FOR CONTRACT NO.: 01-474904

INFORMATION HANDOUT

WATER QUALITY

NORTH COAST REGION

PERMITS

STATE OF CALIFORNIA
DEPARTMENT OF FISH AND GAME
NOTIFICATION NO. 1600-2012-0244-R1

UNITED STATES ARMY CORPS OF ENGINEERS
NON-REPORTING NATIONWIDE 404 PERMIT

ENCROACHMENT PERMITS

COUNTY OF MENDOCINO
DEPARTMENT OF PLANNING AND BUILDING SERVICES
COASTAL DEVELOPMENT

MATERIALS INFORMATION

FOUNDATION REPORT

ROUTE: 01-MEN-1-70.3/70.7

June 19, 2013

In the Matter of

Water Quality Certification

for the

California Department of Transportation
State Route 101 – Seaside Beach Storm Damage Repair Project
WDID No. 1B12173WNME

APPLICANT:	California Department of Transportation
RECEIVING WATERS:	Seaside Creek, Pacific Ocean
HYDROLOGIC UNITS:	Mendocino Coast Hydrologic Unit No.113.00
COUNTY:	Mendocino
FILE NAME:	CDOT - HWY 1, Seaside Beach Project WDID No. 1B12173WNME

BY THE EXECUTIVE OFFICER:

1. On September 7, 2012, the North Coast Regional Water Quality Control Board (Regional Water Board) received an application from the California Department of Transportation (Caltrans) requesting Federal Clean Water Act (CWA) section 401, Water Quality Certification (certification) for activities related to the California Department of Transportation (Caltrans) State Route (SR) 1 Seaside Beach Storm Damage Repair Project (Project).

2. **Hydrologic Unit**: The proposed Project would cause disturbances to waters of the United States (U.S.) and waters of the State associated with wetlands and streams within the Ten Mile Hydrologic Sub-Area No. 113.13.

3. **Public Notice:** The Regional Water Board provided public notice of the application pursuant to title 23, California Code of Regulations, section 3858 on May 6, 2013, and posted information describing the Project on the Regional Water Board's website. No comments were received.

4. **Project Purpose:** The purpose of the Project is to improve roadway safety by improving drainage and repairing storm damage to the existing retaining wall, metal beam guardrail, and roadway prism.

5. **Project Description:** The Project is located on SR 1 between post miles 70.2 and 70.8, in Mendocino County. The scope of work includes:
    - Realigning the roadway surface;
    - Constructing a soldier pile tie back wall;
    - Constructing geo-synthetic reinforced embankment; and
    - Replacing the existing metal beam guardrail.

6. **Construction Schedule:** Project implementation is expected to last approximately 230 days between May 19, 2014, and March 23, 2015.

7. **Permanent Impacts:** Project implementation would result in approximately 0.13 acres of permanent impacts to jurisdictional wetlands due to installation of a new retaining wall and reinforced embankment, and shoulder widening.

8. **Temporary Impacts:** Project implementation would result in approximately 0.21 acres of temporary impacts to jurisdictional wetlands, and approximately 0.02 acres of temporary impacts to waters of the State, due to construction staging activities.

9. **Mitigation for Permanent Impacts to Jurisdictional Wetlands**: To mitigate for 0.13 acres of permanent impacts to jurisdictional wetlands, Caltrans shall provide 0.39 acres of wetland restoration at Inglenook Fen in the Ten Mile Dunes Natural Preserve within MacKerricher State Park.

10. **Mitigation for Temporary Impacts:** To offset approximately 0.21 acres of temporary impacts to jurisdictional wetlands, and approximately 0.02 acres of temporary impacts to waters of the State, Caltrans shall restore all temporarily disturbed areas to pre-construction condition following the construction activities. To mitigate for temporal loss of wetland functions associated with temporary wetland impacts, Caltrans shall restore 0.13 acres of wetlands off-site restoration at Inglenook Fen in the Ten Mile Dunes Natural Preserve within MacKerricher State Park.

11. **Avoidance and Minimization:** To minimize impacts to aquatic resources, Caltrans shall work in jurisdictional wetlands only during the dry season (May 15 to October 15), work from the roadway whenever feasible, minimize vegetation disturbance to the greatest degree possible, and implement construction-stage pollution prevention best management practices (BMPs).

12. **Post-Construction Stormwater Treatment:** The Project will result in an increase of approximately 0.48 acres of impervious surface. Caltrans shall install a biofiltration strip to treat no less than 0.64 acres of impervious area.

13. **Disturbed Soil Area:** The Project will result in less than one acre of disturbed soil area. Caltrans shall utilize BMPs to provide erosion control and pollution prevention throughout the Project area during construction. All graded areas within the Project affected by the construction activities shall be appropriately stabilized and/or replanted with appropriate native vegetation.

14. **Utility Relocations:** Utility relocations are not needed for this project.

15. **Other Agency Actions:** Caltrans has applied to the U.S. Army Corps of Engineers to perform the Project under Nationwide Permit No. 14 (*linear transportation projects*) pursuant to Clean Water Act, section 404. Caltrans has also applied for a California Department of Fish and Wildlife 1602 Streambed Alteration Agreement and a Coastal Development Permit from the County of Mendocino.

16. **CEQA Compliance:** On August 10, 2011, Caltrans, acting as lead agency, certified a Mitigated Negative Declaration for the proposed Project in order to comply with the California Environmental Quality Act (State Clearing House No. 2010122018). The Regional Water Board has considered the environmental documentation, including any proposed changes, and incorporated any avoidance, minimization, and mitigation measures into the Project as a condition of approval to avoid significant effects to the environment.

17. **TMDLs:** This Project is not within a Clean Water Act section 303(d) list watershed.

18. **Antidegradation Policy:** The federal antidegradation policy requires that State water quality standards include an antidegradation policy consistent with federal policy. The State Water Resources Control Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements and incorporates by reference, both the State and federal antidegradation policies. This certification is consistent with applicable federal and State antidegradation policies, as it does not authorize the discharge of increased concentrations of pollutants or increased volumes of treated wastewater, and does not otherwise authorize degradation of the waters affected by this Project.

19. This discharge is also regulated under State Water Resources Control Board Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill

Discharges That Have Received State Water Quality Certification," which requires compliance with all conditions of this certification.

Receiving Waters:	Seaside Creek and Pacific Ocean Mendocino Coast Hydrologic Unit No.113.13	
Filled and/or Excavated Areas:	Permanent – wetlands (U.S.)	0.12 acres
	Permanent – wetlands (State)	0.01 acres
	Temporary – wetlands (U.S.)	0.17 acres
	Temporary – wetlands (State)	0.04 acres
	Temporary – streams (US)	461 linear feet
Dredge Volume:	Permanent – 386 cubic yards	
Fill Volume:	Permanent – 1,480 cubic yards	
	Temporary – 1,826 cubic yards	
Mitigation proposed:	On-site: - Re-vegetation of all disturbed areas. Off-site: - 0.52 acres of wetland restoration at MacKerricher State Park.	
Latitude/Longitude:	39.557658N / 123.764611 W	

Accordingly, based on its independent review of the record, the Regional Water Board certifies that the Caltrans – State Route 1 Seaside Beach Project (WDID No. 1B12173WNME), as described in the application received September 7, 2012, will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law, provided that the Caltrans complies with the following terms and conditions:

All conditions of this certification apply to Caltrans (and all its employees) and all contractors (and their employees), sub-contractors (and their employees), and any other entity or agency that performs activities or work on the project (including the off-site mitigation lands) as related to this Water Quality Certification.

Project-Specific Conditions Requiring Reports

1. Caltrans shall perform off-site mitigation as proposed in the Caltrans-prepared *Seaside Beach Roadside Repair (EA 47490) Anchor Bay Drainage Repair (EA 44650) and SR 128/253 Culvert Rehabilitation (EA 37812, 37813, 37814, 37816, 37817) and Men 20 Left Turn and Shoulder Widening (EA 29200) Off-Site Wetland Mitigation at California State Parks Inglenook Fen – Ten Mile Dunes Natural Preserve, Mitigation and Monitoring Plan,* dated April 2013. Any modifications to the April 2013, mitigation plan shall first be subject to the acceptance of Regional Board staff.

   Mitigation at Inglenook Fen shall result in the restoration of no less than 0.52 acres of

Project-Specific Conditions Requiring Reports (continued)

wetlands. Caltrans shall construct the restoration project concurrent with the Seaside Beach Project. The mitigation project shall be monitored annually for five years to determine progress toward the achievement of success criteria, with the first annual monitoring report due to the Regional Water Board on January 31, after completing Project construction. The final mitigation success shall be evaluated no sooner than monitoring year five.

2. Caltrans shall submit a long-term management plan for the Inglenook Fen mitigation prior to Project construction. The long-term management plan shall detail funding, implementation, and adaptive management responsibilities in perpetuity (i.e., before and after success criteria is met). The long-term management plan shall be subject to the acceptance of Regional Water Board staff.

3. Caltrans shall perform on-site revegetation in accordance with the Caltrans-prepared *Seaside Beach Storm Damage Repair Project (EA 01-47490) Revised Revegetation Plan*, dated June 11, 2013. Revegetation planting shall occur in the first full planting season (November to April) subsequent to construction completion and erosion control. Revegetation monitoring reports are due January 31 of each year until success criteria are achieved.

4. The Regional Water Board shall be notified by e-mail at least five working days prior to commencement of ground disturbing activities for each construction season.

Project-Specific Condition

5. Caltrans shall install a biofiltration strip between stations 513+40 and 515+20 to treat no less than 0.64 acres of impervious area.

Standard Conditions

6. Herbicides and pesticides shall not be used within the Project. If Caltrans has a compelling case as to why herbicides and pesticides should be used, they may submit a request along with a BMP plan to Regional Water Board staff for review, consideration, and concurrence.

7. All activities and BMPs shall be implemented according to the submitted application materials (dated September 7, 2012) and the findings and conditions of this certification.

8. All conditions required by this Order shall be included in the Contract Documents prepared by Caltrans for the contractor. In addition, Caltrans shall require compliance with all conditions included in this Order in the bid contract for this Project.

Standard Conditions (continued)

9. This Order does not authorize drafting of surface waters.

10. Construction BMPs shall be implemented in accordance with the Caltrans Construction Site Best Management Practice Manual (CCSBMPM) and all contractors and subcontractors shall comply with the CCSBMPM. All BMPs shall be installed and used in accordance with the manufacturer's specifications. If Caltrans elects to install alternative BMPs for use on the Project, then Caltrans shall first submit a proposal to Regional Water Board staff for review and acceptance.

11. Caltrans is prohibited from discharging waste to waters of the State, unless explicitly authorized by this certification. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or concrete washings, welding slag, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature, shall be allowed to enter into waters of the State.

    Except for temporary stockpiling of waste generated during demolition operations ("temporary" in this instance means generated and removed during the same working day), waste materials shall not be placed within 150 linear feet of waters of the State or where the materials may be washed by rainfall into waters of the State. Exceptions to the 150-foot limit may be granted on a case-by-case basis provided Caltrans first submits a proposal in writing that is found acceptable by Regional Water Board staff.

12. All project-generated waste shall be handled, transported, and disposed in strict compliance with all applicable State and Federal laws and regulations. When operations are complete, any excess material or debris shall be removed from the work area and disposed of properly and in accordance with the Special Provisions for the Project and/or the 2006 Standard Specification 7-1.13, *Disposal of Material Outside the Highway Right of Way*. Within 30 days of disposing of materials off-site Caltrans shall submit to the Regional Water Board the satisfactory evidence provided to the Caltrans Engineer by the Contractor referenced in Standard Specification 7-1.13. In accordance with State and Federal laws and regulations, Caltrans is liable and responsible for the proper disposal of waste generated by their Project.

13. Asphalt-concrete grindings shall not be placed in any location where it may, at any time, be directly exposed to storm or ground waters, except asphalt-concrete grinding may be re-used and incorporated into impervious asphalt mixes.

14. Fueling, lubrication, maintenance, storage and staging of vehicles and equipment shall not result in a discharge or a threatened discharge to any waters of the State. At no time shall Caltrans use any vehicle or equipment which leaks any substance that may impact water quality.

Standard Conditions (continued)

15. Caltrans shall prioritize the use of wildlife-friendly biodegradable (not photo-degradable) erosion control products wherever feasible. Caltrans shall not use or allow the use of erosion control products that contain synthetic netting for permanent erosion control (i.e. erosion control materials to be left in place for two years or after the completion date of the project). If Caltrans finds that erosion control netting or products have entrapped or harmed wildlife, personnel shall remove the netting or product and replace it with wildlife-friendly biodegradable products. Caltrans shall not use or allow the use of erosion control products that contain synthetic materials within waters of the United States or waters of the State at any time, with the exception of plastic sheeting. Caltrans shall first request approval from the Regional Water Board if an exception from this requirement is needed for a specific location.

16. Work in flowing or standing surface waters, unless otherwise proposed in the project description and approved by the Regional Water Board, is prohibited. If construction dewatering of groundwater is necessary, then Caltrans shall use a method of water disposal other than disposal to surface waters, such as land disposal. Groundwater disposed of to land shall not enter State waters. Alternatively, Caltrans may apply for coverage under the Low Threat Discharge Permit or an individual National Pollutant Discharge Elimination System (NPDES) Permit. If Caltrans applies for coverage under either of these permits, then discharge is prohibited until Caltrans has received notification of coverage under the respective permit.

17. Fueling, lubrication, maintenance, storage and staging of vehicles and equipment shall be prohibited within waters of the State. Fueling of individual equipment types within waters of the State may be authorized if Caltrans first prepares a fueling plan that:
    - i) Identifies the specific piece of machinery that may require fueling within waters of the State;
    - ii) Provides justification for the need to refuel within State waters. The justification shall describe why fueling outside of jurisdictional waters is infeasible; and
    - iii) Includes a narrative of specific BMPs that shall be employed to prevent and capture fuel releases.

    Fueling of equipment within waters of the State shall be prohibited until the fueling plan has been approved by Regional Water Board staff. The fueling plan may be submitted individually, included in the project Storm Water Pollution Prevention Plan (SWPPP), or submitted as a SWPPP amendment. If the fueling plan is included in the Notice of Intent package for coverage under the statewide construction general stormwater permit, then acceptance of the NOI does not constitute Regional Water Board staff acceptance of the fueling plan.

Standard Conditions (continued)

18. Caltrans shall provide a copy of this certification and State Water Resources Control Board (SWRCB) Order No. 2003-0017-DWQ (web link referenced below) to the contractor and all subcontractors conducting the work, and require that copies remain in their possession at the work site. Caltrans shall be responsible for work conducted by its contractor or subcontractors.

19. Caltrans shall provide access to the Project construction site upon request by Regional Water Board staff.

20. The Resident Engineer (or appropriately authorized agent) shall hold water quality permit compliance meetings (similar to tailgate safety meetings) to discuss permit compliance, including instructions on violation avoidance and violation reporting procedures. The meetings shall be held at least every other week, before forecasted storm events, and when a new contractor or subcontractor arrives to begin work at the site. The contractors, subcontractors and their employees, and inspectors or monitors assigned to work on the Project within the next week, shall be present at the meetings. Individuals that cannot attend the meeting shall have an alternative meeting briefing. Caltrans shall maintain dated sign-in sheets for attendees at these meetings, and shall make them available to the Regional Water Board on request.

