALL, AND MAINTAIN PUBLIC WARNING AND NOTIFICATION SIGNAGE AS SHOWN. MAINTAIN SIGNAGE AND BARRICADES CONTINUOUSLY AT ALL TIMES FOR DURATION OF THE WORK.

CUSTOM LETTERED FROM 12'x18" SIGN FROM ROAD TRAFFIC SIGNS OR EQUAL

24" WIDE MUTCD STND SIGN M4-9B. LEFT AND RIGHT SIGN REQUIRED

CUSTOM LETTERED FROM 12'x24" MUTCD STND W23 SIGN SERIES



REGISTERED PROFESSIONAL ENGINEER
JON T. MOORE
No. 75673
Exp. 12-31-17
CIVIL
STATE OF CALIFORNIA

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NO.	DATE	REVISION
1	12/15/2015	CLARIFY STAGING AND STORAGE AREA

DESIGNED BY TJF
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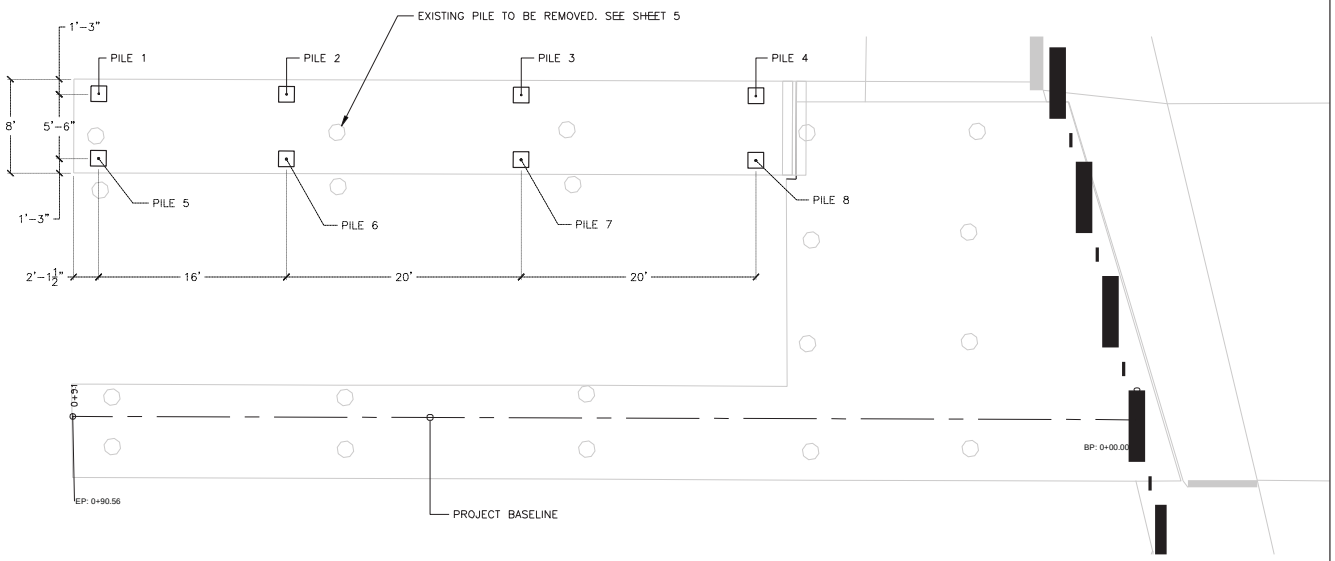
CHECKED BY JTM
APPROV. BY ----

VENTURA HARBOR BOATYARD

PROJECT PLAN

TRAVELIFT PIER REPAIR

SHEET 9 OF 13
JOB NO. 1029-02
SCALE AS SHOWN
DATE 4 DEC 2015



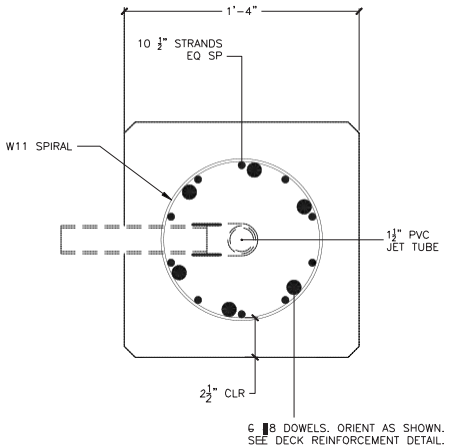
1/10 PILE PLAN
SCALE: 1" = 5'-0"

