

## CALIFORNIA COASTAL COMMISSION

SOUTH CENTRAL COAST AREA  
89 SOUTH CALIFORNIA ST., SUITE 200  
VENTURA, CA 93001  
(805) 585-1800



# W26b

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original staff report

## ADDENDUM

**DATE:** March 9, 2015  
**TO:** Commissioners and Interested Parties  
**FROM:** South Central Coast District Staff  
**SUBJECT:** Agenda Item W26b, Application No. 4-13-010 (California Department of Transportation), Wednesday, March 11, 2015

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The purpose of this addendum is to (1) make a minor revision to the text of Special Condition Five (5), (2) minor revision to the text of Special Condition Eight (8), (3) correct an inadvertent error in the Summary of Staff Recommendation; and (4) correct inadvertent error in the project description.

Note: ~~Strikethrough~~ indicates text to be deleted from the February 26, 2015 staff report and underline indicates text to be added to the staff report.

1. The following revisions shall be made to Special Condition Five (5), found on page 9 of the February 26, 2015 staff report:

- 5. Removal of Existing Rock Revetment and Construction of Public Access Improvements**

The applicant shall, by accepting this permit, agree and ensure that:

A. Where the new rock revetment is proposed, all portions of the existing rock revetment (including any errant, exposed loose rocks) would be removed and either reused on site for the new rock revetment or relocated off site. In addition, the existing concrete road barriers and any existing concrete and/or debris located within the existing rock revetment shall be removed and relocated off site at a location outside the coastal zone or within the coastal zone authorized to receive such material.

B. Construction of the new four vertical public accessways and 3 foot wide trail pathway along the bluff top shall be completed concurrent with the construction of the new revetment authorized by the approval of this permit. Striping for the ADA-compliant parking space, placement of public access signage, and improvements to the existing parking area shall be completed concurrent with, or immediately following completion of paving the road shoulder.

2. The following revisions shall be made to Special Condition Eight (8), in part, found on page 10 of the February 26, 2015 staff report:

**8. Operations and Maintenance Responsibilities**

By accepting this permit, the applicant shall agree to comply with the following construction-related requirements:

A. The applicant shall not store or place any construction materials or waste where it will be or could potentially be subject to wave erosion and dispersion. In addition, no machinery shall be stored or placed in the intertidal zone at any time, except for that necessary to remove errant rocks from the beach seaward of the existing rock revetment and for use of the temporary berm/rip rap barrier for an approximately 565 linear feet segment of the proposed rock revetment as shown on Exhibit 11.

...

3. The following change shall be made to the 2nd paragraph of the “Summary of Staff Recommendation,” found on page 2 of the February 26, 2015 staff report to correct an inadvertent error:

The standard of review for the proposed project is the Chapter Three policies of the Coastal Act. In addition, the policies of the certified ~~Malibu—Santa Monica Mountains Land Use Plan (LUP)~~ City of Malibu Local Coastal Program (LCP) serve as guidance. Following is a summary of the main issues raised by the project and how they are resolved by staff’s recommendation:

4. The following changes shall be made to the project description on the cover page of the February 26, 2015 staff report (in addition, all other references to the project description in the report are revised accordingly):

Construction of a 1,640 linear foot, ~~20-foot-high~~ rock revetment ranging from 5 ft. to 30 ft. in height and using 23,000 cu. yds. of rip rap to stabilize the undermined bluff on the seaward side of Pacific Coast Highway. A 1,260 linear ft. segment of the rock revetment will be constructed using a stacked concrete-filled sack foundation which would be covered by rip rap (40 linear feet of these stacked concrete bags were previously installed pursuant to Emergency Permit No. G-4-14-0032 and would be permanently authorized as part of this application). In addition, the project includes 11,200 cu. yds. of grading (10,000 cu. yds. of cut and 1,200 cu. yds. of fill); removal of existing concrete road barriers along the road shoulder; construction of a 1.6’ ft. high rock berm and 6-inch high dike wall; replacement of an existing public beach vertical accessway/trail with four new vertical public accessways/trails and a bluff top trail, one new ADA-compliant parking space; surface improvements to an existing dirt parking area and installation of two new public coastal access signs.

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**W26b**

Filed: 9/18/2014  
 180th Day: 3/17/2015  
 Staff: D. Venegas-V  
 Staff Report: 2/26/2015  
 Hearing Date: 3/11/2015

**STAFF REPORT: REGULAR CALENDAR**

**Application No.:** 4-13-010

**Applicant:** California Department of Transportation

**Agent:** David Lewis, California Department of Transportation

**Project Location:** Pacific Coast Highway between Postmile 41.8 and 42.1, Las Tunas Beach; City of Malibu, Los Angeles County

**Project Description:** Construction of a 1,640 linear foot, 20 feet high rock revetment using 23,000 cu. yds. of rip rap to stabilize the undermined bluff on the seaward side of Pacific Coast Highway. A 1,260 linear ft. segment of the rock revetment will be constructed using a stacked concrete-filled sack foundation which would be covered by rip rap (40 linear feet of these stacked concrete bags were previously installed pursuant to Emergency Permit No. G-4-14-0032 and would be permanently authorized as part of this application). In addition, the project includes 11,200 cu. yds. of grading (10,000 cu. yds. of cut and 1,200 cu. yds. of fill); removal of existing concrete road barriers along the road shoulder; construction of a 1.6' ft. high rock berm and 6-inch high dike wall; replacement of an existing public beach vertical accessway/trail with four new vertical public accessways/trails and a bluff top trail, one new ADA-compliant parking space; surface improvements to an existing dirt parking area and installation of two new public coastal access signs.

**Staff Recommendation:** Staff recommends **approval** of the proposed development with nine special conditions.

**SUMMARY OF STAFF RECOMMENDATION**

Staff recommends **approval** of the proposed development with conditions.

The standard of review for the proposed project is the Chapter Three policies of the Coastal Act. In addition, the policies of the certified Malibu – Santa Monica Mountains Land Use Plan (LUP) serve as guidance. Following is a summary of the main issues raised by the project and how they are resolved by staff's recommendation:

The California Department of Transportation is proposing construction of a 1,640 linear foot, 20 feet high rock revetment using 23,000 cu. yds. of rip rap along the undermined bluff located immediately seaward of Pacific Coast Highway. A 1,260 linear ft. segment of the rock revetment will be constructed using a stacked concrete-filled sack foundation which would be covered by rip rap (40 linear feet of these stacked concrete bags were previously installed pursuant to Emergency Permit No. G-4-14-0032 and would be permanently authorized as part of this application). In addition, the project includes approximately 11,200 cu. yds. of grading (10,000 cu. yds. of cut and 1,200 cu. yds. of fill); removal of existing concrete road barriers along the road shoulder; construction of a 1.6' ft. high rock berm and 6-inch high dike wall; replacement of an public vertical beach access way/trail with four new public vertical accessways/trails; a new public blufftop trail; and one new American with Disabilities Act (ADA) compliant parking space; resurfacing of an existing parking area with Class D aggregate base; and installation of two new public access signs.

The project site is located along Pacific Coast Highway, between Postmile 41.8 and 42.1 at an area commonly known as "Las Tunas Beach" in the City of Malibu (Exhibits 1-3). This portion of Pacific Coast Highway is 75 ft. wide and extends along the base of the Santa Monica Mountains in a general east-west direction and was mostly constructed on a foundation of artificial fill. The bluff slope between the highway and the ocean where the proposed development will occur is approximately 20 feet high and 2,100 feet long with a steep slope that is generally angled at a 1H:1V (horizontal:vertical) slope ratio to near vertical where eroded. Additionally, the project limits are surrounded by an ancient and massive landslide (the Las Tunas/La Grande Slide), which underlies the entire project reach and toes out onto the sandy beach seaward of the highway. The embankment is partially covered in places with an existing non-engineered rock revetment, however, severe erosion of the fill slope material at some revetment locations has occurred due to high intensity storms and high surf wave-action over several winters.