21. Caltrans shall implement appropriate BMPs to prevent the discharge of equipment fluids to the stream channel. The minimum requirements shall include: storing hazardous materials at least 150 linear feet outside of the stream banks; checking equipment for leaks and not using equipment with leaks; and pressure washing or steam cleaning equipment to remove fluid residue on any of its surfaces prior to its entering any stream channel. Fluids and waste by-products generated by equipment washing and cleaning shall not enter State waters.

22. If an unauthorized discharge to surface waters (including wetlands, rivers or streams) occurs, or any other threat to water quality arises as a result of Project implementation, the associated Project activities shall cease immediately until the threat to water quality is otherwise abated. If there is a discharge to State waters, the Regional Water Board shall be notified no more than 24 hours after the discharge occurs.

23. Caltrans and their contractor are not authorized to discharge wastewater (e.g., water that has contacted uncured concrete or cement, or asphalt) to surface waters, ground waters, or land. Wastewater may only be disposed of to a sanitary waste water collection system/facility (with authorization from the facility's owner or operator) or a properly-licensed disposal or reuse facility. If Caltrans or their contractor proposes an alternate disposal method, Caltrans or their contractor shall request authorization from the Regional Water Board. Plans to reuse or recycle wastewater

Standard Conditions (continued)

require written approval from Regional Water Board staff.

24. Concrete shall be excluded from surface water for a period of 30-days after it is poured/sprayed. During that time the concrete shall be kept moist and runoff from the concrete shall not be allowed to enter any water body. Commercial sealants may be applied to the concrete surface where difficulty in excluding flow for a long period may occur. If sealant is used, water shall be excluded from the site until the sealant is cured. If groundwater comes into contact with fresh concrete, it shall be prevented from flowing towards surface water.

25. All imported fill material shall be clean and free of pollutants. All fill material shall be imported from a source that has the appropriate environmental clearances and permits. The reuse of low-level contaminated solids as fill on-site shall be performed in accordance with all State and Federal policies and established guidelines and must be submitted to the Regional Water Board for review and concurrence.

26. The validity of this certification is conditioned upon total payment of any fee required under title 23, California Code of Regulations, section 3833, and owed by the applicant. $1,675 was submitted by Caltrans on September 7, 2012.

27. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to title 23, California Code of Regulations, section 3855, subdivision (b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

28. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under applicable state or federal law. For the purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification. In response to a suspected violation of any condition of this certification, the State Water Board may require the holder of any federal permit or license subject to this certification to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In response to any violation of the conditions of this certification, the Regional Water Board may add to or modify the conditions of this certification as appropriate to ensure compliance.

Standard Conditions (continued)

29. This certification action is subject to modification or revocation upon administrative or judicial review; including review and amendment pursuant to Water Code section 13330 and title 23, California Code of Regulations, section 3867.

30. This certification is not transferable. In the event of any change in control of ownership of land presently owned or controlled by the Applicant, the Applicant shall notify the successor-in-interest of the existence of this certification by letter and shall forward a copy of the letter to the Regional Water Board. The successor-in-interest must send to the Regional Water Board Executive Officer a written request for transfer of this certification to discharge dredged or fill material under this Order. The request must contain the following:
    i) requesting entity's full legal name;
    ii) the state of incorporation, if a corporation;
    iii) address and phone number of contact person; and
    iv) a description of any changes to the project or confirmation that the successor-in-interest intends to implement the project as described in this Order.

31. Except as may be modified by any preceding conditions, all certification actions are contingent on: a) the discharge being limited, and all proposed revegetation, avoidance, minimization, and mitigation measures being completed, in strict compliance with Caltrans' project description and CEQA documentation, as approved herein, b) Caltrans shall construct the project in accordance with the project described in the application and the findings above, and c) compliance with all applicable water quality requirements and water quality control plans including the requirements of the Water Quality Control Plan for the North Coast Region (Basin Plan), and amendments thereto. Any change in the design or implementation of the project that would have a significant or material effect on the findings, conclusions, or conditions of this Order must be submitted to the Executive Officer of the Regional Water Board for prior review, consideration, and written concurrence. If the Regional Water Board is not notified of a significant alteration to the project, it will be considered a violation of this Order, and Caltrans may be subject to Regional Water Board enforcement actions.

32. The authorization of this certification for any dredge and fill activities expires on November 5, 2017. Conditions and monitoring requirements outlined in this Order are not subject to the expiration date outlined above, and remain in full effect and are enforceable.

Conditions 1-4 of this certification include requirements for information and reports. Any requirement for a report made as a condition to this action is a formal

requirement pursuant to California Water Code (CWC) section 13267, and failure or refusal to provide, or falsification of such required report is subject to civil liability as described in CWC, Section 13268.

The Regional Water Board may add to or modify the conditions of this Order, as appropriate, to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.

Please contact our staff Environmental Specialist / Caltrans liaison, Brendan Thompson at (707) 576-2699, or via e-mail, at Brendan.Thompson@waterboards.ca.gov, if you have any questions.

Matthias St. John
Executive Officer

130619_GBF_dp_CDOT_Hwy1_SeasideBeachProject_401_Cert

Web link:	State Water Resources Control Board Order No. 2003-0017 -DWQ, General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification can be found at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0017.pdf
Original to:	Mr. Frank Demling, Project Manager Caltrans, 1656 Union Street, Eureka, CA 95501
Copy to:	Mr. Sean Marquis, District Biologist - Caltrans, 703 B Street, Marysville, CA, 95901
Electronic Copies to:	U.S. Army Corps of Engineers, Regulatory Functions - San Francisco District
	California Department of Fish and Wildlife, Bay Delta Region
	State Water Resources Control Board
	Environmental Protection Agency, Region IX

CALIFORNIA DEPARTMENT OF FISH AND GAME
NORTHERN REGION
601 LOCUST STREET
REDDING, CALIFORNIA 96001

LAKE OR STREAMBED ALTERATION AGREEMENT
NOTIFICATION NO. 1600-2012-0244-R1
Unnamed Tributaries to Seaside Creek and the Pacific Ocean at Seaside Beach

1 Encroachment

Mr. Frank Demling representing the Dept. of Transportation (Caltrans)
CULVERT ABANDONMENT AND REPLACEMENT AS PART OF THE SEASIDE BEACH STORM DAMAGE REPAIR PROJECT; HIGHWAY 1 AT PMS 70.55 AND 70.65, MENDOCINO COUNTY

This Lake or Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Game (DFG) and Mr. Frank Demling (Permittee), representing the California Department of Transportation (Caltrans).

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified DFG on September 7, 2012 that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1602, DFG has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement.

PROJECT LOCATION

The project location is approximately 8.5 miles north of Fort Bragg at Post Mile (PM) markers 70.55 and 70.65 on State Route 1 in the County of Mendocino, State of California; Section 33, Township 20N, Range 17W; Mount Diablo Base and Meridian, in the Inglenook 7.5-minute quadrangle, U.S. Geological Survey (USGS) map, 39.557658°N/123.764611°W (NAD 83).

PROJECT DESCRIPTION

The project involves two encroachments on State Highway 1: a) abandon an existing culvert at PM 70.55 and b) replace an existing 48-inch culvert with a longer 48-inch culvert at PM 70.65.

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include: northern red-legged frog (*Rana aurora*), foothill yellow-legged frog (*R. boylii*), and other aquatic and riparian species.

The adverse effects the project could have on the fish or wildlife resources identified above include: direct and/or incidental take, impede up- and/or down-stream migration, damage to spawning and/or rearing habitat and potential cumulative impacts.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

Permittee shall meet each administrative requirement described below.

1.1 Documentation at Project Site. Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to DFG personnel, or personnel from another state, federal, or local agency upon request.

1.2 Providing Agreement to Persons at Project Site. Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.

1.3 Notification of Conflicting Provisions. Permittee shall notify DFG if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, DFG shall contact Permittee to resolve any conflict.

1.4 Project Site Entry. Permittee agrees that DFG personnel may enter the project site at any time to verify compliance with the Agreement.

2. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below.

2.1 Except where otherwise stipulated in this Agreement, all work shall be in accordance with the forms, work plans, drawings, mitigated negative declaration, biological reports and maps submitted with Notification No. 1600-2012-0244, as modified or amended on September 7, 2012.

2.2 All work within the bed, bank and channel shall be confined to the period June 15 through October 15 of each year. Work may be conducted in or near the stream during the late season work period October 15 through November 1, provided adherence to all conditions in this Agreement and a) – c) below.

a) The Permittee shall complete any unfinished encroachment work, including erosion control measures, within 24 hours of DFG directing the Permittee to do so.

b) Prior to any work at a site, the Permittee shall stock-pile erosion control materials at the site. All bare mineral soil exposed in conjunction with crossing construction, deconstruction, maintenance or repair or removal shall be treated for erosion immediately upon completion of work on the crossing, and prior to the onset of precipitation capable of generating runoff.

c) When a 7-day National Weather Service forecast of rain includes a minimum of 5 consecutive days with any chance of precipitation, 3 consecutive days with a 30% or greater chance of precipitation, or 2 consecutive days of 50% or greater chance of precipitation, the Permittee shall finish work underway at encroachment and refrain from starting any new work at encroachment prior to the rain event.

2.3 No fill material shall be placed within a stream except as specified in this Agreement.

2.4 All heavy equipment (including parts e.g., buckets) that will be entering the stream channel shall be free of materials deleterious to aquatic life including oil, grease, hydraulic fluid, soil and other debris. Cleaning of equipment shall take place outside of the channel and prior to entering the water.

2.5 Any equipment or vehicles driven and/or operated within or adjacent to the stream channel shall be checked and maintained in a manner which prevents materials that, if introduced to water, could be deleterious to aquatic life, wildlife, or riparian habitat.

2.6 Disturbance or removal of vegetation shall not exceed the minimum necessary to complete operations. The disturbed portions of any stream channel or lake margin within the high water mark of the stream or lake shall be restored to as near their original condition as possible. Restoration shall include re-vegetation of areas stripped or exposed by project activities. Slash pack, rock, or other erosion protection suitable to DFG shall be placed in areas where vegetation cannot reasonably be expected to become reestablished.

2.7 Adequate and effective erosion and siltation control measures shall be used to prevent sediment or turbid or silt-laden water from entering streams. Where needed, the Permittee shall use native vegetation or other treatments including native slash, jute netting, straw wattles, and geotextiles to protect and stabilize soils. Geotextiles, fiber rolls, and other erosion control treatments shall not contain plastic mesh netting.

2.8 All bare mineral soil exposed in conjunction with crossing construction, deconstruction, maintenance or repair, shall be treated for erosion prior to the onset of precipitation capable of generating run-off or the end of the yearly work period, whichever comes first. Restoration shall include using native slash or seeding and mulching of all bare mineral soil exposed in conjunction with encroachment work.. No annual (Italian) ryegrass (*Lolium multiflorum*) shall be used.

2.9 Encroachments and associated structures, fills, and other exposed soils shall be armored as needed to protect fill, abutments, and the stream channel and banks from erosion.

2.10 The Permittee shall provide site maintenance including, but not limited to, re-applying erosion control to minimize surface erosion and ensuring drainage structures, streambeds and banks remain sufficiently armored and/or stable.

2.11 Structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the ordinary high water mark before such flows occur or the end of the yearly work period, whichever comes first.

2.12 Refueling of equipment and vehicles and storing, adding or draining lubricants, coolants or hydraulic fluids shall not take place within or adjacent to any stream. All such fluids and containers shall be disposed of properly. Heavy equipment parked within or adjacent to the stream shall use drip pans or other devices (e.g., absorbent blankets, sheet barriers or other materials) as needed to prevent soil and water contamination.

2.13 All activities performed in the field which involve the use of petroleum or oil based substances shall employ absorbent material designated for spill containment and clean up activity on site for use in case of accidental spill. Clean-up of all spills

shall begin immediately. The Permittee shall immediately notify the State Office of Emergency Services at 1-800-852-7550. DFG shall be notified by the Permittee and consulted regarding clean-up procedures.

2.14 No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other organic or earthen material from construction work, or associated activity of whatever nature shall be allowed to enter into, or be placed where it may be washed by rainfall or runoff into Waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. (Not applicable to material installed pernanently or temporarily as part of the project activities).

2.15 Upon DFG determination that turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation, shall be halted until effective Department approved control devices are installed, or abatement procedures are initiated.

2.16 Installation or modification of culverts shall be such that water flow is not impaired and upstream or downstream passage of all aquatic life-forms is assured at all times.

2.17 Equipment shall not operate in a live (flowing) stream or wetted channel except as may be necessary to construct and remove in-stream structures to catch and contain water (i.e., cofferdams) to divert stream flow and isolate the work site, or as otherwise specifically provided for in this Agreement.

SITE-SPECIFIC MEASURES:

2.18 Permanent culverts at stream crossings shall be sized to pass the estimated 100-year flood flow, including debris and sediment loads, without overtopping or diverting. Culvert sizing factors shall include transportation of bedload, and the abundance and size of woody debris likely to be introduced to the stream upstream of the culvert crossing.

2.19 Permanent culverts shall extend lengthwise completely beyond the toe of fill. Permanent culverts and their outfall structures shall be aligned with the stream channel, as wide as or wider than the channel width, and shall be placed with the bottom set at or slightly below the natural streambed elevation to the maximum extent feasible. If permanent culverts cannot be set to grade, they shall have downspouts and/or energy dissipators below the outfall as needed to effectively control erosion.

2.20 Installation or modification of culverts shall be such that water flow is not impaired and upstream or downstream passage of all aquatic life-forms is assured at all times.

2.21 Where flowing water is present during operations:

a) Cofferdams shall be installed to divert stream flow and isolate and dewater the work site, and to catch any sediment-laden water and minimize sediment transport downstream. Cofferdams shall be constructed of non-polluting materials including sand bags, rock, and/or plastic tarps. Mineral soil shall not be used in the construction of cofferdams.

b) Flowing water shall be cleanly bypassed and/or prevented from entering the work area through pumping or gravity flow, and cleanly returned to the stream below the work area. Flow diversions shall be done in a manner that shall prevent pollution and/or siltation and provides flows to downstream reaches.

c) The Responsible Party shall remove any turbid water and sediment present in the work area prior to restoring water flow through the project site, and place them in a location where they cannot enter the Waters of the State.

2.22 To prevent the release of materials that may be toxic to fish and other aquatic species, poured concrete shall be isolated from stream flow and allowed to dry/cure for a minimum of 30 days. As an alternative, the Responsible Party shall monitor the pH of water that has come into contact with the poured concrete. If this water has a pH of 9.0 or greater, the water shall be pumped to tanker truck or to a lined off-channel basin and allowed to evaporate or be transported to an appropriate facility for disposal. During the pH monitoring period, all water that has come in contact with poured concrete shall be isolated and not allowed to flow downstream or otherwise come in contact with fish and other aquatic resources. The water shall be retested until pH values become less than 9.0. Once this has been determined, the area no longer needs to be isolated and water may be allowed to flow downstream. Results of pH monitoring shall be made available to DFG upon request.

3. Reporting Measures

Permittee shall meet each reporting requirement described below.

3.1 Permittee shall notify the Department, in writing, at least five (5) days prior to initiation of construction (project) activities and at least five (5) days prior to completion of construction (project) activities. Notification shall be faxed to the Department at (707) 441-2021, Attn: Rick Macedo, Staff Environmental Scientist, or via e-mail at rmacedo@dfg.ca.gov.