PILE SCHEDULE

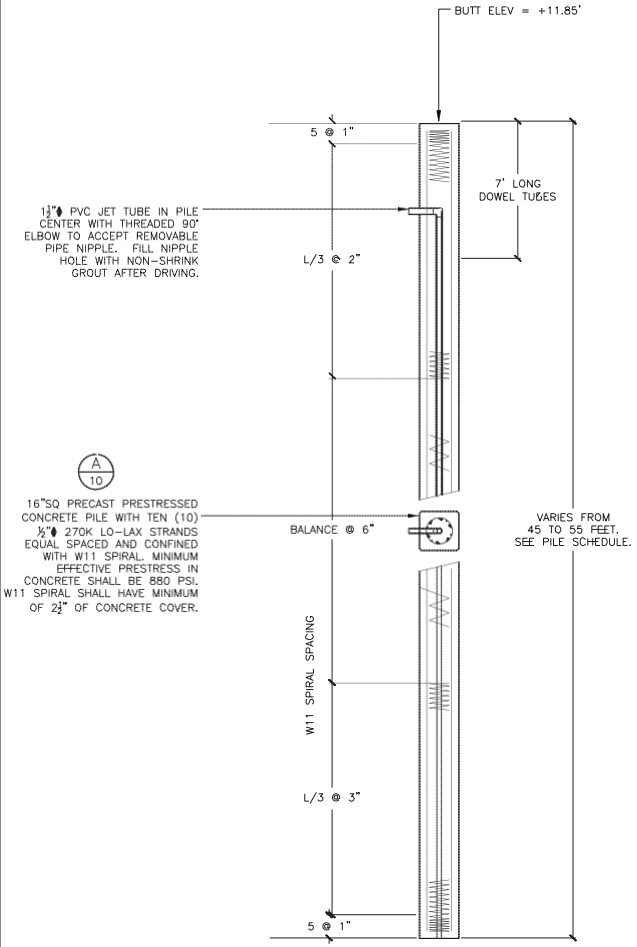
PILE NO.	STATION	OFFSET	NORTHING	EASTING	APPROX. MUDLINE ELEV	BUTT ELEV	TIP ELEV	PILE LENGTH
1	0+68.43	27.50	1,912,564.583	6,180,316.656	-16	11.68	-43.32	55
2	0+72.43	27.50	1,912,560.755	6,180,332.192	-10	11.68	-43.32	55
3	0+52.43	27.50	1,912,555.970	6,180,351.611	-7	11.68	-33.32	45
4	0+32.43	27.50	1,912,551.185	6,180,371.030	0	11.68	-33.32	45
5	0+68.43	22.00	1,912,559.242	6,180,315.340	-16	11.68	-43.32	55
6	0+72.43	22.00	1,912,555.416	6,180,330.876	-10	11.68	-43.32	55
7	0+52.43	22.00	1,912,550.630	6,180,350.295	-7	11.68	-33.32	45
8	0+32.43	22.00	1,912,545.845	6,180,369.714	0	11.68	-33.32	45

NOTES:

1. REMOVE AND REPLACE EXISTING SLOPE PROTECTION STONE AS REQUIRED TO UNOBSTRUCT DRIVING FOR PILE NOS. 4 AND 8.
2. JET PILE TO WITHIN EIGHT (8) FEET OF SPECIFIED TIP ELEVATION THEN DRIVE TO SPECIFIED TIP ELEVATION WITH APPROVED IMPACT HAMMER THAT HAS SUFFICIENT RAM WEIGHT AS SPECIFIED ON SHEET 2.