The site is currently developed with an existing non-engineered 1,660 feet long rock revetment/rip rap approximately 20 feet high. An existing cement groin; existing dirt parking lot with lifeguard station; and an existing informal beach pathway between Pacific Coast Highway and the top of slope and appear to have been constructed prior to the effective date of the Coastal Zone Conservation Act of 1972 and the Coastal Act of 1976. Today, the embankment along the beach is being eroded by waves, which have more recently steadily encroached on the embankment and threatening the roadway shoulder along Pacific Coast Highway, as well as several existing utility lines, including water and gas. In this case, the applicant has indicated that the existing non-engineered shoreline protection on site has reached the end of its expected life and is no longer adequate to ensure the protection of the subject reach of Pacific Coast Highway from wave action. In many locations, there is no shoulder along the road and therefore the existing beach parking areas will be lost with continued erosion. The new proposed rock

revetment will be located further landward of the previously existing revetment and will not result in any seaward encroachment by new development on the sandy beach. Specifically, the proposed project includes the construction of a 1,640 linear ft., 20 ft. high rock revetment designed to be installed along a slope embankment to stabilize the embankment and prevent further undermining of the roadway.

Although the replacement of the proposed rock revetment is necessary, shoreline armoring has a number of impacts on the coast, including but not limited to impacts from encroachment, fixing the back of the beach, and preventing the natural erosion of coastal bluffs that provide sandy material to the nearby beaches. As a result of these impacts, the Coastal Act is premised on both hazard and shoreline armoring avoidance. However, the presence of a rock revetment in this location is necessary to protect the continued use of Pacific Coast Highway.

Currently, public parking is available in the existing dirt parking area. Additionally, parking is also available on the shoulder of the highway along the entire length of the project area. However portions of the existing dirt parking area will serve as a staging area for the proposed project. Although this loss of available parking spaces will only be temporary and therefore does not result in any adverse effects to public access. Additionally, parking will still be available along the highway shoulder to access the beach. The proposed project includes construction of new public access improvements on site including four public access stairways over the proposed new rock revetment by reconfiguring existing stones within the revetment; improvements to an existing informal pathway by creating a wider and more continuous pathway between the roadway and the proposed rock revetment; improvements to the existing dirt parking lot by applying Class D aggregate base (Class D consists of any combination of the following: broken stone, crushed gravel, sand and/or reclaimed processed asphalt concrete) over the parking lot to create a more leveled and usable surface; and the installation of two coastal access signs. To ensure that these public access improvements are constructed, Special Condition Five (5) requires that all proposed public access improvements shall be constructed concurrently with the construction of the new rock revetment.

A solid concrete barrier in this location between the first public road and the sea blocks public views of the ocean. The Commission has typically required the use of more visually permeable rails or barriers in road or bridge projects that are in visually sensitive locations. However, as proposed, the new rock revetment will not be any greater in height than the existing rock revetment and the existing 3.6 ft. concrete solid road barriers will be removed and no new road barrier is proposed. Therefore, the removal of the existing concrete road barrier will enhance public views of the ocean and the project will not result in any adverse impacts to public views of the ocean from the highway or from the beach. Furthermore, the applicant's biologist has submitted a natural environment study prepared for the site, which finds that no sensitive animal or bird species have been determined to reside within the project area. Additionally, the survey indicates the project area is sparsely vegetated by non-native species. Thus, the proposed project is not expected to result in any adverse impacts to sensitive plant or animal species on site. However, the Commission finds that the project area is within the expected range of the California Grunion. To ensure that any potential adverse effects to the California Grunion are minimized, Special Condition Six (6) requires that a qualified biologist or environmental resource specialist shall conduct a survey of the project site each day prior to commencement of any construction activities that occur between March 1<sup>st</sup> and September 1<sup>st</sup>, to determine whether any California Grunion, or eggs, are present.

As originally proposed, the project included the use of heavy equipment on the beach in order to construct the revetment. In addition, due to the narrowness of the beach and because the wave uprush on site frequently extends to the base of the bluff during medium and high tides, the project also included the temporary construction of a geofabric covered berm with rip rap toe protection to serve as a wave barrier approximately 100 ft. from the toe of the revetment in order to create an approximately 15 ft. wide dry work and staging on the sandy beach between the toe of the revetment and the temporary barrier. However, construction of the temporary berm/rip rap barrier at areas of the site that are normally subject to inundation would result in potential temporary adverse impacts to intertidal habitat areas. In coordination with Commission staff, the applicant has revised the proposed project to eliminate the use of the of the berm/rip rap barrier to the extent feasible. The applicant has submitted a draft revised construction methods and staging plan which indicates that the revetment will be constructed utilizing heavy equipment located at the top of the bluff to maximum extent feasible. Therefore, Special Condition One (1) has been required to ensure that revised final constructions staging plans, for the review and approval of the Executive Director in order to ensure that potential impacts to marine resources during construction are minimized to the maximum extent feasible.

Although the Commission has previously certified a Local Coastal Program (LCP) for the City of Malibu, portions of the proposed project will be located, at times, on state tidelands and is located within an area where the Commission has retained jurisdiction over the issuance of coastal development permits. Pursuant to Section 30601.3 of the Coastal Act, a consolidated permit was requested by California Department of Transportation and the City of Malibu and was approved by the Executive Director. Thus, the standard of review for this project is the Chapter Three policies of the Coastal Act, with the applicable policies of the City of Malibu Local Coastal Program (LCP) as guidance. As conditioned, the proposed project is consistent with all applicable Chapter Three policies of the Coastal Act.

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## APPENDICES

### Appendix 1 Substantive File Documents

#### EXHIBITS

- Exhibit 1. Vicinity Map
- Exhibit 2a-b. Parcel Maps
- Exhibit 2. Aerial Photo
- Exhibit 4a-c. Site Photos
- Exhibit 5a-b. Site Plan Part 1&2
- Exhibit 6. Proposed Revetment Cross-Sections
- Exhibit 7. Proposed Access Trail
- Exhibit 8. Proposed Beach Accessway
- Exhibit 9. Proposed Accessible Parking Space
- Exhibit 10. City of Malibu Consolidated CDP Resolution No. 14-30
- Exhibit 11. Proposed Construction Methods

#### LOCAL APPROVALS RECEIVED: N/A

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## I. MOTION AND RESOLUTION

The staff recommends that the Commission adopt the following resolution:

#### **Motion:**

*I move that the Commission approve Coastal Development Permit No. 4-13-010 pursuant to the staff recommendation.*

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

#### **Resolution:**

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



## II. STANDARD CONDITIONS

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

## III. SPECIAL CONDITIONS

### 1. Final Project Plans

A. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the review and approval of the Executive Director, two sets of final revised project plans to the Executive Director for review and approval. All plans must be drawn to scale with dimensions shown. Said plans shall be in substantial conformance with the preliminary plans submitted with this application on February 17, 2015, but shall be revised to include the following:

- (1) Improvements of the existing parking lot located at the downcoast end of the project site. The parking lot shall be improved with Class D aggregated base.
- (2) Correction to the revetment width dimensions located on cross section for Sta. 116+35 to Sta. 120+69 on sheet X-1. Dimensions shall be replaced to read 28' to 41'.
- (3) Correction to the revetment width dimensions located on cross section for Sta. 107+25 to Sta. 116+35 and Sta. 120+69 to Sta. 123+67 on sheet X-1. Dimensions shall be replaced to read 28' to 57'.
- (4) Correction to sheet L-2 to include a fourth public accessway.

- (5) Any changes necessary conform with the final Project Construction Method and Staging Plan required pursuant to subsection B. below.

B. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the review and approval of the Executive Director, two sets of final project construction method and staging project plans to the Executive Director for review and approval. All plans must be drawn to scale with dimensions shown. Said plans shall show that construction activities and staging shall occur primarily from the top of bluff using a temporary ramp to the maximum extent feasible consistent with the draft construction method and staging plan submitted on February 26, 2015 and attached as Exhibit 11.

C. The Permittee shall undertake development in accordance with the final approved plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No change to the approved final plans shall occur without a Coastal Commission approved amendment to the coastal development permit, unless the Executive Director determines that no amendment is legally required.