CONTACT INFORMATION

Any communication that Permittee or DFG submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, fax, or email, or to such other address as Permittee or DFG specifies by written notice to the other.

To Permittee:

Mr. Frank Demling
Caltrans
1656 Union Street
Eureka, California 95501
Office Phone: 707-445-6554
E-Mail: Frank_Demling@dot.ca.gov

To DFG:

Department of Fish and Game
Region 1
619 Second Street
Eureka, California 95501
Attn: Lake and Streambed Alteration Program – Laurie Harnsberger
Notification #1600-2012-0244-R1
Fax: 441-2021
Email: lharnsberger@dfg.ca.gov

LIABILITY

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute DFG's endorsement of, or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

SUSPENSION AND REVOCATION

DFG may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before DFG suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before DFG suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused DFG to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes DFG from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects DFG's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 et seq. (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

DFG may amend the Agreement at any time during its term if DFG determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by DFG and Permittee. To request an amendment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the

corresponding amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter DFG approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to DFG a completed DFG "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

EXTENSIONS

In accordance with FGC section 1605(b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall submit to DFG a completed DFG "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in DFG's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). DFG shall process the extension request in accordance with FGC 1605(b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (Fish & G. Code, § 1605, subd. (f)).

EFFECTIVE DATE

The Agreement becomes effective on the date of DFG's signature, which shall be: 1) after Permittee's signature; 2) after DFG complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at http://www.dfg.ca.gov/habcon/ceqa/ceqa_changes.html.

TERM

This Agreement shall expire five years after the date the Agreement is fully executed, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a)(2) requires.

EXHIBITS

None

AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

AUTHORIZATION

This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project the Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify DFG in accordance with FGC section 1602.

CONCURRENCE

The undersigned accepts and agrees to comply with all provisions contained herein.

FOR FRANK DEMLING

10 MAY 2013

Name FRANK DEMLING — Date

Title PROJECT MANAGER

FOR DEPARTMENT OF FISH AND GAME

T. LABANCA 11/20/13

For Name Curt Babcock — Date

Environmental Program Manager

Prepared by: Rick Macedo
Staff Environmental Scientist
11-21-12

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
1455 MARKET STREET, 16TH FLOOR
SAN FRANCISCO, CALIFORNIA 94103-1398

JAN 15 2014

REPLY TO
ATTENTION OF

Regulatory Division

Subject: File Number 2008-00179N

Mr. Frank Demling
California Department of Transportation, District 1
1656 Union Street
Eureka, California 95501

Dear Mr. Frank Demling:

This correspondence is in reference to your submittal of September 7, 2012, updated on April 19, 2013, and further revised on December 16, 2013 concerning Department of the Army (DA) authorization to construct the Seaside Project located on State Route (SR) 1 from Post Mile (PM) 70.3 to 70.8 near Seaside Creek, approximately 8 miles north of the City of Fort Bragg, in Mendocino County, California (39.55675, -123.7632).

The purpose of the project is to repair storm damage by realigning and widening a portion of SR 1, constructing a soldier pile tie back wall, removing or replacing the existing metal beam guard rail, replacing an existing culvert, and constructing geo-synthetic reinforced embankment. The proposed solider pile tie back wall will be constructed along the east side of SR1 starting at PM 70.5 for a length of 700 feet. A 1:1 geo-synthetic reinforced embankment will be constructed from the westerly terminus of the proposed soldier pile tie back wall on the east side of SR 1 (PM 70.6 to 70.5). A 1:1 geo-synthetic reinforced embankment will be constructed from the westerly terminus of the proposed solider pile tie back wall. The roadway will also be widened to 12-foot lanes with an additional 4-foot shoulder for safety purposes. The proposed metal beam guard rail will be 428 feet long starting at PM 70.5. An area proposed for new parking will accommodate up to six vehicles and will be located on the southern side of the new roadway. A coastal access path will be constructed from the new parking area to Seaside Beach and will be located south of the new alignment from PM 70.6 to 70.7.

Work will result in the permanent fill 0.12 acre of wetland. Work will also result in the temporary fill 0.17 acre of wetland and 0.02 acre of Other Waters of the U.S. All work shall be completed in accordance with the plans and drawings titled "*USACE File #2008-00179N, MEN SR 1 Seaside Creek Storm Damage Repair Project PM 70.1 / 70.8, May 6, 2013, Figures 1 to 9*" (enclosure 1). Compensatory mitigation for unavoidable loss of Waters of the United States shall occur through implementation of the "*Seaside Beach Roadside Repair (EA 47490), Anchor Bay Drainage Repair (EA 44650), SR 128/253 Culvert Rehabilitation, (EA's 37812, 37813, 37814, 37816, 37817), and Men 20 Left-Turn Shoulder Widening (EA 29200) Off-Site Wetland Mitigation at California State Parks, Inglenook fen-Ten Mile Dunes Natural Preserve,*

Mitigation and Monitoring Plan" (Ten Mile Dune Mitigation Plan) dated April 2013 (Corps file number 2013-00032N) providing mitigation at a ratio of 2:1 (i.e., creation of 0.24 acre of wetland and 0.04 acre of Other Waters of the U.S, enclosure 2).

Section 404 of the Clean Water Act (CWA) generally regulates the discharge of dredged or fill material below the plane of ordinary high water in non-tidal waters of the United States, below the high tide line in tidal waters of the United States, and within the lateral extent of wetlands adjacent to these waters. Section 10 of the Rivers and Harbors Act generally regulates construction of structures and work, including excavation, dredging, and discharges of dredged or fill material, occurring below the plane of mean high water in tidal waters of the United States; in former diked baylands currently below mean high water; outside the limits of mean high water but affecting the navigable capacity of tidal waters; or below the plane of ordinary high water in non-tidal waters designated as navigable waters of the United States. Navigable waters of the United States generally include all waters subject to the ebb and flow of the tide; and/or all waters presently used, or have been used in the past, or may be susceptible for future use to transport interstate or foreign commerce.

The enclosed delineation map titled, "*Seaside Beach Project, Mendocino County, Ca, Extent of U.S. Army Corps of Engineers' Jurisdiction*" sheets date certified May 20, 2013, accurately depicts the extent and location of wetlands and other waters of the United States within the boundary area of the site that is subject to U.S. Army Corps of Engineers' regulatory authority under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act (enclosure 3). This approved jurisdictional determination is based on the current conditions of the site, as verified during a field investigation of January 16, 2013 and a review of other data included in your submittal. This approved jurisdictional determination will expire in five (5) years from the date of this letter, unless new information or a change in field conditions warrants a revision to the delineation map prior to the expiration date.

You are advised that the approved jurisdictional determination may be appealed through the U.S. Army Corps of Engineers' *Administrative Appeal Process*, as described in 33 C.F.R. Part 331 (65 Fed. Reg. 16,486; Mar. 28, 2000), and outlined in the enclosed flowchart and *Notification of Administrative Appeal Options, Process, and Request for Appeal* (NAO-RFA) Form. If you do not intend to accept the approved jurisdictional determination, you may elect to provide new information to this office for reconsideration of this decision. If you do not provide new information to this office, you may elect to submit a completed NAO-RFA Form to the Division Engineer to initiate the appeal process; the completed NAO-RFA Form must be submitted directly to the Appeal Review Officer at the address specified on the NAO-RFA Form. You will relinquish all rights to a review or an appeal, unless this office or the Division Engineer receives new information or a completed NAO-RFA Form within 60 days of the date on the NAO-RFA Form. If you intend to accept the approved jurisdictional determination, you do not need to take any further action associated with the Administrative Appeal Process.

Based on a review of the information in your submittal and the current condition of the site, as verified during a field investigation on January 16, 2013, the project qualifies for authorization under Department of the Army Nationwide Permit (NWP) 14 for *Linear Transportation*, 77 Fed. Reg. 10,184, February 21, 2012, pursuant to Section 404 of the CWA of 1972, as amended (33 U.S.C. § 1344 *et seq.*) and Section 10 of the Rivers and Harbors Act (RHA) of 1899, as amended (33 U.S.C. § 403 *et seq.*). The project must be in compliance with the terms of the NWP, the general conditions of the Nationwide Permit Program, and the San Francisco District regional conditions cited in enclosure 4. You must also be in compliance with any special conditions specified in this letter for the NWP authorization to remain valid. Non-compliance with any term or condition could result in the revocation of the NWP authorization for your project, thereby requiring you to obtain an Individual Permit from the Corps. This NWP authorization does not obviate the need to obtain other State or local approvals required by law.

This verification will remain valid until March 18, 2017, unless the NWP authorization is modified, suspended, or revoked. Activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon a NWP will remain authorized provided the activity is completed within 12 months of the date of a NWP's expiration, modification, or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 C.F.R. § 330.4(e) and 33 C.F.R. §§ 330.5 (c) or (d). This verification will remain valid if, during the time period between now and March 18, 2017, the activity complies with any subsequent modification of the NWP authorization. The Chief of Engineers will periodically review NWPs and their conditions and will decide to either modify, reissue, or revoke the permits. If a NWP is not modified or reissued within five years of its effective date, it automatically expires and becomes null and void. It is incumbent upon you to remain informed of any changes to the NWPs. Changes to the NWPs would be announced by Public Notice posted on our website (http://www.spn.usace.army.mil/Missions/Regulatory.aspx). Upon completion of the project and all associated mitigation requirements, you shall sign and return the Certification of Compliance, enclosure 5, verifying that you have complied with the terms and conditions of the permit.

You shall comply with all terms and conditions set forth by the *"California Department of Transportation State Route 101 – Seaside Beach Storm Damage Repair Project WDID No. 1B12173WNME"* issued by the North Coast Regional Water Quality Control Board on June 19, 2013 (enclosure 6). You shall consider such conditions to be an integral part of the NWP authorization for your project.

This authorization will not be effective until you have obtained a concurrence from the California Coastal Commission that your project will comply with California's Coastal Zone Management Act. If the Commission fails to act on a valid request for concurrence with your certification within six months after receipt, the Corps will presume a concurrence has been

obtained. You shall submit a copy of the concurrence to the Corps prior to the commencement of work.

General Condition 20 stipulates that any project affecting a historic property may not commence construction until the provisions of 33 C.F.R. pt. 325, Appendix C, have been satisfied. As the Federal lead agency for this project, Caltrans initiated consultation with the State Historic Preservation Officer (SHPO), Sherwood Valley Rancheria, and the Noyo River Indian Community to address project related impacts associated with the implementation of the Seaside Project. Caltrans initiated consultation with the SHPO to address project related impacts to CA-MEN-1818H listed in the National Register of Historic Places.

In order to ensure compliance with this NWP authorization, the following special conditions shall be implemented:

1. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, if temporary structures, work, and discharges, including cofferdams, are required.

2. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows.

3. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations.

4. Staging for construction purposes shall occur outside of Corps' jurisdictional wetlands. If any staging is proposed to occur off of the paved roadway, you must submit a wetland delineation for the proposed staging area prior to construction.

5. Construction activities shall follow the construction timeline outlined in the PCN provided as enclosure 7.

6. The "*Seaside Beach Roadside Repair (EA 47490), Anchor Bay Drainage Repair (EA 44650), SR 128/253 Culvert Rehabilitation, (EA's 37812, 37813, 37814, 37816, 37817), and Men 20 Left-Turn Shoulder Widening (EA 29200) Off-site Wetland Mitigation at California State Parks, Inglenook Fen-Ten Mile Dunes Natural Preserve, Mitigation and Monitoring Plan*" (Inglenook Fed-Ten Mile Dune Mitigation Plan) dated April 2013 has been approved to provide compensatory mitigation for the permanent fill of permanent fill 0.12 acre of wetland through creation of 0.24 acre of seasonal wetland. Performance standards are outlined on page 20 of the MMP. The 5-year monitoring program will be implemented as outlined in the Ten Mile Dune Mitigation Plan. Annual monitoring reports shall be submitted to the Corps by November 31st, of each year.

7. Inglenook Fed-Ten Mile Dune Mitigation Plan shall be implemented concurrently with construction of the proposed project. If work to implement the Ten Mile Dune Mitigation Plan does not commence concurrently with impact to a jurisdictional feature required for construction of the project, and conclude prior to the completion of the project, then you shall submit, subject to approval by the Corps, a mitigation proposal to account for temporal loss of jurisdictional waters impacted during the delay period.

8. The Permittee retains ultimate legal responsibility for meeting the requirements of the Inglenook Fed-Ten Mile Dune Mitigation Plan.

9. Your responsibility to complete the required compensatory mitigation as set forth in Special Condition 6 above will not be considered fulfilled until you have demonstrated mitigation success and have received written verification from the Corps.

10. Within 1-year of initiation of temporary impact to a jurisdictional feature, you shall re-contour the temporarily impacted area and replant it with appropriate soil-stabilizing native species as outlined in the "*Seaside Beach Storm Damage Repair Project, Revised Re-vegetation Plan*" last revised January 10, 2014. A 5-year management and monitoring program will be implemented as outlined in the above mentioned plan. Annual monitoring reports shall be submitted to the Corps by January 31, of each year. The reports shall include representative photos of the re-vegetated areas. If the cover requirements for the re-vegetated areas are not met, the Corps may require further monitoring, re-vegetation, and/or off-site mitigation.

11. Caltrans, acting as the Federal lead agency, initiated consultation with the State Historic Preservation Officer, the Sherwood Valley Rancheria, and the Noyo River Indian Community to address project related impacts to properties listed in the National Register of Historic Places. A Memorandum of Agreement (MOA) signed on March 15, 2011, cited in enclosure 8, titled "*Memorandum of Agreement Between the California Department of Transportation and the California State Historic Preservation Officer Regarding the Seaside Storm Damage Repair Project on State Route 1 in Mendocino County, California*". Project authorization is conditional upon compliance with the mandatory stipulations of the MOA.

You may refer any questions on this matter to Paula Gill of my Regulatory staff by telephone at 415-503-6776 or by e-mail at Paula.C.Gill@usace.army.mil. All correspondence should be addressed to the Regulatory Division, North Branch, referencing the file number at the head of this letter.

The San Francisco District is committed to improving service to our customers. My Regulatory staff seeks to achieve the goals of the Regulatory Program in an efficient and cooperative manner, while preserving and protecting our nation's aquatic resources. If you would like to provide comments on our Regulatory Program, please complete the Customer Service Survey Form available on our website: http://per2.nwp.usace.army.mil/survey.html.

Sincerely,

Jane M. Hicks
Chief, Regulatory Division

Copies Furnished (w/o enclosures):

CA RWQCB, San Luis Obispo, CA
U.S. EPA, San Francisco, CA
CA SWRCB, Sacramento, CA
CDFW, Yountville, Ca
USFWS, Sacramento, Ca
NMFS, Santa Rosa, Ca

COUNTY OF MENDOCINO
DEPARTMENT OF PLANNING AND BUILDING SERVICES
860 NORTH BUST STREET · UKIAH · CALIFORNIA · 95482
120 WEST FIR STREET · FORT BRAGG · CALIFORNIA · 95437

STEVE DUNNICLIFF
TELEPHONE 707-463-4281
FAX 707-463-5709
FB PHONE 707-964-5379
FB FAX 707-961-2427
pbs@co.mendocino.ca.us
www.co.mendocino.ca.us/planning

June 27, 2013

NOTICE OF FINAL ACTION

Action has been completed by the County of Mendocino on the below described project located within the Coastal Zone.