A/10 PILE SECTION
SCALE: 3" = 1'-0"



2/10 PILE DETAIL
SCALE: 3/4" = 1'-0"

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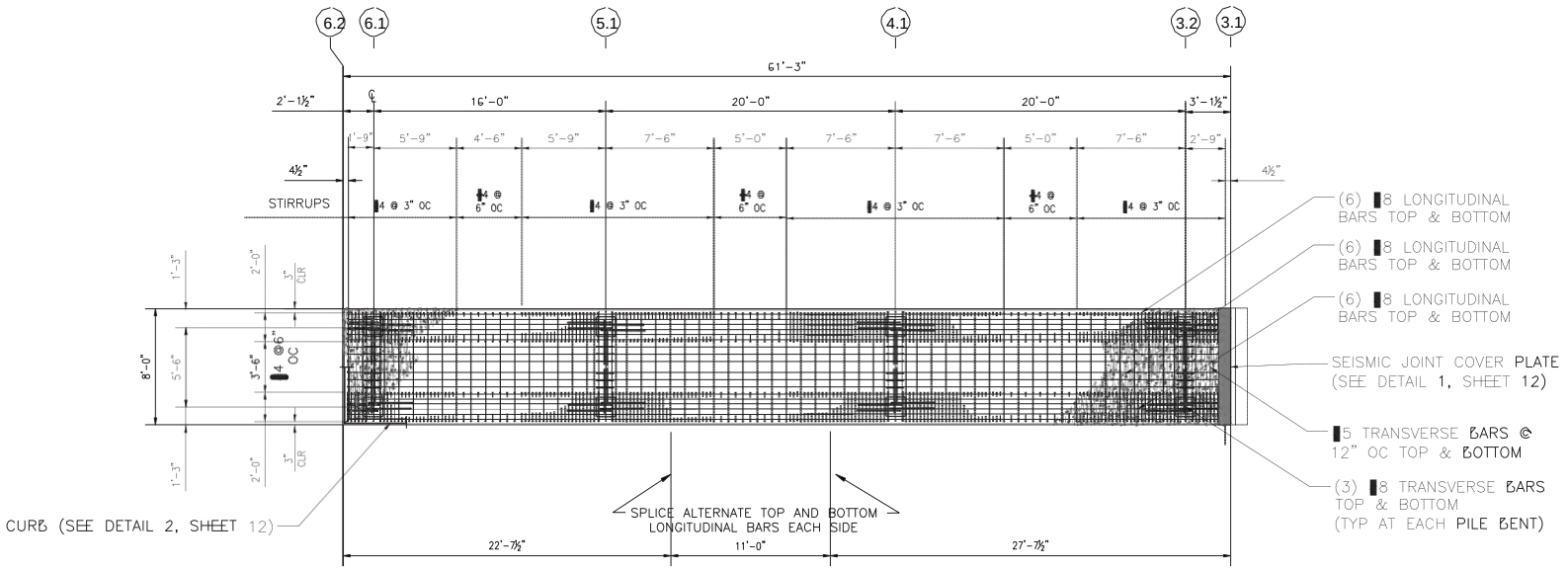
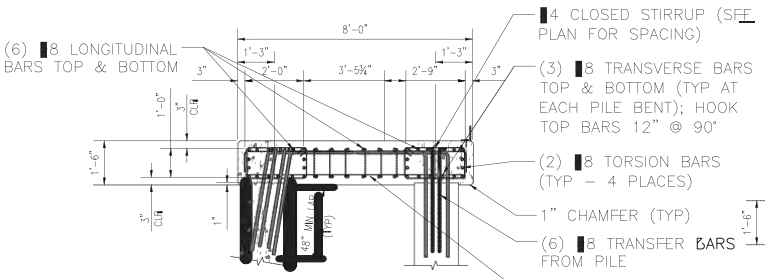
PILE PLAN

TRAVELIFT PIER REPAIR

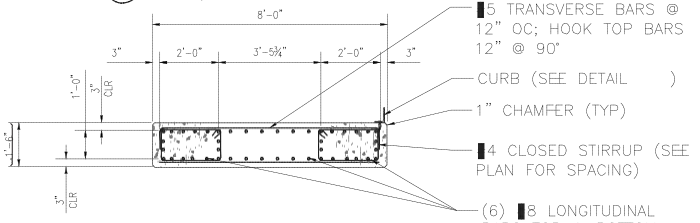
SHEET 10 OF 13
JOB NO. 1029-02
SCALE AS SHOWN
DATE 4 DEC 2015