## **2. Plans Conforming to Geotechnical Engineer's Recommendations**

By acceptance of this permit, the applicant agrees to comply with the recommendations contained in all of the geology, geotechnical, and/or soils reports referenced as Substantive File Documents. These recommendations, including recommendations concerning foundations, sewage disposal, and drainage, shall be incorporated into all final design and construction plans, which must be reviewed and approved by the consultant prior to commencement of development.

The final plans approved by the consultant shall be in substantial conformance with the plans approved by the Commission relative to construction, grading, and drainage. Any substantial changes in the proposed development approved by the Commission that may be required by the consultant shall require amendment(s) to the permit(s) or new Coastal Development Permit(s).

## **3. Assumption of Risk, Waiver of Liability and Indemnity**

By acceptance of this permit, the applicants acknowledges and agrees (i) that the site may be subject to hazards from erosion, liquefaction, waves, flooding, tsunamis, and sea level rise; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit a written agreement, in a form and content acceptable to the Executive Director, incorporating all of the above terms of this condition.

#### **4. Other Federal, State, or Local Approvals**

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit for the review and approval of the Executive Director, either evidence of final required approvals or evidence that no approval is needed from the U.S. Army Corps of Engineers, Regional Water Quality Control Board, California Department of Fish and Wildlife Service, United States Fish and Wildlife, and the National Marine Fisheries Service.

#### **5. Removal of Existing Rock Revetment and Construction of Public Access Improvements**

The applicant shall, by accepting this permit, agree and ensure that:

- A. Where the new rock revetment is proposed, all portions of the existing rock revetment (including any errant, exposed loose rocks) would be removed and either reused on site for the new rock revetment or relocated off site.
- B. Construction of the new four vertical public accessways and 3 foot wide trail pathway along the bluff top shall be completed concurrent with the construction of the new revetment authorized by the approval of this permit. Striping for the ADA-compliant parking space, placement of public access signage, and improvements to the existing parking area shall be completed concurrent with, or immediately following completion of paving the road shoulder.

#### **6. Biological Monitoring During Construction**

The applicant shall retain the services of a qualified biologist or environmental resource specialist (hereinafter, “environmental resources specialist”) with appropriate qualifications acceptable to Executive Director, to conduct California Grunion pre-construction surveys. If any construction activity occurs on the sandy beach including but not limited to, removal of existing rip rap and/or construction of the new rock revetment, between March 1<sup>st</sup> and September 1<sup>st</sup>, then the applicant shall have the environmental resource specialist conduct a survey of the project site, to determine presence of California Grunion during the seasonally predicted run period and egg incubation period, as identified by the California Department of Fish and Wildlife Services. If the environmental resources specialist determines that any grunion spawning activity is occurring and/or that grunion are present in or adjacent to the project site, then no construction/demolition activities shall occur on the area of the beach where grunion have been observed to spawn until the next predicted run in which no grunion are observed. Surveys shall be conducted for all seasonally predicted run periods in which material is proposed to be placed or removed at any of the above sites. The applicant shall have the environmental resource specialist provide inspection reports after each grunion run observed and shall provide copies of such reports to the Executive Director and to the California Department of Fish and Wildlife Services.

#### **7. Public Access Signage Plan**

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the review and approval of the Executive Director, a public access signage plan, that

describes the location, number, size, and contents of signs to be placed along Pacific Coast Highway and the subject site and which meets, at a minimum, the following requirements:

1. Signs shall indicate the availability of public access to the beach at the project site.
2. A minimum of two signs shall be installed along Pacific Coast Highway; and
3. Signs shall be maintained in good condition onsite for the duration of the project.

The public access signs shall be installed by the applicant in the manner described in the approved signage plan concurrent with the construction of the rock revetment and public access improvements on site, or within such additional time as the Executive Director may grant for good cause.

## **8. Operations and Maintenance Responsibilities**

By accepting this permit, the applicant shall agree to comply with the following construction-related requirements:

- A. The applicant shall not store or place any construction materials or waste where it will be or could potentially be subject to wave erosion and dispersion. In addition, no machinery shall be stored or placed in the intertidal zone at any time, except for that necessary to remove errant rocks from the beach seaward of the existing rock revetment.
- B. Construction equipment shall not be cleaned on the beach or in the adjacent beach parking areas.
- C. Construction debris and sediment shall be properly contained and secured on site with best management practices to prevent the unintended transport of sediment and other debris into coastal waters by wind, rain or tracking.
- D. Construction debris and sediment shall be removed from construction areas as necessary to prevent the accumulation of sediment and other debris which may be discharged into coastal waters. Any and all debris resulting from construction activities shall be removed from the project site within 24 hours. Debris shall be disposed at a debris disposal site outside the coastal zone or at a location within the coastal zone authorized to receive such material.
- E. During construction activities authorized pursuant to this permit, the applicant shall be responsible for removing all unsuitable material or debris within the area of placement should the material be found to be unsuitable for any reason, at any time, when the presence of such unsuitable material/debris can reasonably be attributed to the placement material. Debris shall be disposed at a debris disposal site outside of the coastal zone or at a location within the coastal zone authorized to receive such material.

## **9. Removal of Excavated Material**

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall provide evidence to the Executive Director of the location of the disposal site for all excess excavated material from the site. If the disposal site is located in the Coastal Zone, the disposal

site must have a valid coastal development permit for the disposal of fill material. If the disposal site does not have a coastal permit, such a permit will be required prior to the disposal of material.

#### **IV. FINDINGS AND DECLARATIONS**

The Commission hereby finds and declares:

##### **A. PROJECT DESCRIPTION AND BACKGROUND**

The California Department of Transportation is proposing construction of a 1,640 linear foot, 20 feet high rock revetment using 23,000 cu. yds. of rip rap along the undermined bluff located immediately seaward of Pacific Coast Highway. A 1,260 linear ft. segment of the rock revetment will be constructed using a stacked concrete-filled sack foundation which would be covered by rip rap (40 linear feet of these stacked concrete bags were previously installed pursuant to Emergency Permit No. G-4-14-0032 and would be permanently authorized as part of this application). In addition, the project includes approximately 11,200 cu. yds. of grading (10,000 cu. yds. of cut and 1,200 cu. yds. of fill); removal of existing concrete road barriers along the road shoulder; construction of a 1.6' ft. high rock berm and 6-inch high dike wall; replacement of an public vertical beach accessway/trail with four new public vertical accessways/trails; a new public blufftop trail; and one new American with Disabilities Act (ADA) compliant parking space; resurfacing of an existing parking area with Class D aggregate base; and installation of two new public access signs.

The project site is located along Pacific Coast Highway, between Postmile 41.8 and 42.1 at an area commonly known as "Las Tunas Beach" in the City of Malibu (Exhibits 1-3). This portion of Pacific Coast Highway is 75 ft. wide and extends along the base of the Santa Monica Mountains in a general east-west direction and was mostly constructed on a foundation of artificial fill. The bluff slope between the highway and the ocean where the proposed development will occur is approximately 20 feet high and 2,100 feet long with a steep slope that is generally angled at a 1H:1V (horizontal:vertical) slope ratio to near vertical where eroded. The fill material consists of silty-sand with some clay and debris. Additionally, the project limits are surrounded by an ancient and massive landslide (the Las Tunas/La Grande Slide), which underlies the entire project reach and toes out onto the sandy beach seaward of the highway. The embankment is partially covered in places with an existing non-engineered rock revetment. However, severe erosion of the fill slope material at some revetment locations has occurred due to high intensity storms and high surf wave-action over several winters.