CASE#: CDP 18-2012
OWNER/ APPLICANT: CALIFORNIA DEPARTMENT OF TRANSPORTATION- DISTRICT 3
AGENT: SANDRA ROSAS, ENVIRONMENTAL MANAGEMENT BRANCH M2
REQUEST: Coastal development permit to realign existing roadway and construct a solider pile tie-back retaining wall adjacent to Seaside Creek shoreline access area. Existing retaining wall and roadway has been impacted by storm damage and needs to be replaced. Associated development includes removal or replacement of the metal beam guard rail, replacing a culvert and abandoning a culvert, relocating overhead utilities, elimination of three informal parking spaces and creation of a new parking area to accommodate six parking spaces with an access trail to the beach. The project would require expansion of the right-of-way on the properties adjoining Highway 1.
APPEALABLE AREA: Yes
LOCATION: In the Coastal Zone, 7± miles north of Fort Bragg, adjacent to Highway One, approximately 0.5 mile north of its intersection with Ten Mile Bridge and 0.3 mile north of its intersection with Ocean Meadows Circle (CR# 449) at Seaside Beach.
PROJECT COORDINATOR: JOHN SPEKA
ACTION TAKEN: Approved with modifications and additions

The Coastal Permit Administrator, on Monday June 17, 2013, approved the above described project with conditions. See attached documents for the findings and conditions in support of this decision.

The above project was not appealed at the local level.

This project is appealable to the Coastal Commission pursuant to Public Resources Code, Section 30603. An aggrieved person may appeal this decision to the Coastal Commission within 10 working days following Coastal Commission receipt of this notice. Appeals must be in writing to the appropriate Coastal Commission district office.

Attachments

cc: Coastal Commission
Assessor

COUNTY OF MENDOCINO
DEPARTMENT OF PLANNING AND BUILDING SERVICES
860 NORTH BUST STREET · UKIAH · CALIFORNIA · 95482
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FINAL FINDINGS AND CONDITIONS OF APPROVAL
CDP 18-2013 CALTRANS
JUNE 17, 2013

PROJECT FINDINGS AND CONDITIONS: Pursuant to the provisions of Chapter 20.532 and Chapter 20.536 of the Mendocino County Code, the Coastal Permit Administrator approves the proposed project, and adopts the following findings and conditions.

FINDINGS:

1. The proposed development is in conformity with the certified Local Coastal Program; and

2. The proposed development will be provided with adequate utilities, access roads, drainage and other necessary facilities; and

3. The proposed development is consistent with the purpose and intent of the applicable zoning district, as well as all other provisions of Division II, and preserves the integrity of the zoning district; and

4. A Mitigated Negative Declaration has been conducted by Caltrans, and the County is in agreement that the proposed development, if constructed in compliance with the conditions of approval, will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act; and

5. The proposed development will not have any adverse impacts on any known archaeological or paleontological resource; and

6. Other public services, including but not limited to, solid waste and public roadway capacity have been considered and are adequate to serve the proposed development.

7. The proposed development is in conformity with the public access and public recreation policies of Chapter 3 of the California Coastal Act and Coastal Element of the General Plan.

8. As conditioned, the following findings can be made for development proposed within Environmentally Sensitive Habitat Areas:
   a) The resource as identified will not be significantly degraded by the proposed development.

   b) There is no feasible less environmentally damaging alternative.

   c) All feasible mitigation measures capable of reducing or eliminating project related impacts have been adopted.

9. The following findings can be made for the protection of agricultural lands:

   a) The proposed project is compatible with the long-term protection of resource lands. An insignificant portion of resource lands will be affected by the project and the existing agricultural use of the project will not substantially change;

   b) Continued or renewed agricultural use is not feasible as demonstrated by an economic feasibility evaluation prepared pursuant to Section 20.524.015(C)(3). Section

20.524.015(C)(3) is specific to requirements in the case of subdivisions of land, and the subject project will not result in a subdivision of land;

c) Such development would result in protecting agricultural land and/or concentrate development. The proposed realignment is located as far west as is feasible to keep the development in line with the existing highway corridor, while adequately addressing slope failure and traffic safety issues, taking into consideration environmental limitations.

CONDITIONS OF APPROVAL:

1. This action shall become final on the 11th day following the decision unless an appeal is filed pursuant to Section 20.544.015 of the Mendocino County Code. The permit shall become effective after the ten working day appeal period to the Coastal Commission has expired and no appeal has been filed with the Coastal Commission. The permit shall expire and become null and void at the expiration of two years after the effective date except where construction and use of the property in reliance on such permit has been initiated prior to its expiration.

2. The application, along with supplemental exhibits and related material, shall be considered elements of this permit, and that compliance therewith is mandatory, unless an amendment has been approved by the Coastal Permit Administrator.

3. This permit shall be subject to the securing of all necessary permits for the proposed development from County, State and Federal agencies having jurisdiction.

4. The applicant shall secure all required building permits for the proposed project as required by the Building Inspection Division of the Department of Planning and Building Services.

5. This permit shall be subject to revocation or modification upon a finding of any one or more of the following:

   a) The permit was obtained or extended by fraud.

   b) One or more of the conditions upon which the permit was granted have been violated.

   c) The use for which the permit was granted is conducted so as to be detrimental to the public health, welfare or safety, or to be a nuisance.

   d) A final judgment of a court of competent jurisdiction has declared one or more conditions to be void or ineffective, or has enjoined or otherwise prohibited the enforcement or operation of one or more such conditions.

   e) Any future development of a coastal path connecting existing and proposed parking shall require a Coastal Development Permit prior to construction.

7. The developer shall adhere to language of the *Seaside Beach Storm Damage Repair Project (EA 01-47490) Revegetation Plan*, dated September 5, 2012.

8. Steel I-Beam and concrete walers on the SPTW shall be stained dark brown or some other color deemed by the Coastal Permit Administrator to blend in hue and brightness with their surroundings to match the color of the timber infill.

9. The proposed project shall comply with the all of the applicable mitigation measures contained in the *Mitigated Negative Declaration and Initial Study (EA 01-474901), prepared by the State of California Department of Transportation, August 2011* (Appendix A), and in the *Botanical/ESHA*

Assessment and Reduced Buffer Analysis for the Seaside Beach Storm Damage Repair Project State Route 1, Post Mile 70.3/70.7 in Mendocino County, August 2012.

10. The proposed project shall strictly comply with all recommendations made to avoid identified sites within the Recovery Plan prepared by Thad Van Buren dated January 14, 2011.

11. If any archaeological sites or artifacts are discovered during site excavation or construction activities, the applicant shall cease and desist from all further excavation and disturbances within one hundred (100) feet of the discovery, and make notification of the discovery to the Director of the Department of Planning and Building Services. The Director will coordinate further actions for the protection of the archaeological resources in accordance with Section 22.12.090 of the Mendocino County Code.

12. It shall be the responsibility of the applicant to provide a copy of the mitigation measures adopted as a part of the Mitigated Negative Declaration, together with copies of any other required conditions of approval of CDP 18-2012, to any contractors, organizations, or volunteer groups engaged to perform work on the site in order that they are fully aware of the conditions of this permit and that all work performed is in compliance with all applicable mitigation measures and conditions.

SPECIAL CONDITIONS:

1. Prior to construction of the project, CALTRANS shall submit to the County of Mendocino a revised plan to show the project will include the following pedestrian and bicycle safety improvements:

   a. Speed reduction advisory signs through the project site in both directions
   b. Pedestrian crossing advisory signs through the project site in both directions
   c. Class 2 bicycle lanes through the project site in both directions

2. Prior to construction of the project, CALTRANS shall submit to the County of Mendocino a revised plan that shoes the project will provide a utility conduit within the CALTRNS right-of-away to allow future undergrounding and relocation of above ground telecommunication utilities including but not limited to telephone lines and fiber optic cable.

State of California
DEPARMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: GARY BLAKESLEY
Division of Structure Design
Office of Bridge Design North

Date: December 9, 2011

File: 01-MEN-001-PM 70.5
EA: 01-474901
EFIS ID: 0100000331
Retaining Wall No.10E0025

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES
OFFICE OF GEOTECHNICAL DESIGN NORTH – BRANCH B

Subject: Foundation Report for Seaside Beach Retaining Wall

INTRODUCTION

This Foundation Report summarizes the results of the foundation investigation and provides geotechnical recommendations for a soldier pile tieback wall on Route 001 at postmile (PM) 70.5 in Mendocino County, CA (Figure 1). The wall is required to repair the slope failure that occurred along the northbound edge of the highway.

PROJECT DESCRIPTION

The existing alignment was constructed in the 1930's as a local road, and was later consolidated into the State Highway system. As-builts of the original road are not available. The alignment does not meet current design standards with short radius curves, shoulder widths of 2 feet or less, and non-conforming super elevation rates, transitions, run-off lengths and sight distances.

The project was identified as a "storm damage location" during the winter of 2005/2006. The FHWA Damage Assessment Form (DAF) dated January 3, 2006 noted "shoulder, MBGR, and roadway traveled way failing due to heavy winter rains". A near vertical slope developed near the edge of traveled way (fog stripe). Caltrans Maintenance forces temporarily repaired the road by placing fill (mostly gravel) along the outboard edge of the roadway and repaving to restore the traveled way. Pictures of the failing guardrail and the fill placed by Maintenance are provided below.

(Photos taken January 8, 2009)

The slope failure is characterized as a shallow fill slope failure that extends approximately 20 feet down slope towards the flat floodplain just east of Seaside Beach. At this location, District 1 plans to construct a soldier pile tieback wall to repair the failing slope and realign the roadway. The project also includes shoulder widening, geometric improvements and associated drainage improvements. A vicinity map showing the project location (Figure 1) and a Site Plan (Figure 2) are attached.

The proposed wall is 700 feet in length with a maximum wall height of 32.47 feet. The new alignment will consist of 12 foot lanes with 4 foot paved shoulders.

EXCEPTIONS

The recommendations contained in this report are based on a review of geotechnical/geologic literature, a subsurface investigation, laboratory testing of soil samples, geotechnical calculations and field observations,.

Subsurface conditions were evaluated only at the boring locations and may deviate elsewhere within the Project Limits. The elevations reported in this memorandum are with respect to Mean Sea Level (MSL).

REFERENCES

Kelley, F.R., 1983, DMG Open-File Report 83-31, *Geology and Geomorphic Features related to Landsliding, Inglenook 7.5' Quadrangle, Mendocino County, California.*

"Inglenook, Calif" 7.5 Minute Topographic Quad Map *(SE/4 Cape Vizcaino 15' Quadrangle),* N3930-W12345/7.5, United States Geological Survey (USGS), 1966.

Saucedo, G.J. et. al. "GIS data for the Geologic Map of California", USGS, 2000
Digitized from the 1977 Geologic Map of California by C.W. Jennings.

Turner, A.K., Schuster, R.L. (ed.) 1996," Landslides Investigation and Mitigation", Special Report 247, Transportation Research Board, National Research Council.

US Department of Transportation, Federal Highway Administration – California Division, Damage Assessment Form (DAF) Title 23, Report No. CSC-CT01-011-0, inspection date January 3, 2006.

Caltrans Reports

Fort Bragg faults and their impact on Ten Mile River Bridge, Memo prepared by Martha Merriam and Reza Mahallati, dated June 12, 2006

Caltrans Corrosion Guidelines Version 1.0, 9/2003

Caltrans Design Plans dated 8/30/2011

Caltrans Bridge Design Specifications Section 5, 8/2004

Caltrans Soil and Rock Logging, Classification, and Presentation Manual, 2007 Edition.

Caltrans Structure Plans (P&Q) dated 11/28/2011

FIELD INVESTIGATION AND TESTING PROGRAM

A total of four borings and three Wacker holes were completed between November 2008 and January 2009 (Figure 2). The borings were advanced using 2 different truck mounted Acker MPCA drill rigs using a 94-mm HXB casing equipped with a diamond impregnated core bit. The Wacker holes were advanced by using a modified gasoline powered vibratory rammer (commonly called a jumping jack), to drive 1.125 inch OD thin wall steel soil tubes (in 4 foot sections). The bottom soil tube was either tipped with a 1.5 inch diameter solid steel driving shoe or fitted to accept eight brass sample tubes (each sample tube is 6 inches long and 1 inch OD).

Samples of the soil and bedrock from the borings were obtained by punch core, coring and using a 2-inch (inside diameter) Modified California and 1.4-inch (inside diameter) Standard Penetration Test (SPT) samplers, each driven with an automatic 140-pound hammer dropped 30 inches. The blows required to drive the samplers were recorded for each 6 inches of penetration or fraction thereof. Visual classifications were made in accordance to the Caltrans Soil and Rock Logging, Classification, and Presentation Manual 2007 Edition.

Wacker samples were obtained by advancing the soil tubes containing 1-inch (outside diameter) brass sample tubes. There is no standardization for Wacker testing. This is a sampling and testing procedure that Caltrans uses in cases where conventional drilling equipment access is prohibited or not feasible. As the Wacker driven soil tube is advanced, a record of time vs. driving depth is made. Due to variations in equipment, this can be only used to determine relative or general subsurface material density. The samples obtained in the brass tubes were treated as semi-disturbed samples, and some were visually classified in accordance to the Caltrans Soil and Rock Logging, Classification, and Presentation Manual 2007 Edition. The remaining brass tubes were sealed and retained for laboratory analysis and testing.

SI casings were installed in three borings, R-08-001, R-08-002 and R-08-003. The annular space around the casing was backfilled with grout. The borings were completed at the surface with traffic-rated access boxes. Inclinometer readings were obtained between January 2009 and September of 2010. A summary of the borings and inclinometer monitoring results are summarized in Table 1. The SI data are included in Appendix A.

TABLE 1
BORING AND INCLINOMETER DATA SUMMARY

I.D.	STATION/ OFFSET	DEPTH OF BORING (ft, bgs)	SURFACE ELEVATION (ft, MSL)	DATE COMPLETED	DEPTH TO TKfs ROCK (ft, bgs)	DEPTH TO FAILURE SURFACE (ft, bgs)
W1-08	508+63.550 RT 74.758'	32	25.403	11/25/2008	14	N/A
W2-08	510+50.557 RT 83.933'	30	20.965	12/02/2008	30	N/A
W3-08	512+66.673 RT 29.842'	27	21.407	12/03/2008	16	N/A
R-08-001	508+02.760 LT 8.866'	80	71.673	12/16/2008	17	Deflection at 10 ft
R-08-002	509+30.619 LT 9.128'	70	62.684	12/17/2008	17	Deflection at 5 ft
R-09-003	510+88.129 LT 15.927'	70	52.211	01/06/2009	30	Deflection at 10 ft
R-09-004	511+92.666 LT 23.303'	30	44.609	01/07/2009	14	No SI installed

The boring locations and wall layout line are shown on Figure 2.

LABORATORY TESTING

Laboratory testing of soil samples obtained from Wacker hole W1-08 and from borings R-08-001, R-08-002 and R-09-003 were performed at Caltrans' Geotechnical and Materials Laboratory in Sacramento and the District 1 Materials Laboratory in Eureka, California. The testing was used to verify field descriptions and identifications and to obtain engineering properties. The following tests were performed:

- Standard Test Method for Particle-Size Analysis of Soils (California Test Method No. 203 and ASTM D422)
- Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (California Test Method No. 204 and ASTM D4318)
- Standard Test Method for Unconfined Compressive Strength (ASTM D2166)
- Corrosivity test (pH and Resistivity) (CA Test Method No. 643)

In place density was determined from punch core samples, brass tube push samples, and Wacker tubes.