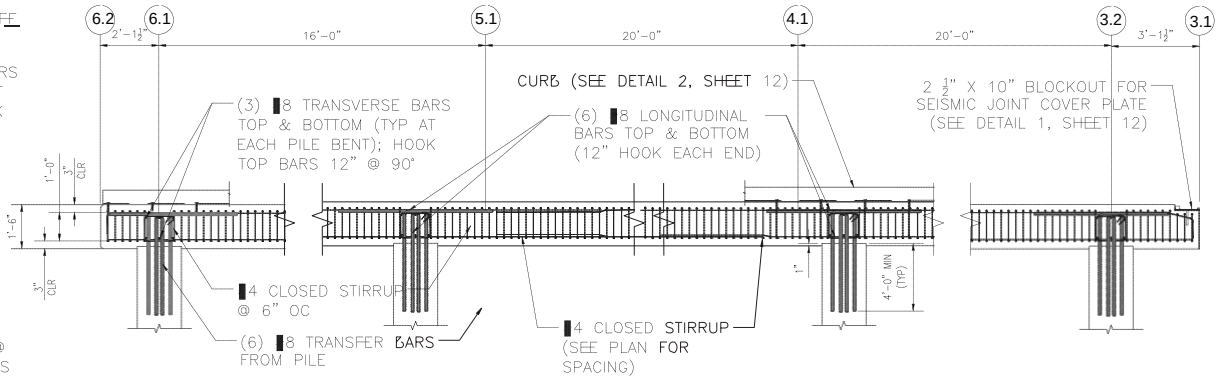
1 / 11 DECK PLAN
SCALE: 1:48



2 / 11 DECK SECTION AT BENT
SCALE: 1/2" = 1'-0"



3 / 11 DECK SECTION BETWEEN BENTS
SCALE: 1/2" = 1'-0"



4 / 11 DECK ELEVATION
SCALE: 1/2" = 1'-0"

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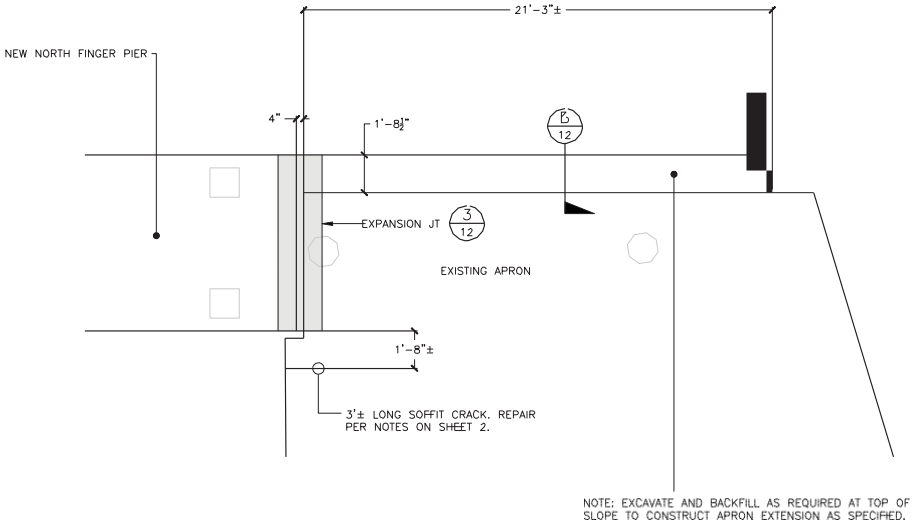
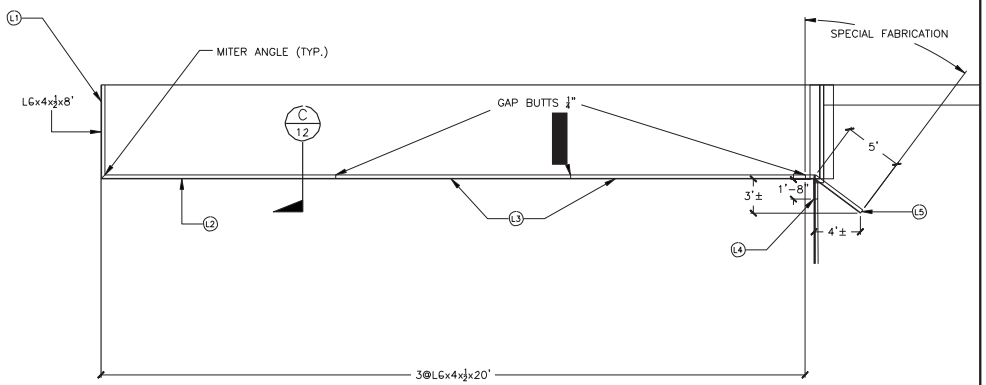
DECK PLAN