The site is currently developed with an existing non-engineered 1,660 feet long rock revetment/rip rap approximately 20 feet high. An existing cement groin; existing dirt parking lot with lifeguard station; and an existing informal beach pathway between Pacific Coast Highway and the top of slope and appear to have been constructed prior to the effective date of the Coastal Zone Conservation Act of 1972 and the Coastal Act of 1976. The cement groin is still functioning to retain some sand along the upcoast reach of the project site and also allows for more useable beach area and; therefore, the applicant's do not propose to remove the cement groin at this time. Portions of the existing rock revetment/rip rap on site were originally constructed prior to the effective date of the Coastal Act and other portions were constructed

pursuant to previously issued coastal development permits and emergency permits between the years of 1992 and 2014. Today, the embankment along the beach is still being eroded by waves, which have more recently steadily encroached on the embankment and threatening the roadway shoulder along Pacific Coast Highway, as well as several existing utility lines, including water and gas. A timber seawall, originally built in 1932 to provide retaining support for the roadway and to protect against wave action, used to occupy the site until the seawall reached a deteriorating condition which resulted in its failure and was ultimately removed pursuant to Commission issued Coastal Development Permit No. 4-92-184.

In this case, the applicant has indicated that the existing non-engineered shoreline protection on site has reached the end of its expected life and is no longer adequate to ensure the protection of the subject reach of Pacific Coast Highway from wave action. The applicant's engineers have further found that due to the deteriorated and damaged state of the existing revetment and slope embankment, it is necessary to remove and replace the existing rock revetment on site in order to ensure the continued use of the adjacent public highway. In many locations, there is no shoulder along the road and therefore the existing beach parking areas will be lost with continued erosion. If erosion is left uncontrolled, the highway may eventually lose highway traffic lanes. The new proposed rock revetment will be located further landward of the previously existing revetment and will not result in any seaward encroachment by new development on the sandy beach.

Specifically, the proposed project includes the construction of a 1,640 linear ft., 20 ft. high rock revetment designed to be installed along a slope embankment to stabilize the embankment and prevent further undermining of the roadway. This would involve the total reconstruction of the existing embankment and removal of all existing rock revetment, which would be stocked on site and reused to reconstruct the new revetment. Once the existing rock revetment is removed, the exposed embankment would be cut/graded and the irregular eroding bluffs would be pushed further landward and filled in some areas using a combination of fill dirt and 1,260 linear ft. of concrete-filled sacks (40 linear feet of these stacked concrete bags were previously installed pursuant to Emergency Permit No. G-4-14-0032 and would be permanently authorized as part of this application). Once the embankment is reconstructed, filter fabric (or in some locations concrete sack walls at a finished slope of 1H:2V) would be installed with anchor ties. After the fabric is installed, the rock revetment would be reconstructed by placing a combination of ½ ton and 8 ton rock at a slope of 1H:1V (horizontal:vertical). It is estimated that the construction will take approximately 120 working days to complete the project.

Although the Commission has previously certified a Local Coastal Program (LCP) for the City of Malibu, portions of the proposed project will be located, at times, on state tidelands and is located within an area where the Commission has retained jurisdiction over the issuance of coastal development permits. Pursuant to Section 30601.3 of the Coastal Act, a consolidated permit was requested by California Department of Transportation and the City of Malibu and was approved by the Executive Director. Thus, the standard of review for this project is the Chapter Three policies of the Coastal Act, with the applicable policies of the City of Malibu Local Coastal Program (LCP) as guidance. As conditioned, the proposed project is consistent with all applicable Chapter Three policies of the Coastal Act.

## **B. PAST COMMISSION ACTION**

This portion of Pacific Coast Highway at Las Tunas Beach has been subject to several previous permit and emergency permit actions by the Commission due to several due to high intensity winter storms during the last two decades.

On September 28, 1992 the Commission authorized Emergency Permit No. 4-92-184-G for the replacement of approximately 140 ft. long section of damaged timber seawall with approximately 1,000 tons of rock rip-rap and 300 cu. yds. of fill as temporary repair to protect the southbound lane of PCH, 8-inch gas main, 30-inch water main and utility poles. Additionally, Emergency Permit 4-93-218-G was issued on December 28, 1993 for the placement of eroded sediments generated from bluffs and debris basins adjacent to State Route 2 onto the highway shoulder and beach for the purposed of road shoulder maintenance and beach replenishment. Furthermore, Coastal Development Permit No. 4-92-184, a follow-up coastal development permit to Emergency Permit No. 4-92-184-G, was approved by the Commission on December 14, 1994 to permanently authorize the work constructed pursuant to the emergency permit.

Additionally, on December 4, 2006, the Commission authorized Emergency Permit No.4-06-149-G for the repair of collapsed portion of highway shoulder, including the repair of an existing as-built rock revetment through rebuilding an approximately 230 sq. ft. area, adding 4-6 ton sized rocks to the revetment, refilling the voids at the top and adding asphalt paving.

On February 14, 2013, the applicants submitted the subject application for the construction of the proposed rock revetment; however, prior to the subject application being filed complete and scheduled for a Commission hearing, the applicants submitted Emergency Permit No. G-4-14-0032 on September 9, 2014, for the placement of a 1,600 linear foot, 20 feet high rock revetment along the undermined bluff located immediately seaward of the Pacific Coast Highway, repair/reconstruction of an beach access trail and the placement of an approximately 40 linear feet, 12 foot high concrete sack wall in order to prevent damage to existing gas/water/sewer lines. The applicants indicated that a recent storm event in early July 2014 and wave action from Hurricane Marie in late August 2014 caused the existing conditions at the site to deteriorate rapidly and several underground utilities that run parallel to the roadway were now exposed and in jeopardy of falling and thus immediate action to prevent or mitigate loss or damage to property and essential public services were required and Emergency Permit No. G-4-14-0032 was issued on September 9, 2014. The applicants indicated that the previously authorized rock revetment was not constructed under Emergency Permit No. G-4-14-0032 and that the only work constructed under Emergency Permit No. G-4-14-0032 was a 40 linear ft. section of the 12-foot high concrete sack walls.

## **C. HAZARDS AND SHORELINE PROCESSES**

In regards to the new construction of shoreline protective devices that may alter natural shoreline processes, Section **30235** of the Coastal Act, which is incorporated as part of the City of Malibu LCP, states:

*Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public*

*beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.*

In addition, Section 30253 of the Coastal Act, which is incorporated as part of the City of Malibu LCP, states, in part, that new development shall:

- (1) *Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
- (2) *Assure stability and structural integrity, and neither create nor contribute significantly to erosion, instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

In addition, the following LCP polices are applicable in this case:

- 4.22 Siting and design of new shoreline development and shoreline protective devices shall take into account anticipated future changes in sea level. In particular, an acceleration of the historic rate of sea level rise shall be considered. Development shall be set back a sufficient distance landward and elevated to a sufficient foundation height to eliminate or minimize to the maximum extent feasible hazards associated with anticipated sea level rise over the expected 100 year economic life of the structure.
- 4.23 New development on a beach or oceanfront bluff shall be sited outside areas subject to hazards (beach or bluff erosion, inundation, wave uprush) at any time during the full projected 100-year economic life of the development. If complete avoidance of hazard areas is not feasible, all new beach or oceanfront bluff development shall be elevated above the base Flood Elevation (as defined by FEMA) and setback as far landward as possible. All development shall be setback a minimum of 10 feet landward of the most landward surveyed mean high tide line. Whichever setback method is most restrictive shall apply. Development plans shall consider hazards currently affecting the property as well as hazards that can be anticipated over the life of the structure.
- 4.33 All new beachfront and blufftop development shall be sized, sited and designed to minimize risk from wave run-up, flooding and beach and bluff erosion hazards without requiring a shoreline protection structure at any time during the life of the development.
- 4.35 All new beachfront development shall be required to utilize a foundation system adequate to protect the structure from wave and erosion hazard without necessitating the construction of a shoreline protection structure.
- 4.36 New development on or along the shoreline or a coastal bluff shall include, at a minimum, the use of secondary treatment waste disposal systems and shall site these new systems as far landward as possible in order to avoid the need for protective devices to the maximum extent feasible.



Coastal Act Section 30235 specifically provides that shoreline protective devices must be permitted only when both of the following two criteria are met: (1) the device is required to serve coastal –dependent uses or to protect existing structures or public beaches provided that these areas/structures are in danger from erosion and (2) the device is designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Additionally, Section 30253 of the Coastal Act mandates that new development shall minimize risks to life and property in areas of high geologic and flood hazard.