Laboratory Data sheets and Test Results are also included in Appendix B.

SITE GEOLOGY AND SUBSURFACE CONDITIONS

Site Description

Currently the road surface is approximately 22 feet wide with narrow to nonexistent shoulders (paved or unpaved) and has a steep grade with small radii curves. The slope failure currently impacting the highway is a fill slope failure with an estimated thickness of 5 to 8 feet. The wall layout line is approximately 40 feet beyond the hinge point of the existing northbound lane (Figure 2).
Four small arcuate failures are inferred by patched sections of asphalt concrete on the existing roadway. A rotary boring is located at each of these AC patches. Minor rilling was observed on the fill slope below the highway and on the cut slope above the highway.

A shallow V–ditch along the southbound lane of the roadway channels groundwater from a cut slope seep located near STA 510+00 to the west to a culvert at PM 70.55. The ditch appears to be wet throughout the year.

Site Geology

A geologic map of the area is provided in Figure 3. Bedrock within the project limits is mapped as Coastal Belt Franciscan Complex (TKfs). The bedrock at the site is gray to very dark gray, medium to fine-grained, slightly weathered to decomposed sandstone and shale. The bedrock is overlain by

Quaternary marine terrace deposits (Qmts) and beach sands (Qbs) as well as alluvium (Q) in existing creek drainages and their floodplains.

The damage evidenced in the roadway is the result of severe storms (high rainfall intensities and totals) that occurred in the winter of 2005/2006. During this time, the existing slope became saturated and failed near the hinge point of the roadway, causing oversteepening and further failure of the slope. There is no evidence of larger (global) instability at the site.

Subsurface Conditions

District 1 Materials Laboratory records and As-Built plan sets indicate that the original gravel roadway surface has had few thin blanket overlays. The borings encountered 1 to 1.8 feet of AC surfacing. Note all borings were located in failed pavement areas within AC patches. The asphalt concrete is underlain by a 1.5 to 2 foot of base material consisting of moist clayey sand with gravel. Beneath the existing structural section, the subsurface material becomes a moist sand, silty sand or clayey sand (with some gravel) to a depth of 10 to 20 feet. The depth to bedrock ranged between 14 and 30 feet. The bedrock consists of interbedded sandstone and shale. Bedrock throughout all the borings contained layers of varying thicknesses that were decomposed.

Logs of Test Borings (LOTBs) will be provided at a future date to be included in the plans.

Groundwater Conditions

Groundwater levels were checked on the Wacker holes during and just after their installation. The following measurements were recorded:

TABLE 3
LOCATION 2 WATER LEVEL MEASUREMENTS[1]

Date Measured[1]	Time Measured[1]	W2-08 (ft, bgs)	W2-08 (ft, bgs)	W3-08 (ft, bgs)
11/25/2008	1300 hrs	3.5		
11/25/2008	1440 hrs	3.75		
12/02/2008	1422 hrs	3.1		
12/02/2008	1353 hrs		2.9	
12/02/2008	1430 hrs		2.6	

Date Measured[1]	Time Measured[1]	W2-08	W2-08	W3-08
12/03/2008	1430 hrs			8.2

Notes: 1 - All water levels measured from the top of casing.

Groundwater measurements were not recorded in the rotary borings.

CORROSION EVALUATION

Chemical analyses were performed on samples collected from borings and Wacker brass tubes to evaluate corrosion potential of the on-site soils. Testing was performed by the Caltrans Geotechnical Laboratory in Sacramento, CA and at the District1 Materials Laboratory in Eureka, CA. Table 4 summarizes the test results:

TABLE 4
SOIL CORROSION TEST SUMMARY

BOREHOLE ID	DEPTH (ft, bgs)	pH	MINIMUM RESISTIVITY (ohm-cm)
W1-08	1 - 3.5	5.70	4800
W1-08	15 - 15.5	6.72	2500
W1-08	26 - 32	7.16	4350
W3-08	16.5 - 20	6.72	490
R-08-001	38	5.83	3600
R-08-002	35 & 55	5.76	1000
R-09-003	55 & 60	6.88	1100
R-09-004	15	5.53	3500

The results of the corrosion tests are attached in Appendix B.

Based on the Caltrans Corrosion Guidelines (2003 version 1.0) and the laboratory test results, the site may be considered non-corrosive to steel and concrete. However the Guidelines also state that corrosion mitigation measures should be included for tiebacks due to the critical nature of the components and the "stressed" state of the anchors. The location is very close to the Pacific Ocean, and all exposed facilities should also be assumed to be exposed to typical coastal conditions of salt spray and fog.

SEISMIC RECOMMENDATIONS

Seismic design criteria (Liquefaction and Dynamic stability studies) were not considered for the wall design, as it is not a "critical" structure.

GEOTECHNICAL AND FOUNDATION RECOMMENDATIONS

Wall Location and Height

We recommend a Soldier Pile Tieback wall be constructed to retain the roadway prism and the underlying soils. The wall layout line is shown on the attached Site Plan sheet (Figure 2). The wall, as shown, will extend from roadway station 506+00 to station 513+00 for a wall length of 700 feet. The maximum wall height is 32.47 feet and the minimum wall height is 4.69 ft to finish grade. The attached Profile Along the Wall Layout Line (Figure 4) shows the approximate elevations of the top of wall, finish grade and bedrock surface along the wall.

Design Parameters

Soil strength parameters for design were determined by using the standard penetration test (SPT) N values obtained from the vertical boreholes, published correlations and laboratory data.

TABLE 5
Soil Design Properties

LAYER	APPROXIMATE THICKNESS (ft)[1]	TOTAL UNIT WEIGHT (pcf)	ANGLE OF INTERNAL FRICTION (degrees)	COHESION (c, psf)
Fill/Colluvium	20-40	125	34	0
Interbedded Sandstone/Shale	≥ 40	135	34	400

Notes: 1 – At wall layout line

See the attached Subsurface Geology Along the WLOL (Figure 4) and Design Cross Section sheet (Figure 5) for subsurface material representation.

We have reviewed the P&Q Structure Plans dated November 28, 2011 and we concur with the design pile tip elevations.

We recommend that the tiebacks derive their support from the bedrock. The unbonded length of the tiebacks will be located in the fill and colluviums layers. Recommended tieback unbonded lengths are found in Appendix C of this report.

Hydrostatic Forces

For wall design we recommend that the groundwater level be assumed to be at bottom of lagging.

Design pressures should be based on moist unit weights of the soil above the groundwater surface and saturated unit weights should be applied below the groundwater surface.

EARTH WORK AND WALL BACKFILL RECOMMENDATIONS

The wall is designed so that the design height H provides a berm in front of the wall face at least 4 feet wide measured from the face of the wall and provides a design grade at least 2 feet below finished grade measured at the face of the wall (Caltrans Bridge Design Specifications, 5.8.6.1). It is anticipated that portions of the fill slope below the roadway will be removed to construct the wall.

The wall configuration adds lane and shoulder width to the existing alignment, therefore it is anticipated that structure backfill will be necessary behind the wall and should be placed and compacted in accordance with the Structure Plans and the Standard Specifications (Section 19-3.06).

To assure adequate wall drainage, shims should be placed between the timber lagging in conjunction with free-draining backfill material. We recommend a one foot wide layer of Class 1, Type B permeable material be placed behind wall face, and that a layer of Class A filter fabric be placed between the permeable material and the backfill, and another layer of Class A filter fabric be attached to the inside surface of the lagging to prevent migration of permeable material through the wall face.

RIPPABILITY

Based on the boring logs and field observations, we expect the material within the anticipated limits of excavation to be rippable. The boring locations are shown in Figure 2.

CONSTRUCTION CONSIDERATIONS

The typical sequence of Tieback Wall installation shall follow the Structure Plans and the Special Provisions for this project.

Excavation and Drilling Difficulties

Caving conditions may be encountered during drilling for the piles due to the granular nature of the soils encountered and the very intensely fractured nature of the rock. Temporary casing, drilling under slurry or placement of slurry cement or concrete backfill and re-drilling may be required to control caving and should be performed in conformance with the provisions in Section 49-4.09 "Drilled Holes" of the Standard Specifications.

Groundwater may be encountered in the pile boreholes. Pile installation may require dewatering or the placement of concrete and grout under water. If water is present and the holes are not dewatered, displacement of the water by means of a closed system using a concrete pump or tremie tube to place concrete and grout at the bottom of the holes will be required in conformance with the provisions in Section 5-1.10 "Concrete Deposited Under Water", of the Standard Specifications.

Hazardous Materials

The Tertiary-Cretaceous aged Coastal Belt Franciscan Complex (TKfs), Holocene aged marine terrace deposits (Qmts) and beach sand deposits (Qbs) as well as colluvium deposits (Q) within the Project Limits do not contain NOA.

PROJECT INFORMATION

Standard Special Provisions S5-280, "Project Information", discloses to bidders and contractors a list of pertinent information available for their inspection prior to bed opening. The following is an excerpt for SSP-280 disclosing information originating from Geotechnical Services. Items listed to be included in the information Handout will be provided in Acrobat (pdf) format to addressee(s) of this report via electronic mail.

Data and information attached with the project plans are:
Log of Test Borings for Seaside Beach

Data and information included in the Information Handout provided to the bidders and contractors are:

A. Foundation report Seaside Beach Retaining Wall No.10E0025 dated December 9, 2011

Data and Information available for observation at the Transportation Laboratory:

A. Borehole Core Samples

If you have any questions or need more information, please contact Kathy Gallagher at (707) 441-2024 or Charlie Narwold at (707) 445-6036.

KATHY GALLAGHER
Transportation Engineer
Office of Geotechnical Design North

CHARLIE NARWOLD
Senior Engineering Geologist
Office of Geotechnical Design North

List of Figures

Figure 1 - Vicinity Map
Figure 2 - Site Plan
Figure 3 - Project Geologic Map
Figure 4- Subsurface Geology Along Wall Layout Line
Figure 5 - Design Cross Section

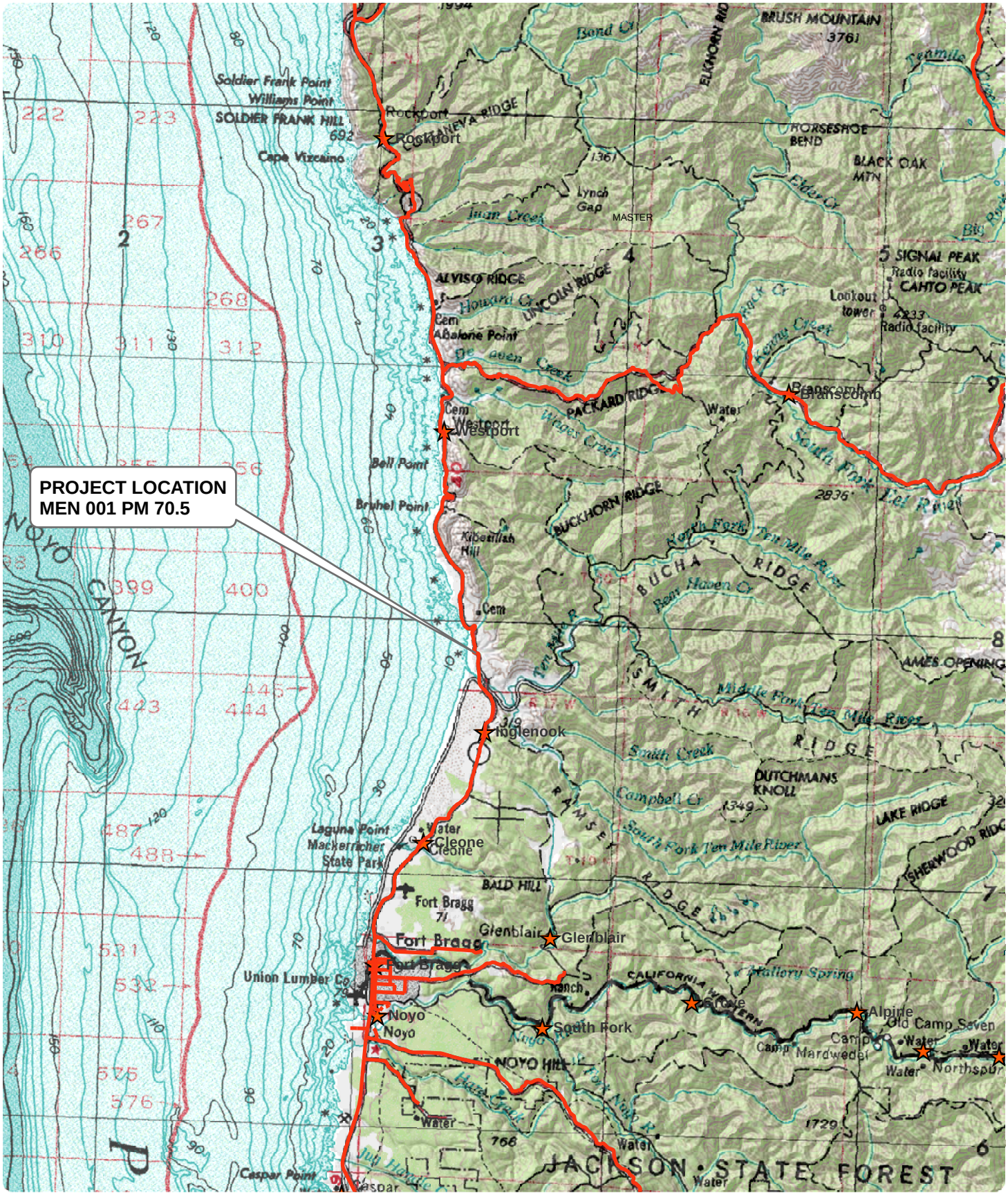
Appendix A: Slope Inclinometer Monitoring Results
Appendix B: Laboratory Test Summary and Data Sheets
Appendix C: Recommended Tieback Unbonded Lengths

C:

RBibbens (E-copy)

GS File Room (email gs_file_room@dot.ca.gov)

Structure Construction RE Pending File (email RE_pending_file@dot.ca.gov)
Project Manager



Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design North- Branch B

EFIS:0100000331

Date: June 2011

VICINITY MAP

FOUNDATION REPORT

FIGURE 1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	70.2-70.8		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER K. GALLAGHER No. 62012 Exp. 9/30/11 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

FOR ACCURATE RIGHT OF WAY AND ACCESS DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND

- SPTW
- FILL LINE
- CUT LINE
- ROTARY BORING LOCATION
- WACKER SAMPLING LOCATION

ABBREVIATION

SPTW SOLDIER PILE TIEBACK WALL

ROADWAY BORINGS

ID	STATION	OFFSET	TYPE	DEPTH
W1-08	508+63.550	RT 74.758'	Wacker	32'
W2-08	510+50.557	RT 83.933'	Wacker	30'
W3-08	512+66.673	RT 29.842'	Wacker	27'
R-08-001	508+02.760	LT 8.866'	Rotary	80'
R-08-002	509+30.619	LT 9.128'	Rotary	70'
R-09-003	510+88.129	LT 15.927'	Rotary	70'
R-09-004	511+92.666	LT 23.303'	Rotary	30'