TRAVELIFT PIER REPAIR

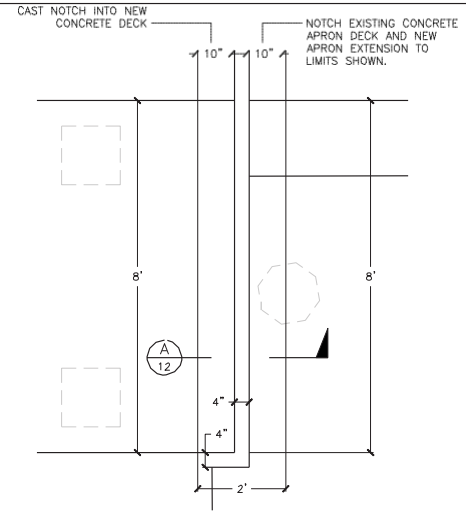
SHEET 11 OF 13
JOB NO. 1029-02
SCALE AS SHOWN
DATE 4 DEC 2015



1 12 APRON EXTENSION PLAN DETAIL
SCALE: 3/8" = 1'-0"

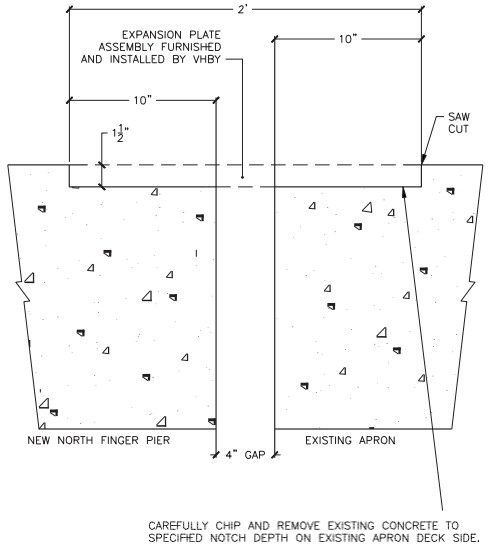


2 12 CURB PLAN DETAIL
SCALE: 1" = 4'

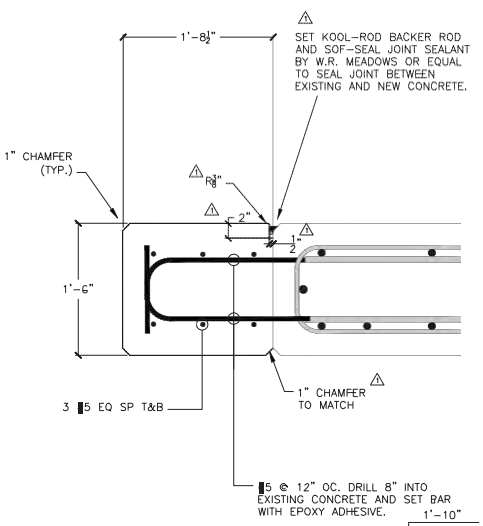


NOTE:
CONTRACTOR SHALL PREPARE 2'x8'x1½" NOTCH AS SHOWN TO RECEIVE STEEL EXPANSION PLATE ASSEMBLY TO BE FABRICATED AND INSTALLED BY VHBY.