The Malibu coastal area, where the subject site is located, has historically been subject to flooding and damage resulting from wave action during storm conditions. Specifically, the subject site has been susceptible to previous damage from flooding and/or wave action from storm waves and storm surge conditions which, prior to the effective date of the Coastal Act, resulted in the need for the original timber seawall and the existing non-engineered rock revetment placed pursuant to previously Commission issued permits and emergency permits to protect Pacific Coast Highway.

In this case, the applicant has indicated that the existing shoreline protection on site has reached the end of its expected life and is no longer adequate to ensure the protection of the subject reach of Pacific Coast Highway from wave action. The applicant’s engineers have further found that due to the deteriorated and damaged state of the existing revetment and slope embankment, it is necessary to remove and replace the existing rock revetment on site in order to ensure the continued use of the adjacent public highway. The new proposed rock revetment will be located further landward of the previously existing revetment and will not result in any seaward encroachment by new development on the sandy beach. The proposed project includes the construction of a 1,640 linear ft., 20 ft. high rock revetment designed to be installed along the bluff slope descending from Pacific Coast Highway to the sandy beach below to prevent potential undermining of the roadway.

#### 1. Shoreline Armoring Impacts

Coastal Act Section 30235 acknowledges that seawalls, revetments, cliff retaining walls, groins and other such structural or “hard” methods designed to forestall erosion also alter natural landforms and natural shoreline processes. Accordingly, Section 30235 limits the construction of shoreline protective works to those required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion. The Coastal Act provides these limitations because shoreline structures can have a variety of adverse impacts on coastal resources, including adverse effects on sand supply, public access, coastal views, natural landforms, and overall shoreline beach dynamics on and off site, ultimately resulting in the loss of beach.

Shoreline armoring or protective devices also directly interfere with public access to tidelands impeding the ambulatory nature of the mean high tide line (the boundary between public and private lands) during high tide and severe storm events, and potentially throughout the entire winter season. The impact of a shoreline protective device on public access is most evident on beach where wave run-up and the mean high tide line are frequently observed in an extreme landward position during storm events and the winter season. As the shoreline retreats landward due to the natural process of erosion, the boundary between public and private lands also retreat landward. Construction of rock revetments and seawalls to protect private property fixes a

boundary on the beach and prevents any current or future migration of the shoreline and mean high tide line landward, thus eliminating the distance between the high water mark and low water mark. As the distance between the high water mark and low water mark becomes obsolete the seawall effectively eliminates lateral access opportunities along the beach as the entire area below the fixed high tideline is inundated. The ultimate result of a fixed tideline boundary (which would otherwise normally migrate and retreat landward, while maintaining a passable distance between the high water mark and low water mark overtime) is a reduction or elimination of the area of sandy beach available for public access and recreation.

Interference by shoreline protective devices can result in a number of adverse effects on the dynamic shoreline system and the public's beach ownership interests. First, changes in the shoreline profile, particularly changes in the slope of the profile which results from a reduced beach berm width, alter the usable area under public ownership. A beach that rests either temporary or permanently at a steeper angle than under natural conditions will have less horizontal distance between the mean low water and mean high water lines. This reduces the actual area in which the public can pass on their own property. The second effect on access is through a progressive loss of sand as shore material is not available to nourish the beach. This affects public access again through a loss of area between the mean high water line and the actual water. Third, shoreline protective devices such as revetments and bulkheads cumulatively affect shoreline sand supply and public access by causing accelerated and increased erosion on adjacent public beaches. This effect may not become clear until such devices are constructed individually along a shoreline and they reach a public beach. In addition, if a seasonal eroded beach condition occurs with greater frequency due to the placement of shoreline protective device on the subject site, then the subject beach would also accrete at a slower rate. Fourth, if not sited landward in a location that ensure that the seawall is only acted upon during severe storm events, beach scour during the winter season will be accelerated because there is less beach area to dissipate the wave's energy.

Shoreline protective devices such as seawalls, revetments, gunnite facing, groins et cetera are physical structures that occupy space. When a shoreline protective device is placed on a beach area, the underlying beach area cannot be used as beach. This generally results in a loss of public access as well as a loss of sand-generating area. The area where the structure is placed will be altered from the time the protective device is constructed, and the extent or area occupied by the device will remain the same over time, until the structure is removed or moved from its initial location, or in the case of a revetment, as it spreads seaward over time. The beach area located beneath a shoreline protective device, referred to as the encroachment area, is the area of the structure's footprint.

Further, when a shoreline or beach segment is developed with a shoreline protective device, the natural exchange of material between the back beach, dune systems, foreshore and intertidal region can all be interrupted. The natural shoreline processes affecting the formation and retention of sandy beaches can be significantly altered by the construction of shoreline armoring structures depending on where these devices are located on the beach and the site specific geomorphological characteristics of the shoreline. There are effects that a shoreline protective structures has on a shoreline which can be quantified, including, (1) the loss of beach area on which the structure is located, (2) the long-term loss of beach which will result when the beach location is fixed on an eroding shoreline (also known as passive erosion); and (3) the amount of material which would have been supplied to the beach if the back beach were allowed to erode

naturally. As follows, the location and alignment of a shoreline protective device on a beach dictates the amount of material that would otherwise have been supplied to the beach seaward of the device. Thus, generally the Commission as found in past approvals of shoreline protective devices that the furthest landward location of a device is preferable to maximize the amount of sandy beach available for public access seaward of the device and to reduce impacts to the natural environments and natural sand exchange systems existing along a beach.

## 2. Sea Level Rise

Sea level has been rising slightly for many years. As an example, in the Santa Monica Bay area, the historic rate of sea level rise, based on tide gauge records, have been 1.8 mm/yr. or about 7 inches per century<sup>1</sup>. Recent satellite measurements have detected global sea level rise from 1993 to present of 3 mm/yr. or a significant increase above the historic trend observed from tide gauges. Recent observations of sea level along parts of the California coast have shown some anomalous trends, however; there is a growing body of evidence that there has been a slight increase in global temperature. Sea level rise is expected to increase significantly throughout the 21<sup>st</sup> century and some coastal experts have indicated that sea level rise of 3 to 5 ft. or more could occur by the year 2100<sup>2</sup>. Mean water level affects shoreline erosions in several ways and an increase in the average sea level will exacerbate all these conditions.

On the California coast the effect of a rise in sea level will be the landward migration of the intersection of the ocean with the shore. On a relatively flat beach, with a slope of 40:1, a simple geometric model of the coast indicated that ever centimeter of sea level rise will result in a 40 cm. landward movement of the ocean/beach interface. For fixed structures on the shoreline, such as a seawall, an increase in sea level will increase the inundation of the structure. More of the structure will be inundated or underwater than is inundated now and the portions of the structure that are now underwater part of the time will be underwater more frequently.

Accompanying this rise in sea level will be an increase in wave heights and wave energy. Along much of the California coast, the bottom depth controls the nearshore wave heights, with bigger waves occurring in deeper water. Since wave energy increase with the square of the wave height, a small increase in wave height can cause a significant increase in wave energy and wave damage. Combined with the physical increase in water elevation, a small rise in sea level can expose previously protected back shore development to increased wave action, and those areas that are already exposed to wave action will be exposed more frequently, with higher wave forces. Structures that are adequate for current storm conditions may not provide as much protection in the future.

## 3. Shoreline Protection on the Subject Site

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<sup>1</sup> Lyes, S.D., L.E. Hickman and H.A. Debaugh (1988) *Sea Level Variations for the United States 1855-1986*. Rockville, MD: National Ocean Service.

<sup>2</sup> Cayan, D.R., M. Tyree, M. Dettinger, H. Hidalgo, T. Das, E. Maurer, P. Bromirski, N. Graham, and R.E. Flick, 2009. *Climate Change Scenarios and Sea Level Estimates for the California 2008 Climate Change Scenarios Assessment*, Draft Paper, CEC-500-2009-014-D, 62 pp, <http://www.energy.ca.gov/2009publications/CEC-500-2009-014/CEC-500-2009-014-D.pdf>.