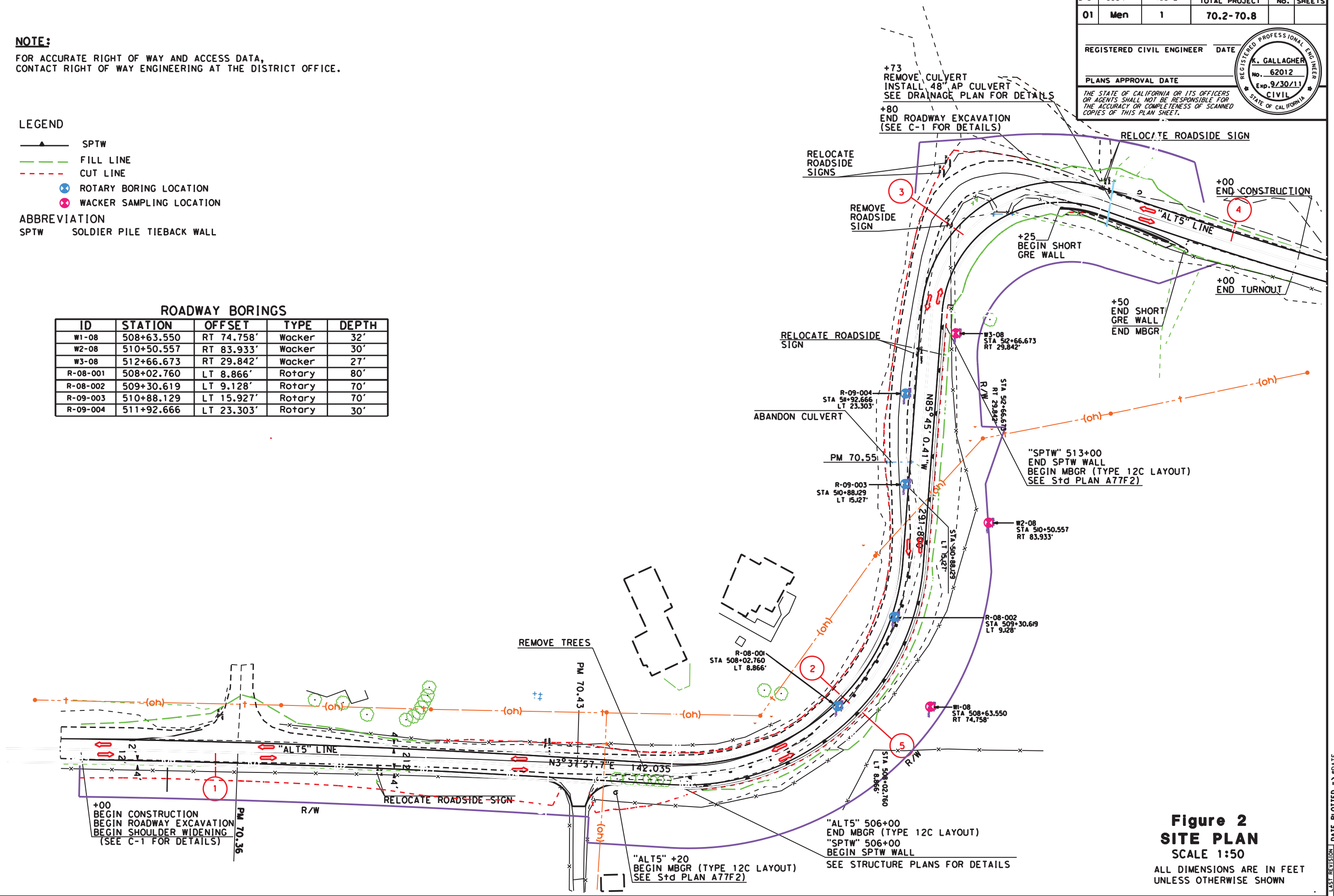


Figure 2
SITE PLAN
SCALE 1:50
ALL DIMENSIONS ARE IN FEET
UNLESS OTHERWISE SHOWN

REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | FUNCTIONAL SUPERVISOR: CHARLIE NARWOLD

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

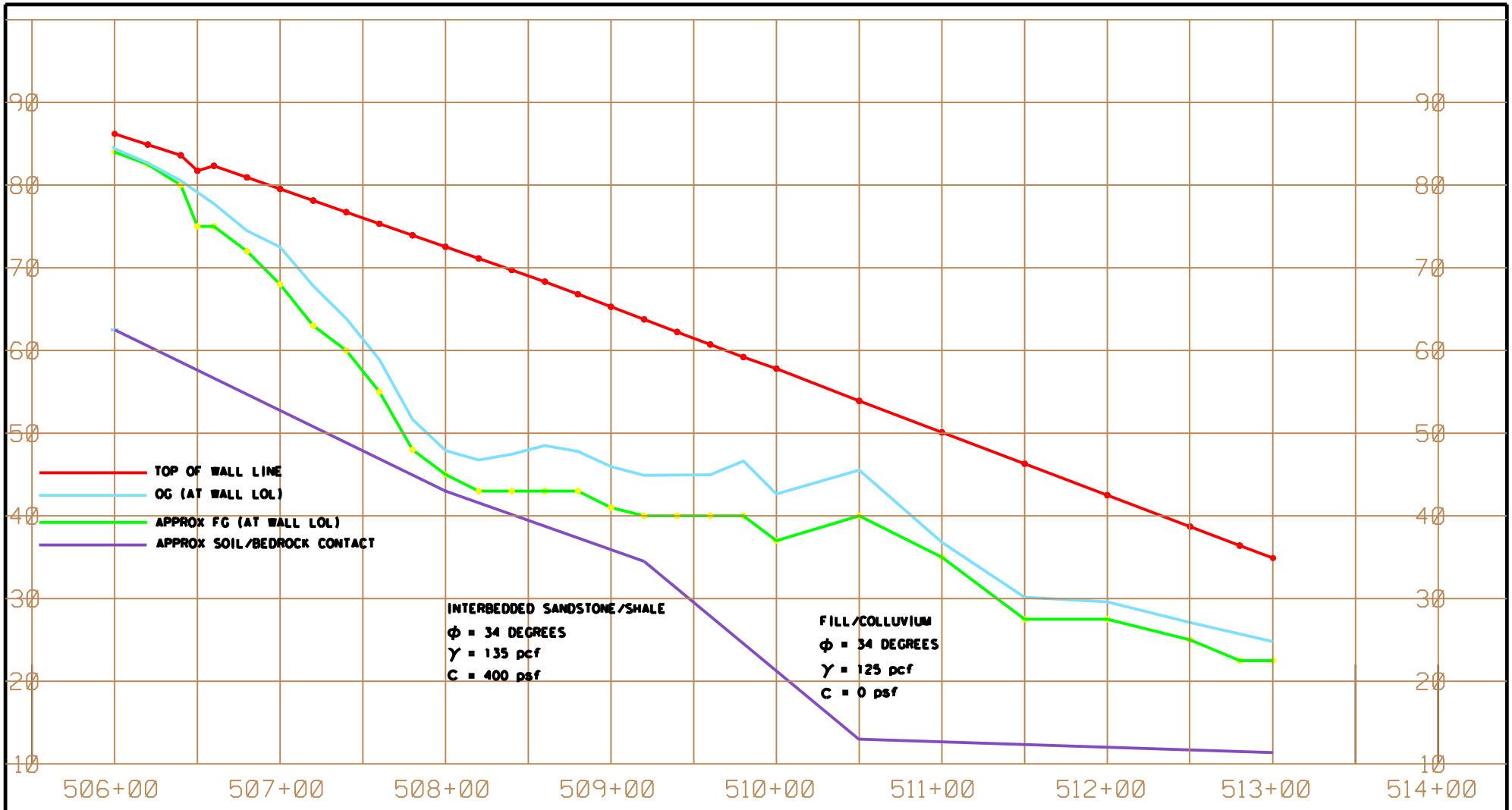
LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

Saucedo G.J. et. al. "GIS data for the geologic map of California", USGS, 2000
Digitized from the 1977 Geologic Map of California by C.W. Jennings

LEGEND

- Q ALLUVIUM
- Qbs BEACH SANDS
- Qds DUNE SANDS
- Qe ESTUARY DEPOSITS
- Qmts MARINE TERRACE DEPOSITS
- TKfs COASTAL BELT FRANCISCAN
- PACIFIC OCEAN
- STATE HIGHWAY

Department of Transportation Division of Engineering Services Geotechnical Services Office of Geotechnical Engineering - North	EFIS: 01-00000331 Date: JUNE 2011	**SEASIDE BEACH PROJECT GEOLOGIC MAP**
	FOUNDATION REPORT	Figure 3



Caltrans

Department of Transportation
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - North

EA: 01-00000331

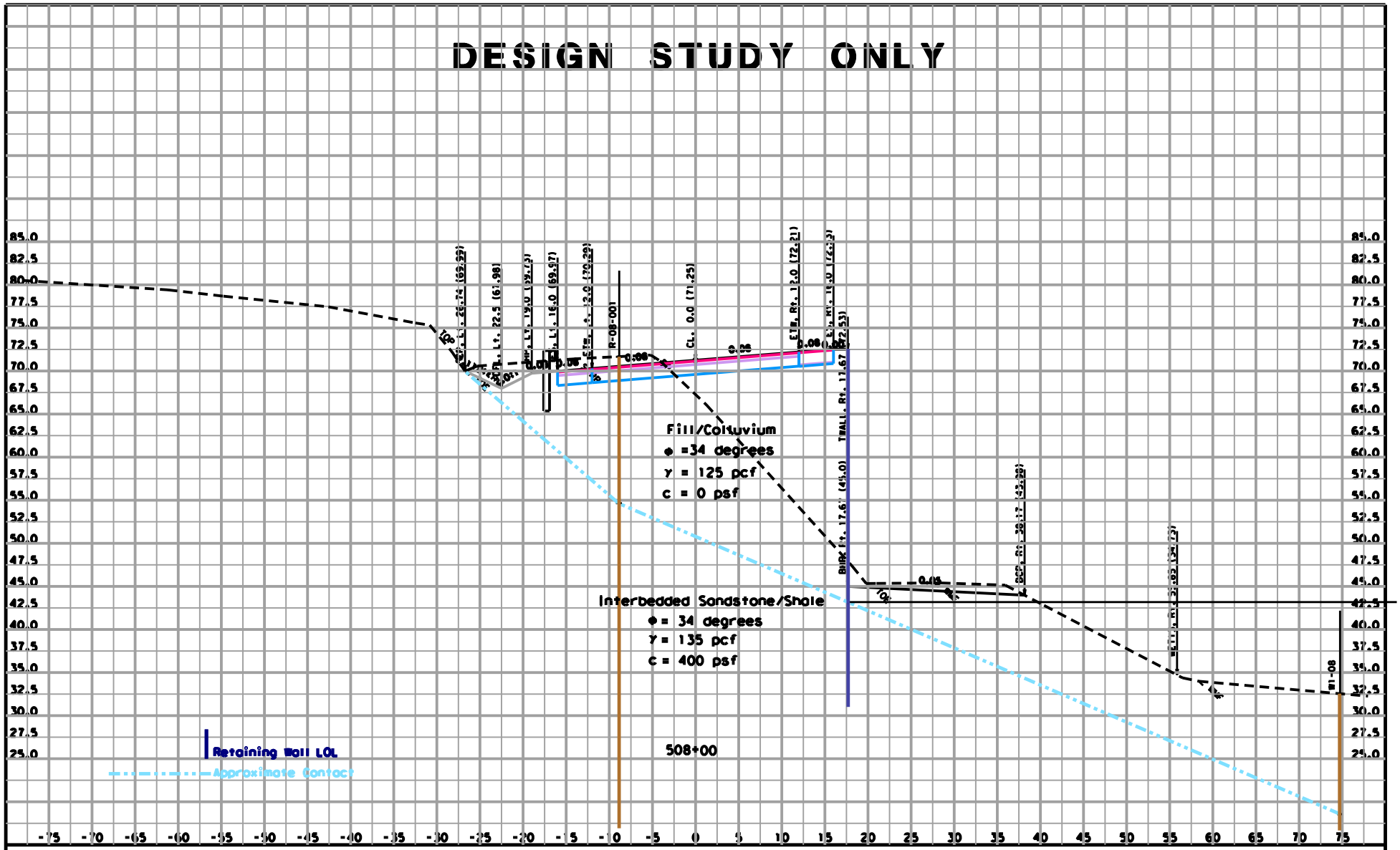
DATE: DECEMBER 2011

SUBSURFACE GEOLOGY ALONG WLOL

SEASIDE BEACH FOUNDATION REPORT

FIGURE 4

...\Final FR Bedrock_profile _12_8_2011.dgn 12/8/2011 5:47:39 PM



CREATED BY: M.COLLINS/K.GALLAGHER
DATE: 12/08/2011
S:\TRANPRO\Office of Geotechnical Design North Branch B\KG\Seaside Beach\Foundation Report\XSEC3_16_11.DGN