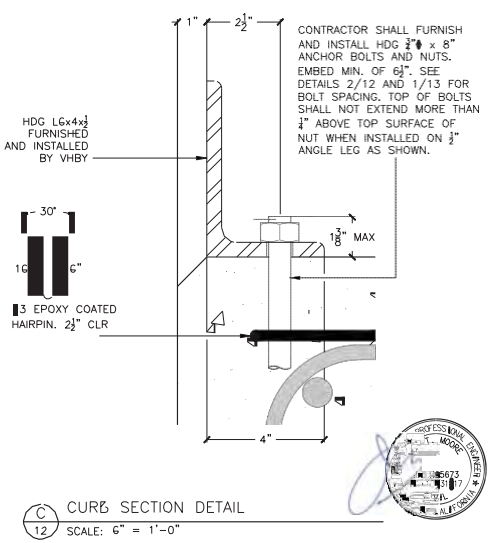
3 12 EXPANSION JOINT PLAN DETAIL
SCALE: 3/4" = 1'-0"



A 12 EXPANSION JOINT SECTION
SCALE: 3" = 1'-0"



B 12 APRON EXTENSION SECTION
SCALE: 1-1/2" = 1'-0"



C 12 CURB SECTION DETAIL
SCALE: 6" = 1'-0"

NO.	DATE	REVISION
1	10/19/2015	CURVED TOP/BOTTOM CHAMFER AND JOINT SEAL DETAIL ON DETAIL B SECTION.

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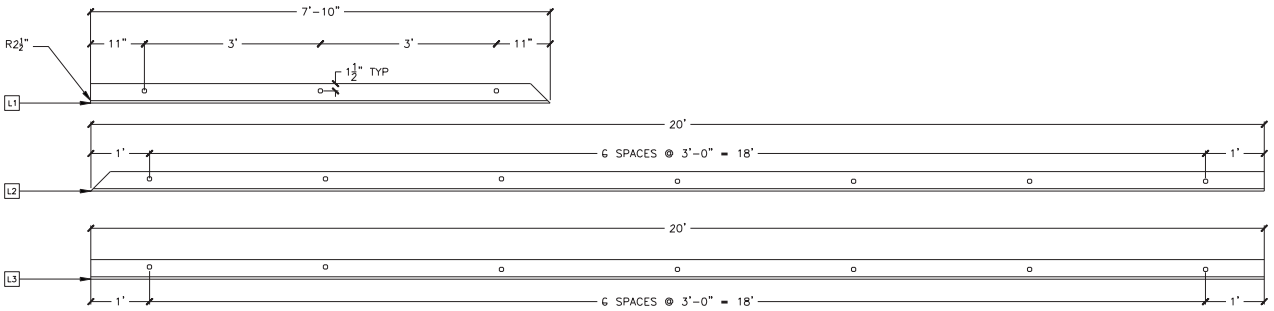
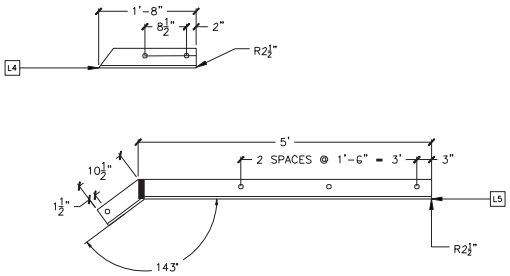
DETAILS

TRAVELIFT PIER REPAIR

SHEET 12 OF 13
JOB NO. 1029-02
SCALE AS SHOWN
DATE 4 DEC 2015





1 / 13 CURB ANGLE DETAIL

SCALE: 1" = 1'-0"

NOTES:

1. ALL ANGLE SHALL BE L6x4x$\frac{3}{8}$ CONFORMING TO ASTM A36. HOT DIP GALVANIZE AFTER FABRICATION.
2. ALL ANGLE SHALL BE FURNISHED AND INSTALLED BY VHBY. CONTRACTOR SHALL SET ALL CAST-IN-PLACE $\frac{3}{4}$"ø ANCHOR BOLTS TO MATCH THE BOLT PATTERN SHOWN.
3. ALL HOLES $\frac{7}{8}$"ø FOR $\frac{3}{4}$"ø BOLTS.