Coastal Act Section 30235 acknowledges that seawalls, revetments, cliff retaining walls, groins and other such structural or “hard” methods designed to forestall erosion also alter natural landforms and natural shoreline processes. Accordingly, Section 30235 limits the construction of shoreline protective works to those required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion. The Coastal Act provides these limitations because shoreline structures can have a variety of adverse impacts on coastal resources, including adverse effects on sand supply, public access, coastal views, natural landforms, and overall shoreline beach dynamics on and off site, ultimately resulting in the loss of beach. Specifically, Section 30235 of the Coastal Act allows for the construction of a shoreline protective device only when necessary to protect existing development or to protect a coastal dependent use and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. In this case, the proposed revetment is necessary in order to protect the Pacific Coast Highway, an important regional and local roadway, as well as a well-used public parking area located along the seaward shoulder of the highway. Although there is an existing non-engineered rock revetment on site which currently protects Pacific Coast Highway, the applicant’s engineers have indicated that the existing revetment has reached the end of its expected life and must be replaced to ensure the geologic and engineering stability of the existing public highway.

Thus, the Commission finds that in this case, a shoreline protective device is necessary in to protect existing development consistent with Section 30235. However, Section 30235 of the Coastal Act also requires that, when new shoreline protective devices are allowed, such devices shall be designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Thus, when read in tandem with other applicable Coastal Act policies protecting coastal resources as cited in these findings, this 30235 evaluation is often conceptualized as a search for the least environmentally damaging feasible alternative that can serve to achieve the stated project goal of protecting the threatened structure, coastal-dependent use, or public beach.

In this case, the applicant has submitted an engineering and alternatives analysis which analyzed alternative measure such as the construction of a soldier pile or caisson supported wall and other retaining structures, including the use of tie-back foundation walls. As stated in the applicant’s alternative analysis, the well documented and massive Las Tunas/La Grande Bulge Slide underlies the project site and extends north of the highway at this location. Instrumentation results during a landslide investigation conducted by Los Angeles County in the 1980’s and the applicant Caltrans in 1999 indicated the slide plane is toeing out onto the sandy beach below the highway at this location. Caltrans geologists and engineers determined that alternatives using vertical seawall/retaining wall designs would be infeasible because they would encroach upon the toe of the landslide; thus, compelling Caltrans to mitigate the landslide before a structure alternative could be constructed. More specifically, the ancient and massive deep-seated Las Tunas/La Grande Bulge landslide lies outside Caltrans right-of-way and toes below Pacific Coast Highway at the project site. The total area of the slide is estimated to be approximately 21 acres. Thus, due to the large size of the landslide, remediation of the slide to ensure the structural adequacy of a seawall on site was determined to be infeasible. Additionally, realignment of Pacific Coast Highway further landward was also analyzed and found to be not a feasible alternative to the proposed project due to the location of the subject site on a narrow coastal terrace backed by steep cliffs to the north. As it currently exists, both the location and orientation of the highway are constrained by the location of the adjacent roadway and the steep coastal hillsides which preclude landward relocation of Pacific Coast Highway. Thus, in this case, the

use of the proposed rock revetment for shoreline protection, as proposed, rather than a vertical seawall or retaining structure, is the appropriate alternative to provide shoreline protection on site.

Moreover, in past permit actions, the Commission has found that adverse impact to shoreline processes from shoreline protective devices are greater the more frequently that they are subject to wave action. As such, in past permit actions, the Commission has required that all new development on a beach, including a shoreline protection devices, be located as landward as possible in order to reduce adverse impacts to the sand supply and public access resulting from the development.

In this case, the applicant is proposing to recontour the bluffslope to relocate the toe and top of the slope several feet further landward. Thus, all portions of the new proposed revetment will be located further landward than the existing non-engineered revetment on site. As a result, the new revetment will not result either in any seaward encroachment by new development on the sandy beach and will not result in any new adverse impacts to sand supply. However, since the existing non-engineered revetment on site has reached the end of its expected life, the Commission finds that the proposed replacement of the existing revetment with a new revetment will serve to extend the period of time that shoreline armoring will be present along this portion of the coastline. Moreover, extending the life of the shoreline protection on the subject site will also serve to extend the period of time that such a shoreline armoring will result in adverse impacts to shoreline sand supply and public access.

Thus, in order to address these adverse impacts, the applicant, in consultation with Commission staff, has designed the proposed project to incorporate significant new public access and recreational improvements on site including four new vertical public accessways (including 2 stairs and 2 sloping paths) to replace the one existing vertical access path to be removed, a new public blufftop access trail, parking area improvements and the installation of two public coastal access signs along the highway indicating the availability of public beach access on site. Further, the project also includes the provision of a new Americans with Disability Act (ADA)-compliant designated parking space within the existing parking lot area on site. Therefore, in order to ensure the applicant's proposal is implemented in a manner adequate to minimize adverse impacts to public access and recreation on site, Special Condition Five (5) requires the applicant to complete construction of the new public access and recreational improvements, concurrent with the construction of the new rock revetment.

To analyze the suitability of the site of the proposed revetment relative to potential hazards, the applicant has submitted a Wave Run-up and Sea Level Rise Study for the proposed rock revetment, dated July 11, 2014, and prepared by CWE. This study evaluated the existing wave uprush and coastal processes for the rock revetment and the effects of sea level rise on the project. Wave uprush can induce erosion and flooding, and the high velocities can scour foundations and damage structures. Impacts from wave uprush are expected to increase with rising sea level. Specifically, sea level rise will result in: 1) an increase in the elevation of maximum wave uprush, 2) an increase in landward extent of wave induced coastal flooding and long term erosion hazards from sea level rise, and 3) storm induced erosion impacts. These may all affect the rock revetment's performance over the expected lifespan of 75 years.

The wave run-up study analyzed the estimated wave uprush from current conditions and from two sea level rise scenarios –1.38 feet and 5.48 feet by 2100, approximately the expected life of the proposed revetment. The current revetment is at the same elevation of the roadway and has been subject to occasionally wave uprush and overtopping during winter storms. The proposed revetment will also be at the same elevation of the roadway and therefore subject to the wave uprush and overtopping. The CWE wave run-up study found that wave impacts at the revetment location will increase in intensity and frequency in the future and that in the future, waves could impact or overtop the revetment. Near-shore design wave height is a significant parameter in evaluating the wave impacts to the proposed revetment. The design wave heights were estimated with high projections of sea level rise at years 2030, 2050 and 2100, and resulted in depths of 6.86, 7.72 and 10.53 feet.

However, although the revetment would be acted upon more frequently due to sea level rise, the applicant's engineering consultants and staff have determined that the size and weight of the rock revetment is adequate to withstand the design waves pursuant to Caltrans design guidelines. Specifically, the applicant's engineers found that the revetment is adequate to withstand the expected wave uprush at the 100-year recurrence interval. Although the revetment height does not extend to the top of the wave uprush in all locations along the highway, the revetment is tied into the road surface so that any flows overtopping the revetment will flow onto the road, across to the bluff, and then into the surface drainage system for return to the beach. Potential scour depths for the revetment were calculated to be between 5.51 and 5.84 feet below MLLW depending on selected sea level rise projections. The revetment toe will extend to a depth of at least 6 feet below the MLLW.

The proposed revetment is as far landward as possible and will replace the existing non-engineered revetment that has previously protected Pacific Coast Highway. The footprint of the revetment will be similar to, and slightly landward of, the historic revetment footprint and will not extend past the toe of the previously existing revetment/rip.

To ensure that the potential for construction activities to adversely effect the marine environment are minimized, Special Condition Eight (8) requires the applicant to ensure that no construction materials, debris, or waste shall be placed or stored where it may be subject to wave erosion and dispersion, that all debris resulting from construction activities shall be removed from the beach prior to the end of each work day; no machinery or mechanized equipment shall be allowed in the intertidal zone, except for that necessary to remove the errant rocks from the beach seaward of the revetment. In addition, in order to ensure that all rock removed from the existing revetment not to be reused for the new proposed revetment will not be stockpiled on site and that impacts to shoreline processes are minimized, Special Condition Nine (9) requires that the applicant shall provide evidence to the Executive Director of the location of the disposal site for all rock removed from the existing rock revetment on site. If the disposal site is located in the Coastal Zone, the disposal site must have a valid coastal development permit for the disposal of fill material.