PROJECT ID: SEASIDE BEACH

CONTRACT: 01-474901
DIST/CO/RTE/PM: 01/MEN001/70.3-70.8

SCALE: 1" = 5' Horiz.
1" = 5' Vert.
All Dimensions are US Survey Feet

FIGURE 5
DESIGN
CROSS SECTION

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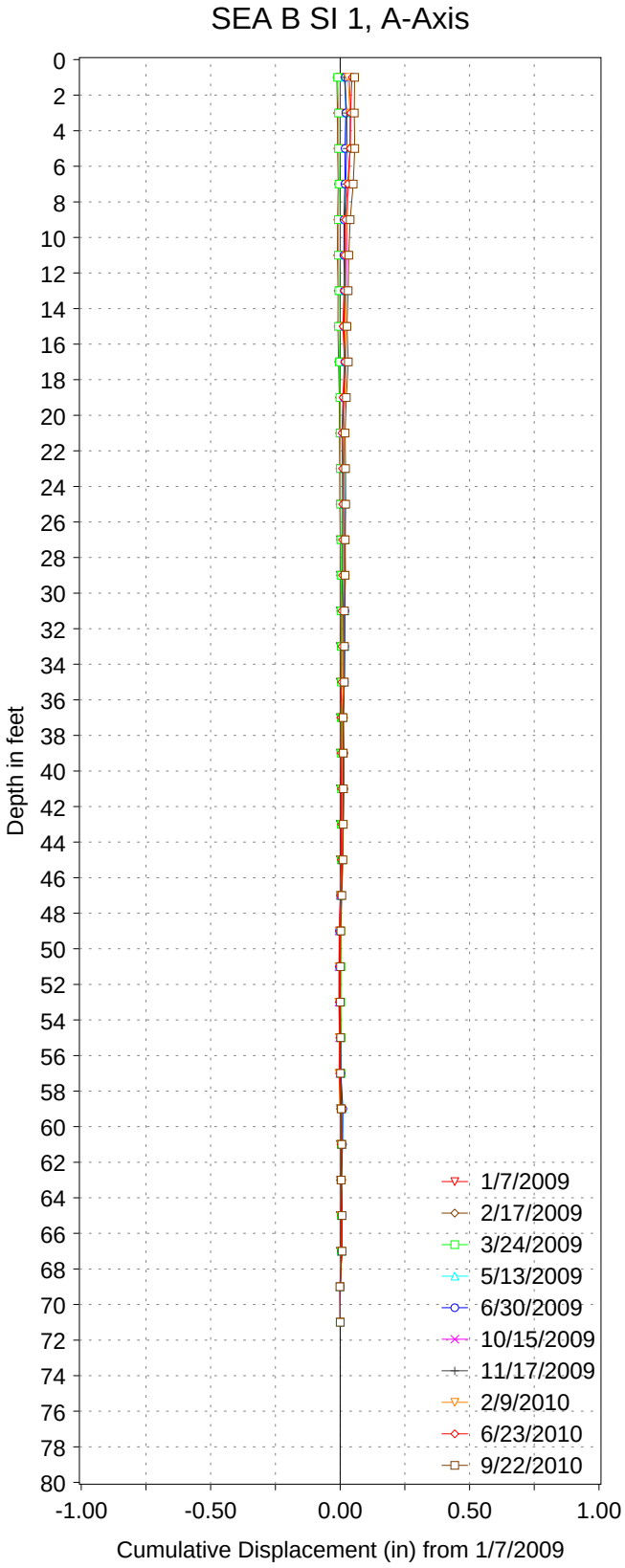
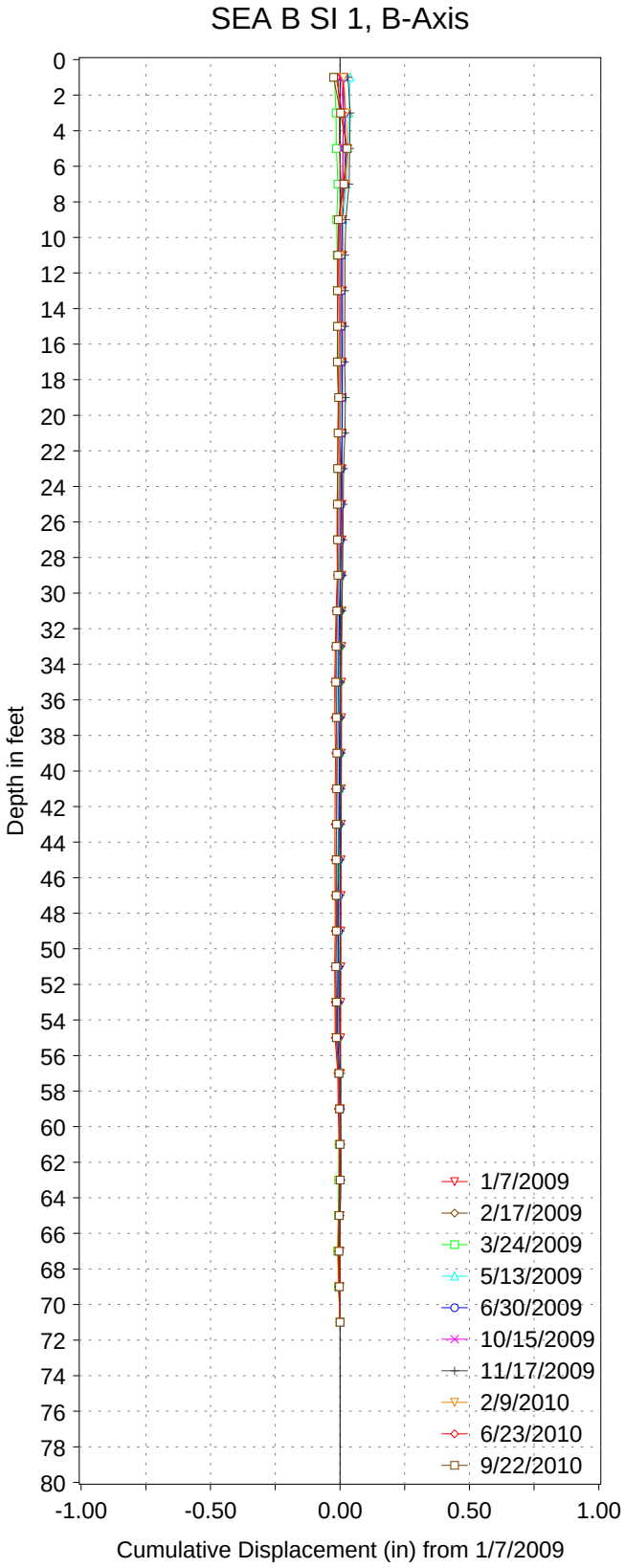
APPENDIX A

SLOPE INCLINOMETER MONITORING RESULTS





INCLINOMTER RESULTS

01-Men-001- PM 70.5

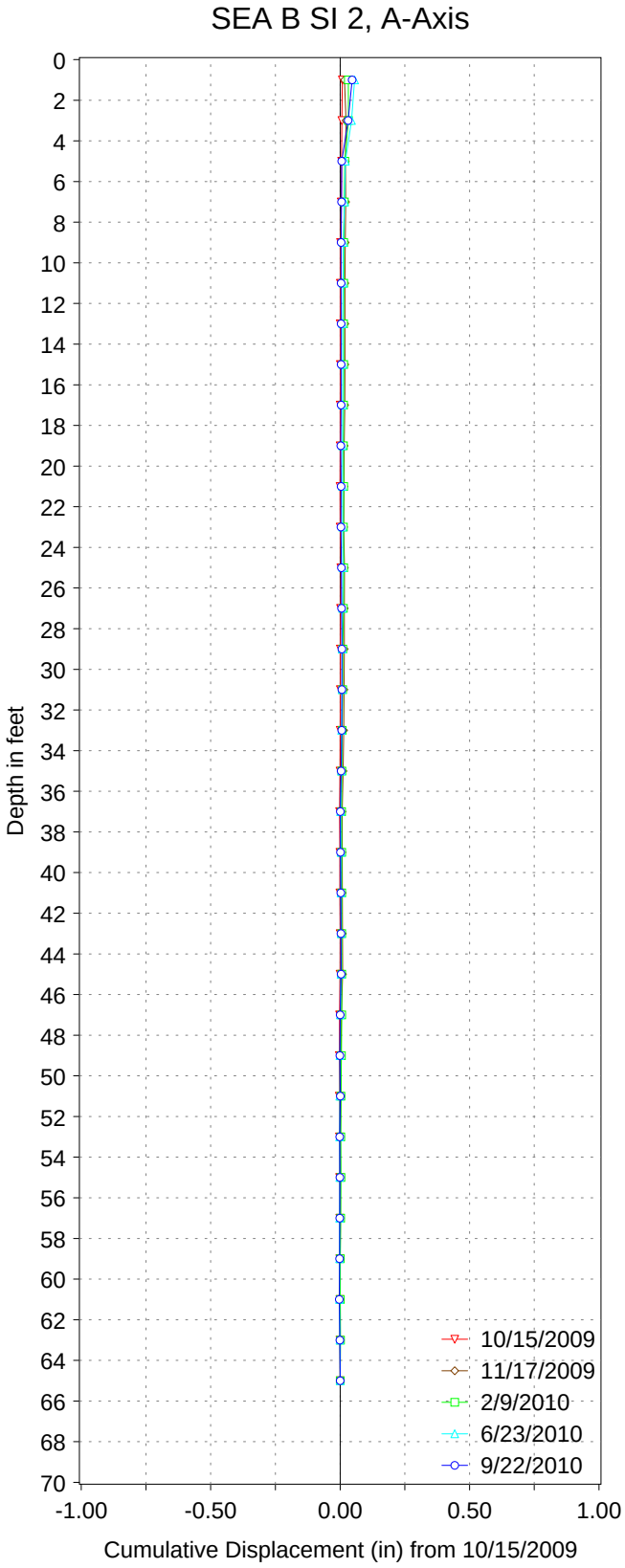
Seaside Beach

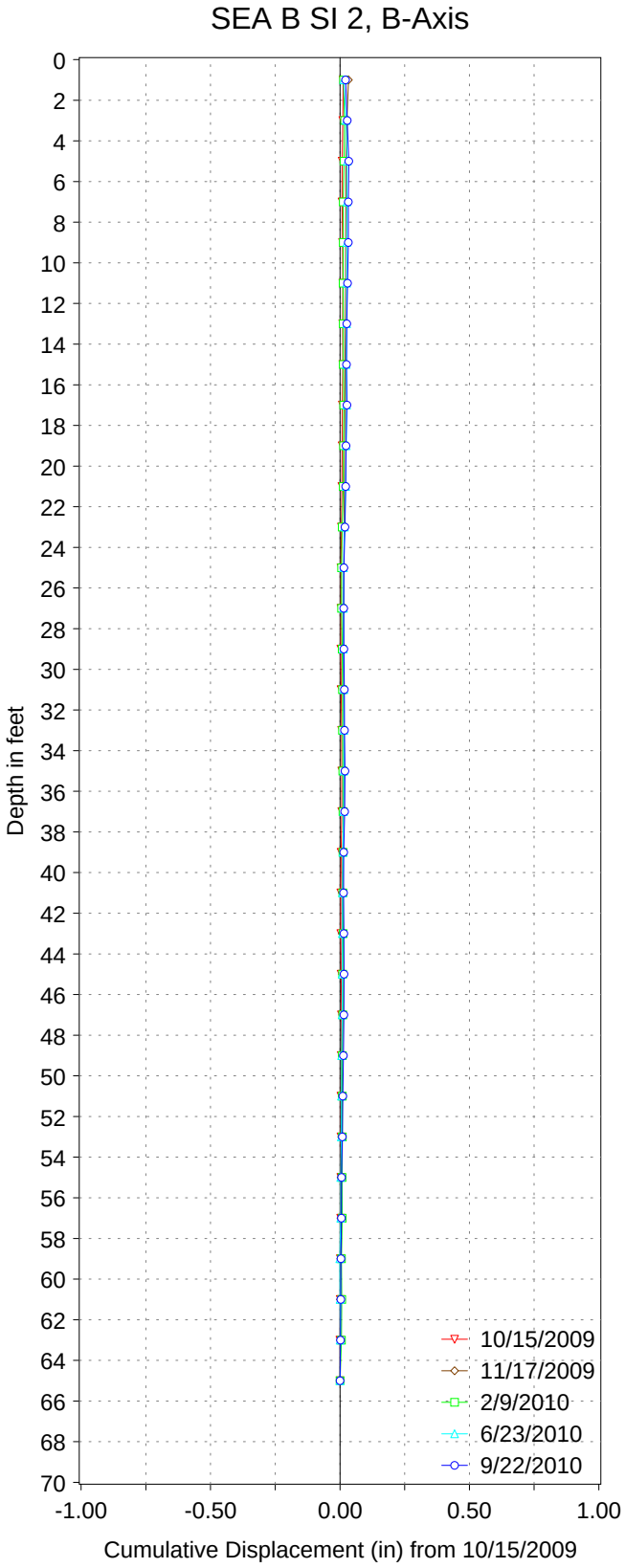
E.A. No: 01-474901

DEPTH OF INCLINOMETER CASING: 71 ft

Ao DIRECTION: 15* (magnetic North)

Location (WGS-84) :





INCLINOMTER RESULTS

01-Men-001-PM 70.5

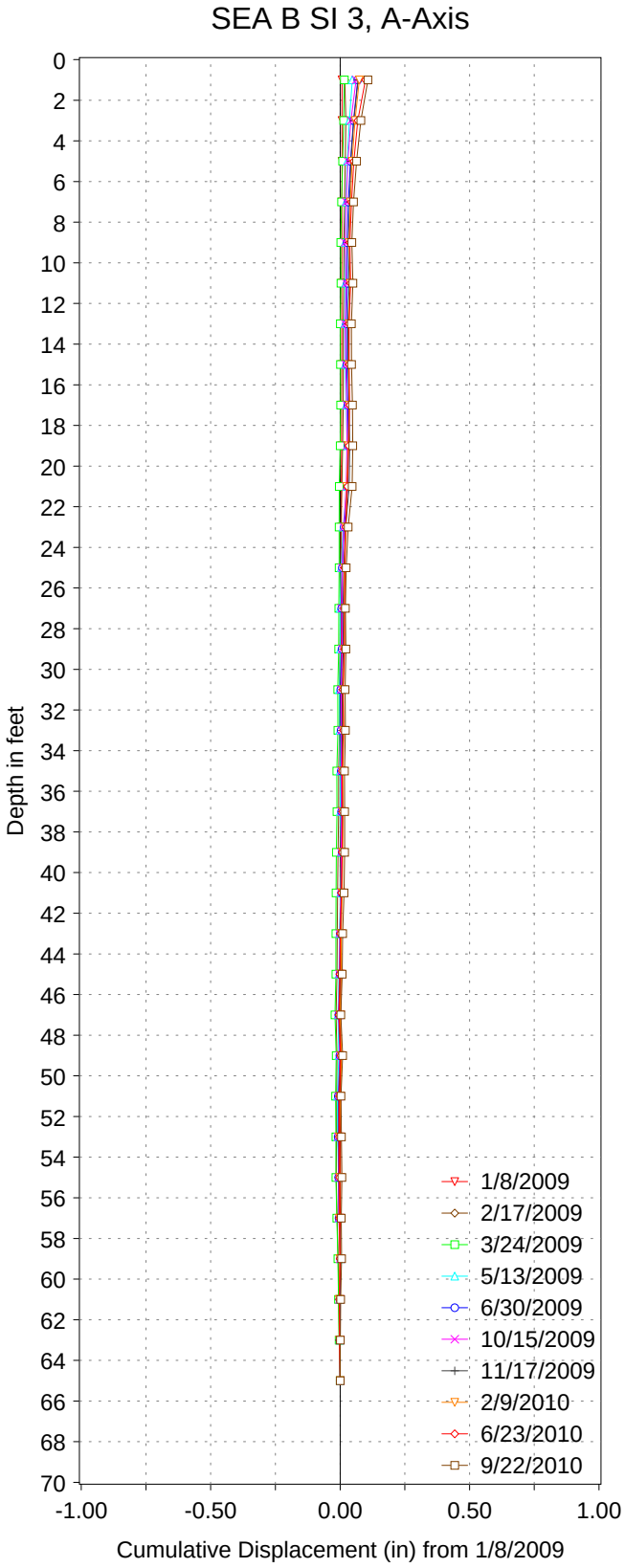
Seaside Beach

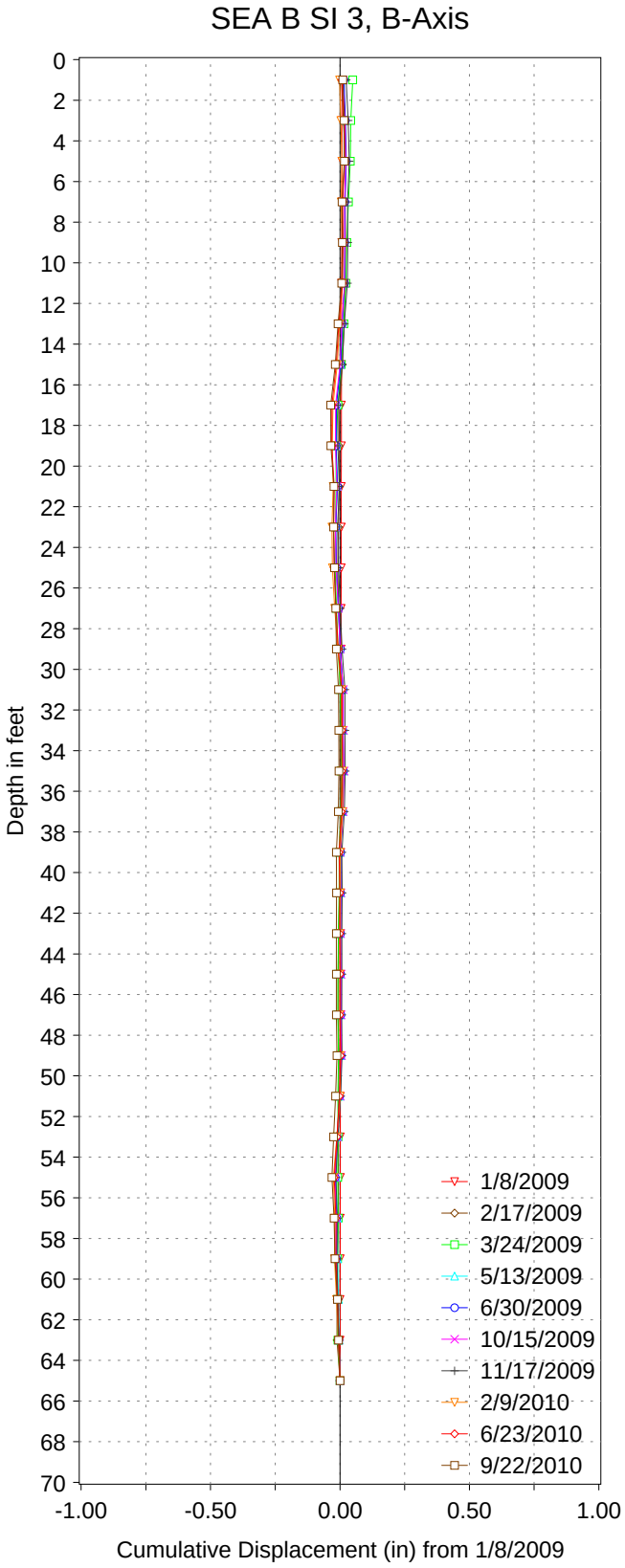
E.A. No: 01-474901

DEPTH OF INCLINOMETER CASING: 65 ft

Ao DIRECTION: 20* (magnetic North)