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FABRICATED METAL

TRAVELIFT PIER REPAIR

SHEET 13 OF 13
JOB NO. 1029-02
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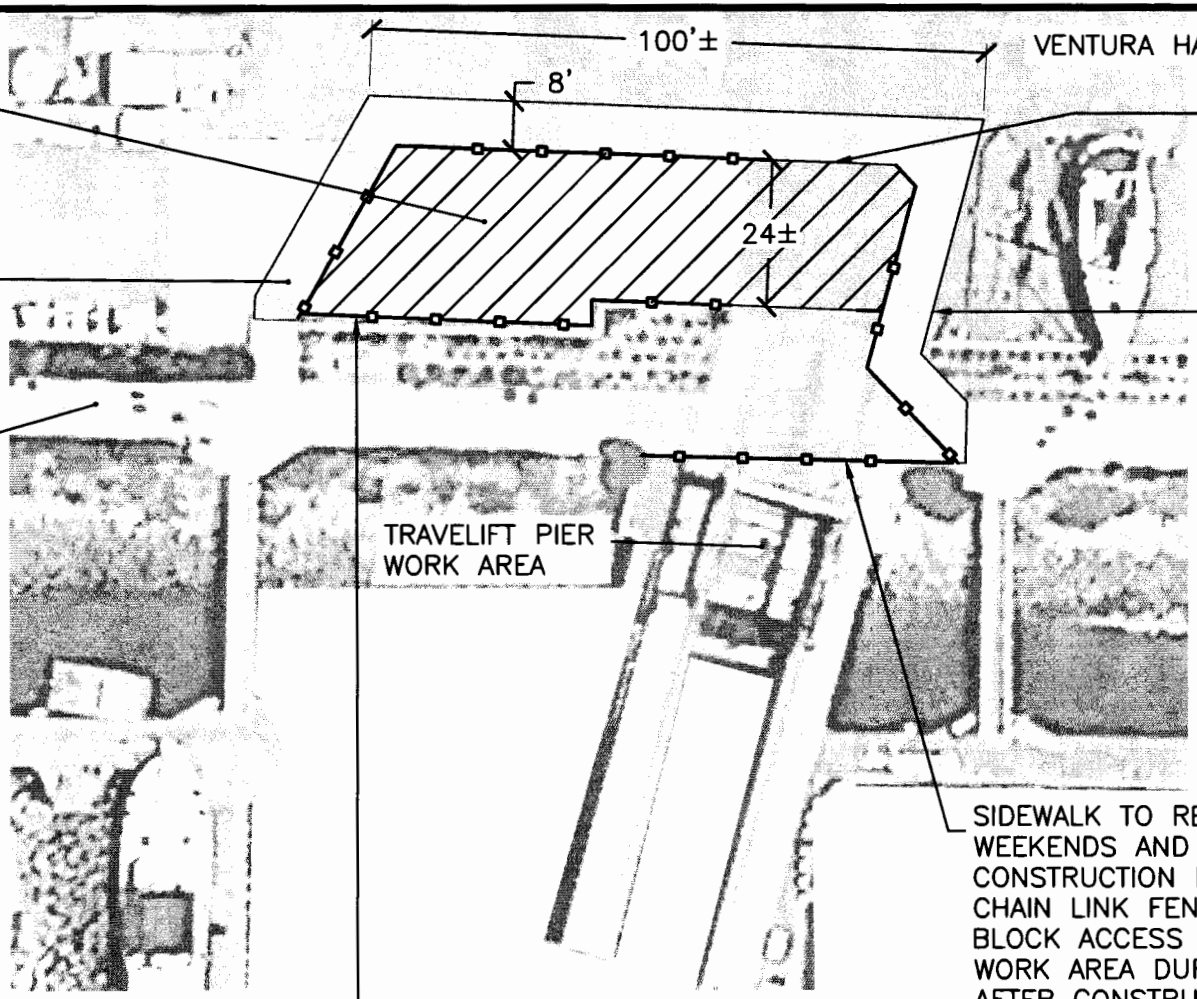
DATE 4 DEC 2015



SCALE: 1" = 30'

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TEMPORARY CONSTRUCTION FENCE PLAN

~~FIGURE 7~~

Exhibit 8