Moreover, the Commission notes that the proposed development is located along the shoreline in the City of Malibu. The City's coast has historically been subject to substantial damage as the result of storm and flood occurrences. The subject site is clearly susceptible to flooding and/or wave damage from storm waves, storm surges and high tides. This ample evidence existing that all beachfront areas in the City of Malibu are subject to an unusually high degree of risk due to

storm waves and surges, high surf conditions, erosion, and flooding. The subject site, even after the completion of the proposed project, will continue to be subject to the high degree of risk posed by the hazards of oceanfront development in the future. The Coastal Act recognizes that development, such as the revetment project, even as designed and constructed to incorporate the recommendation of the applicant's coastal engineer, may still involve the taking of some risk. When development in areas of identified hazards is proposed, the Commission considers the hazard associated with the project site and the potential cost to the public.

Thus, in this case, the Commission finds that due to the possibility of tsunamis, storm waves, surges, and erosion the applicant shall assume these risks as conditions of approval. Because this risk of harm cannot be completely eliminated, the Commission requires the applicant to waive any claim of liability against the Commission for damage to life or property which may occur as a result of the permitted development. The applicant's Assumption of Risk, Waiver of Liability and Indemnity, as required by Special Condition Three (3), will show that the applicant is aware of and appreciates the nature of the hazards which exist on the site, and that may adversely affect the stability or safety of the development it protects, and will effectuate the necessary assumption of risks by the applicant.

The following special conditions are required, as determined in the findings above, to assure the project's consistency with Section 30235 and 30253 of the Coastal Act and as a response to the risks associated with the project:

- Special Condition 3: Assumption of Risk, Waiver of Liability and Indemnity
- Special Condition 8: Timing, Operations and Maintenance Responsibilities
- Special Condition 9: Removal of Excavated Material

Therefore, for the reasons discussed above, the Commission finds that the proposed project, as condition, is consistent with Coastal Act Sections 30235 and 30253.

#### **D. MARINE RESOURCES AND WATER QUALITY**

Section 30230 of the Coastal Act, which has been incorporated in the certified Malibu LCP, states:

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

Section 30231 of the Coastal Act, which has been incorporated in the certified Malibu LCP, states:

*The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of*

*waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, minimizing alteration of natural streams.*

Section 30240 of the Coastal Act, which has been incorporated in the certified Malibu LCP, states:

*(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*

*(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

In addition, the following LCP polices are applicable in this case:

- 3.75 Marine ESHAs shall be protected against significant disruption of habitat values, and only uses dependent on such resource shall be allowed within such areas. Residential, commercial, or institutional uses shall not be considered resource dependent uses.
- 3.76 Permitted land uses or developments shall have no significant adverse impacts on marine and beach ESHA.
- 3.77 Development on beach or ocean bluff areas adjacent to marine and beach habitat shall be sited and designed to prevent impacts that could significantly degrade Environmentally Sensitive Habitat Areas. All uses shall be compatible with the maintenance of the biological productivity of such areas.
- 3.78 New development shall prevent or reduce non-point source pollution in the near shore environment through implementation of the non-point source pollution and private sewage disposal system policies.
- 3.79 Grading and landform alteration shall be limited to minimize impacts from erosion and sedimentation on marine resources.
- 3.89 The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes may be permitted in accordance with all policies of the LCP, where there is no feasible less environmentally damaging alternative and where feasible mitigation measure have been provided to minimize adverse environmental effects, and shall be limited to the following:
  - a. Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.
  - b. Restoration purposes.



- c. Nature study, aquaculture, or similar resource dependent activities.

In addition, the following LUP polices pertain to the protection of water quality:

- 3.95 New development shall be sited and designed to protect water quality and minimize impacts to coastal waters by incorporating measures designed to ensure the following:
  - a. Protecting areas that provide important water quality benefits, areas necessary to maintain riparian and aquatic biota and/or that are susceptible to erosion and sediment loss.
  - b. Limiting increase of impervious surfaces.
  - c. Limiting land disturbance activities such as clearing and grading, and cut-and-fill to reduce erosion and sediment loss.
  - d. Limiting disturbance of natural drainage features and vegetation.
- 3.96 New development shall not result in the degradation of the water quality of groundwater basins or coastal surface water including the ocean, coastal streams, or wetlands. Urban runoff pollutants shall not be discharged or deposited such that they adversely impact groundwater, the ocean, coastal streams, or wetlands, consistent with the requirements of the Los Angeles Regional Quality Control Board's municipal stormwater permit and the California Ocean Plan.
- 3.97 Development must be designed to minimize, to the maximum extent feasible, the introduction of pollutants of concern that may result in significant impacts from site runoff from impervious areas. To meet the requirements to minimize "pollutants of concerns," new development shall incorporate a Best Management Practice (BMP) or a combination of BMPs best suited to reduce pollutant loading to the maximum extent feasible.

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

Construction activities related to the proposed revetment demolition and replacement have the potential to negatively impact the surrounding marine environment. Introduction of waste or construction debris into the marine environment could create deleterious impacts to coastal waters and could stem from activities such as stockpiling of materials or cleaning of construction equipment on or adjacent to the beach. In order to ensure that adverse impacts to the marine environment are minimized, the Commission finds it necessary to require the applicant to include construction best management practices in the project. Special Condition Eight (8) requires that the project applicant comply with specific construction standards and best management practices. Special Condition Eight (8) further requires that no construction materials, debris or waste shall

be placed or stored where it may be subject to wave erosion and dispersion, that all debris resulting from construction activities shall be removed from the beach period to the end of each work day; no machinery or mechanized equipment shall be allowed in the intertidal zone, except for that necessary to remove the errant rocks from the beach seaward of the revetment; and all excavated beach sand shall be redeposited on the beach.

As originally proposed, the project included the use of heavy equipment on the beach in order to construct the revetment. In addition, due to the narrowness of the beach and because the wave uprush on site frequently extends to the base of the bluff during medium and high tides, the project also included the temporary construction of a geofabric covered berm with rip rap toe protection to serve as a wave barrier approximately 100 ft. from the toe of the revetment in order to create an approximately 15 ft. wide dry work and staging on the sandy beach between the toe of the revetment and the temporary barrier. However, construction of the temporary berm/rip rap barrier at areas of the site that are normally subject to inundation would result in potential temporary adverse impacts to intertidal habitat areas. In coordination with Commission staff, the applicant has revised the proposed project to eliminate the use of the of the berm/rip rap barrier to the extent feasible. The applicant has submitted a draft revised construction methods and staging plan which indicates that the revetment will be constructed utilizing heavy equipment located at the top of the bluff to maximum extent feasible (Exhibit 11).

However, due to the narrowness of the road shoulder and the presence of overhead power lines between Pacific Coastal Highway and the bluff edge, it is not possible to construct all portions of the revetment from the top of the bluff only. As shown on Exhibit 11, revetment demolition/construction will occur from the top of the bluff along an approximately 275 linear ft. portion of the project reach identified as “Segment C”, where the power lines are located further landward. However, within the approximately 800 linear ft. portion of the project reach identified as “Segment B” the revetment would be constructed using a temporary sand/rock ramp within the approximate footprint of the proposed revetment. The applicant has indicated that the use of the sand/rock ramp is not feasible within the approximately 565 linear ft. “Segment A” due to the configuration of the site; thus, in this reach of the project site, the applicant is proposing to use a reduced width berm/rip rap barrier that would only extend no more than 110 ft. seaward of the toe of the revetment in order to minimize any potential temporary adverse impacts to intertidal habitat areas to the extent feasible. Although the applicant has submitted draft construction methods and staging plans for the project, final project plans have not yet been submitted. Therefore, Special Condition One (1) has been required to ensure that revised final constructions staging plans, for the review and approval of the Executive Director in order to ensure that potential impacts to marine resources during construction are minimized to the maximum extent feasible.