Location (WGS-84) :





INCLINOMTER RESULTS

01-Men-001-PM 70.5

Seaside Beach

E.A. No: 01-474901

DEPTH OF INCLINOMETER CASING: 65 ft

Ao DIRECTION: 20* (magnetic North)

Location (WGS-84) :

APPENDIX B

LABORATORY TEST SUMMARY AND DATA SHEETS

APPENDIX B

TABLE 2
Wacker Holes and Rotary Borings

WACKER/ BORING ID	DEPTH (ft,bgs)	USCS	DESCRIPTION	UNIT WEIGHT [1] (pcf)	IN-SITU MOISTURE CONTENT [1] (%)			ASTM ATTERBERG LIMITS		
								PL	LL	PI
W1-08	1 – 3.5	SC		84.2	21			21	30	9
W1-08	14 – 14.5	SM			7			NP	22	NP
W1-08	15 – 15.5	SM			10			NP	21	NP
W1-08	16 - 17	SC						17	29	12
W1-08	26-32	SM						NP	-	NP
W3-08	2.5 - 4	SC		95	25.5			44	24	20
W3-08	5.5 - 8	SC			15			21	35	14
W3-08	10 - 12	SC			18			22	35	13
W3-08	12.5 - 16	SC			31			19	31	12
W3-08	16.5 - 20	SC						19	28	9
W3-08	20.5 – 22.5	SC			31			19	30	11
W3-08	22.5 - 24	SC			10			17	25	8
W3-08	24-26	CL			33			18	27	9
W3-08	26.5 - 27	SC		131	10			17	25	8
R-08-001	17	SC		115.0	9.0				29	8
R-08-001	20	SC		99.9	6.6				32	9
R-08-001	30	SC		104.8	17.1				29	8
R-08-001	40	SC/SM			14.2				25	5
R-08-001	17	SC		115.0	9.0				29	8
R-08-001	20	SC		99.9	6.6				32	9
R-08-001	30	SC		104.8	17.1				29	8
R-08-001	40	SC/SM			14.2				25	5
R-08-002	5	SM			18.8				27	5
R-08-002	10	SC/SM			15.6					

TABLE 2 (Cont.)
Wacker Holes and Rotary Borings

WACKER/ BORING ID	DEPTH (ft,bgs)	USCS	DESCRIPTION	UNIT WEIGHT [1] (pcf)	IN-SITU MOISTURE CONTENT [1] (%)			ASTM ATTERBERG LIMITS		
								PL	LL	PI
R-08-002	15	SC/SM			10.0				25	4
R-08-002	20	CL/ML			11.3				24	4
R-08-002	25	SC/SM			8.9				23	4
R-08-002	35	SC			12.9				26	10
R-08-002	40-45	SC/SM			16.1				19	5
R-09-003	7	SC		92.4	27.4				27	6
R-09-003	12	SC		116.6	22.4				28	10
R-09-003	31	SC		127.7	11.0				24	11
R-09-003	36	SC		126.7	8.5				23	8
R-09-003	48	SC		131.6	9.2				23	8
R-09-003	69	SC			4.5					

DIVISION OF
ENGINEERING SERVICES
OFFICE OF GEOTECHNICAL SUPPORT
GEOTECHNICAL LABORATORY
5900 Folsom Boulevard
Sacramento, CA 95819

Date: 3/1/2010

To: Kathy Gallagher / GDN

From: Lilibeth C. Purta / (916) 227-5239

RE: Laboratory Test Report -- EA: 01-474901
GL 09-062

Final test results.

Note: All remaining test specimens will be disposed of in 30 calendar days from the release date of the final test results.

AASHTO R18

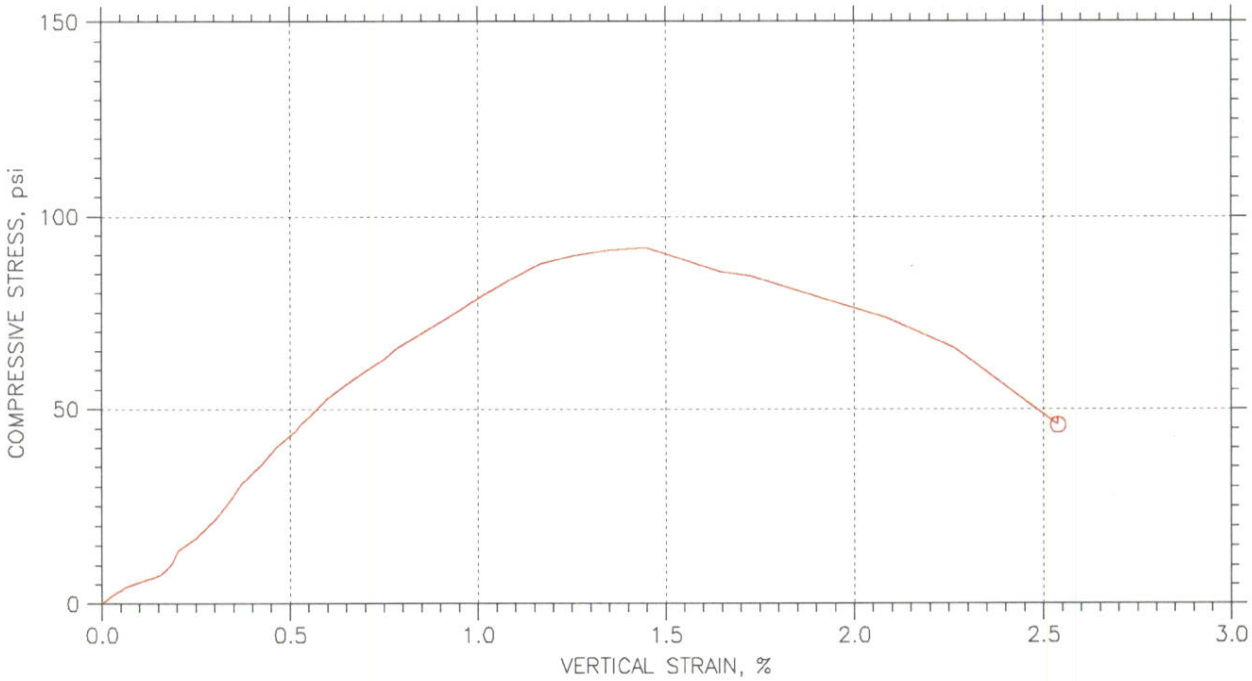
CALIFORNIA DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL LABORATORY

GL TRACKING NO : 09-062
Dist - EA: 01-474901
Report Date: March 1, 2010
Page: 1/1

CLASSIFICATION TEST SUMMARY

SAMPLE ID	% FINER THAN																	ATTERBERG LIMITS		AS RECEIVED		Gs
	3"	2 1/2"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	5μ	1μ	LL	PI	γd (pcf)	%m	
R-09-001_01								100	84	63	51	44	40	36	33	13	6	29	8	115.0	9.0	
R-09-001_02								100	91	71	54	43	36	31	28	12	5	32	9	99.9	6.6	
R-09-001_03								100	94	84	76	68	58	41	26	11	4	29	8	104.8	17.1	
R-09-001_04								100	98	94	91	87	76	56	43	18	10	25	5		14.2	
R-09-001_05																						
R-09-001_06																						
R-09-002_07						100	90	86	79	70	66	62	53	33	27	20	9	27	5		18.8	
R-09-002_08						100	95	92	85	67	58	51	44	32	23	10	6				15.6	
R-09-002_09				100	92	85	78	76	69	61	56	52	47	36	28	12	6	25	4		10.0	
R-09-002_10									100	94	86	78	71	65	61	22	12	24	4		11.3	
R-09-002_11						100	95	95	84	73	64	56	49	38	29	13	8	23	4		8.9	
R-09-002_12							100	98	88	78	73	69	64	53	43	19	10	26	10		12.9	
R-09-002_13&13A								100	94	89	84	74	55	38	30	10	4	19	5		16.1	
R-09-002_14																						
R-09-003_15				100	96	96	96	95	94	89	84	78	69	35	28	16	8	27	6	92.4	27.4	
R-09-003_16								100	87	83	80	76	71	63	57	27	14	28	10	116.6	22.4	
R-09-003_17									100	97	89	78	68	57	49	30	19	24	11	127.7	11.0	
R-09-003_18								100	98	90	81	71	59	47	38	19	11	23	8	126.7	8.5	
R-09-003_19								100	88	82	73	62	52	43	36	19	10	23	8	131.6	9.2	
R-09-003_20																					4.5	

UNCONFINED COMPRESSION TEST REPORT



Symbol		⦶			
Test No.		Q10-004			
Initial	Diameter, in	2.38			
	Height, in	4.16			
	Water Content, %	4.47			
	Dry Density, pcf	75.3			
	Saturation, %				
	Void Ratio				
Unconfined Compressive Strength, psi		91.88			
Undrained Shear Strength, psi					
Time to Failure, min					
Strain Rate, %/min		1			
Implied Specific Gravity					
Liquid Limit		---			
Plastic Limit		---			
Plasticity Index		---			
Failure Sketch					

Caltrans	Project: SEASIDE BEACH
	Location: 01-MEN1-70.5
	Project No.: 01-474901
	Boring No.: R-09-003
	Sample No. : 20
	Description: Moist, Grey-brown hard silty clay
	Remarks: ASTM D 2166. L/D < 2.0

W 1/12/10

Thu, 07-JAN-2010 14:46:11

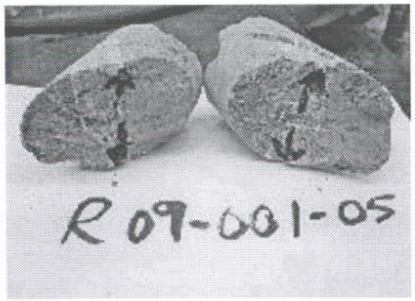
Division of Engineering Services
Geotechnical Laboratory

Point Load Strength Index

Dist-EA: 01-474901
Dist-Co-Rte-PM: MEN-1-70.5/

GI Tracking No.: 09-062
Report Date: January 12, 2010

Sample ID	Test Type	Length , L (mm)	Width, W (mm)	Initial Distance Between Contact Points, D(mm)	Final Distance Between Contact Points, D'(mm)	Equivalent Diameter, De (mm)	Failure Load, P (lbs)	Uncorrected Point Load Strength Index Is (psi)	Point Load Strength Index Is (50) (psi)	Remarks
R-09-001_05	D-L	56.84		60	52	55.86	440	90.98	96	
R-09-001_06	D-L	53.33		60	55	57.45	712.8	139.35	148	
R-09-002_14	I-L	41.88	49.7	24	20	35.58	316.8	161.49	139	



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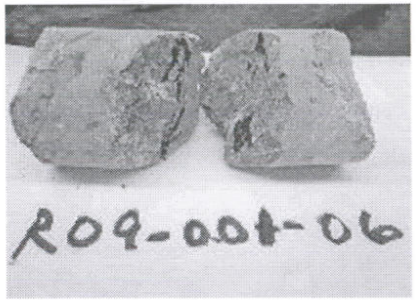

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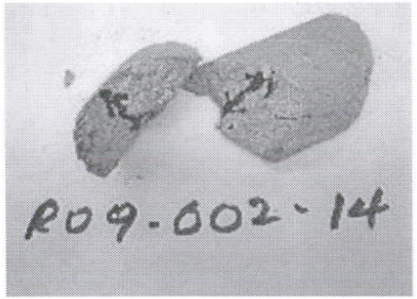

R-09-002_14

No Image Available

Test Type Abbreviations: D- Diametral, A - Axial, B - Block, I - Irregular Lump

Orientation of Load Direction (if anisotropic): P - Perpendicular to plane of weakness, L - Parallel to plane of weakness

APPENDIX

RECOMMENDED TIEBACK UNBONDED LENGTHS

Pile Number	Tieback Unbonded Lengths (feet)		
	T1	T2	T3
1	--	--	--
2	--	--	--
3	--	--	--
4	--	--	--
5	--	--	--
6	--	--	--
7	--	--	--
8	--	--	--
9	--	--	--
10	40	--	--
11	40	--	--
12	40	--	--
13	40	--	--
14	40	--	--
15	40	30	--
16	40	30	--
17	40	30	--
18	40	30	20
19	40	30	20
20	40	30	20
21	40	30	20
22	40	30	20
23	40	30	20
24	40	30	20
25	40	30	20
26	45	40	30
27	45	40	30
28	45	40	30
29	45	40	30
30	45	40	30
31	45	40	30
32	45	40	30
33	45	40	30
34	45	40	30
35	45	40	30
36	45	30	--
37	45	30	--
38	45	30	--
39	45	30	--

Pile Number	Tieback Unbonded Lengths (feet)		
	T1	T2	T3
40	45	30	--
41	45	30	--
42	45	30	--
43	45	30	--
44	45	30	--
45	45	30	--
46	50	--	--
47	50	--	--
48	50	--	--
49	50	--	--
50	50	50	--
51	50	50	--
52	60	50	--
53	60	50	--
54	60	55	--
55	60	55	--
56	60	55	--
57	60	55	--
58	60	55	--
59	60	55	--
60	45	--	--
61	45	--	--
62	45	--	--
63	45	--	--
64	45	--	--
65	45	--	--
66	45	--	--
67	45	--	--
68	45	--	--
69	45	--	
70	45	--	
71	--	--	