Furthermore, the applicant’s biologist has submitted a natural environment study prepared for the site, which finds that no sensitive animal or bird species have been determined to reside within the project area. Additionally, the survey indicates the project area is sparsely vegetated by non-native species. Thus, the proposed project is not expected to result in any adverse impacts to sensitive plant or animal species on site. However, the Commission finds that the project area is within the expected range of the California Grunion. To ensure that any potential adverse effects to the California Grunion are minimized, Special Condition Six (6) requires that a qualified biologist or environmental resource specialist shall conduct a survey of the project site each day prior to commencement of any construction activities that occur between March 1<sup>st</sup> and

September 1<sup>st</sup>, to determine whether any California Grunion, or eggs, are present. In the event that the California Grunion are present on the project site, and exhibit reproductive behavior, the environmental specialist shall require the applicant to cease work, and shall immediately notify the Executive Director and local resource agencies. Project activities shall resume only upon written approval of the Executive Director. The monitor(s) shall require the applicant to cease work should any beach in permit compliance occur or if any unforeseen sensitive habitat issues arise. The monitor(s) shall immediately notify the Executive Director of activities outside the scope of this coastal development permit. If significant impacts or damage occur to the California Grunion, the applicant shall be required to submit a revised, or supplemental program to adequately mitigate such impacts. The revised, or supplemental, program shall be processed as an amendment to this coastal development permit.

Additionally, to ensure that the applicant avoids adverse impacts to all sensitive species, Special Condition Four (4) also requires that the applicant complies with all permit requirements and mitigation measures of the California Department of Fish and Wildlife Service, U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service with respect to preservation and protection of water quality and marine environment.

The following special conditions are required, as determined in the findings above, to assure the project's consistency with Section 30230, 30231, and 30240 of the Coastal Act:

- Special Condition 1: Final Project Plans
- Special Condition 4: Other Federal, State or Local Approvals
- Special Condition 6: Biological Monitoring During Construction
- Special Condition 8: Timing, Operations, and Maintenance

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

#### **E. PUBLIC ACCESS AND RECREATION**

Coastal Act Section 30210, which has been incorporated in the certified City of Malibu LCP, states:

*In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Coastal Act Section 30211, which has been incorporated in the certified City of Malibu LCP, states:

*Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

Coastal Act Section 30212, which has been incorporated in the certified City of Malibu LCP, states:

*(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:*

*(1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources,*

*(2) adequate access exits nearby, or,*

*(3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.*

*(b) For purposes of this section, “new development” does not include:*

*(1) Replacement of any structure pursuant to the provisions of subdivision (g) of Section 30610.*

*(2) The demolition and reconstruction of a single-family residence; provided, that the reconstructed residence shall not exceed either the floor area, height or bulk of the former structure by more than 10 percent, and that the reconstructed residence shall be sited in the same location on the affected property as the former structure.*

*(3) Improvements to any structure which do not change the intensity of its use, which do not increase either the floor area, height, or bulk of the structure by more than 10 percent, which do not block or impede public access, and which do not result in a seaward encroachment by the structure.*

*(4) The reconstruction or repair of any seawall; provided, however, that the reconstructed or repaired seawall is not a seaward of the location of the former structure.*

*(5) Any repair or maintenance activity for which the commission has determined, pursuant to Section 30610, that a coastal development permit will be required unless the commission determines that the activity will have an adverse impact on lateral public access along the beach.*

*As used in this subdivision “bulk” means total interior cubic volume as measured from the exterior surface of the structure.*

*(c) Nothing in this division shall restrict public access nor shall it excuse the performance of duties and responsibilities of public agencies which are required by Sections 66478.1 to 66478.14, inclusive, of the Government Code and by Section 4 of Article X of the California Constitution.*

Coastal Act Section 30221, which has been incorporated in the certified City of Malibu LCP, states:

*Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demands for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.*

Additionally, the Malibu LCP contains the following development policies related to public access and recreation that are applicable to the proposed development:

- 2.1 The shoreline, parklands, beaches and trails located within the City provide a wide range of recreational opportunities in natural settings which include hiking, equestrian activities, bicycling, camping, educational study, picnicking, and coastal access. These recreational opportunities shall be protected, and where feasible, expanded or enhanced as a resource of regional, state and national importance.
- 2.2 New development shall minimize impacts to public access to and along the shoreline and inland trails. The City shall assure that the recreational needs resulting from proposed development will not overload nearby coastal recreation areas by correlating the amount of development with local parks acquisition and/or development plans with the provision of onsite recreational facilities to serve new development.
- 2.5 New development shall be sited and designed to minimize impacts to public access and recreation along the shoreline and trails. If there is no feasible alternative that can eliminate or avoid all access impacts, then the alternative that would result in the least significant adverse impact shall be required. Impacts may be mitigated through the dedication of an access or trail easement where the project site encompasses an LCP mapped access or trail alignment, where the City, County, State, or other public agency has identified a trail used by the public, or where there is substantial evidence that prescriptive rights exist. Mitigation measures required for impacts to public access and recreational opportunities shall be implemented prior to or concurrent with construction of the approved development.
- 2.6 Mitigation shall not substitute for implementation of a feasible project alternative that would avoid impacts to public access.
- 2.63 Consistent with the policies below, maximum public access from the nearest public roadway to the shoreline and along the shoreline shall be provided in new development. Exceptions may occur only where (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources; (2) adequate access exists nearby, or; (3) agriculture would be adversely affected. Such access can be lateral and/or vertical. Lateral access is defined as an accessway that provides for public access and use along the shoreline. Vertical access is defined as an accessway which extends to the shoreline, or perpendicular to the shoreline in order to provide access from the first public road to the shoreline.

2.73 Maximum public access shall be provided in a manner which minimizes conflicts with adjacent uses.

Coastal Act Section 30210 and Coastal Act Section 30211 mandate that maximum public access and recreational opportunities be provided and that development not interfere with the public's right to access the coast. Section 30212 of the Coastal Act provides that adequate public access to the sea be provided in new development projects. Additionally, Section 30221 of the Coastal Act protects oceanfront land for recreational uses.

The beaches of Malibu are extensively used by visitors of both local and regional origin and most planning studies indicate that attendance of recreational sites will continue to increase significantly over the coming years. The public has a right to use the shoreline under the public trust doctrine, the California Constitution and California common law. The Commission must protect those public rights by assuring that any proposed shoreline development does not interfere with or will only minimally interfere with those rights. In past permit actions, the Commission has often required that public access to and along the shoreline be provided in conjunction with beachfront development projects and has required design changes in other projects to reduce interference with access to and along the shoreline. The principal access impacts associated with such projects that have provided the nexus for these requirements in permits involving shoreline protection are the occupation of sand area by a structure and/or the potential for adverse effects from a shoreline protection are the occupation of sand area by a structure and/or the potential for adverse effects from a shoreline protective device on shoreline sand supply and public access and recreation, in contradiction of Coastal Act policies 30210, 30212, 30220, and 30221.

Past Commission review of shoreline armoring projects in the City of Malibu has shown that individual and cumulative adverse effects to public access from such projects can include encroachment on lands subject to the public trust (or, in a case such as this, otherwise subject to public access rights), thus physically excluding the public; interference with the natural shoreline processes necessary to maintain publicly-owned tidelands and other public beach areas; overcrowding or congestion of such tideland or beach areas; and visual or psychological interference with the public's access to and the ability to use public tideland areas. Similarly, the substantial repair or replacement of an existing shoreline protective device serves to extend the life of the device and in doing so extends the period of time that the shoreline protective device will result in adverse impacts to shoreline sand supply and public access.

The Commission has also routinely found in past permit actions that shoreline protective devices result in potential adverse effects on shoreline processes as wave energy reflected by those structures contributes to erosion and steepening of the shore profile, and ultimately, to the extent and availability of tidelands. For these reasons, the Commission must also consider whether a project will have indirect effects on public use of these shorelands.

The interference by a shoreline protective device, such as a rock revetment, has a number of adverse effects on the dynamic shoreline system and the public's beach ownership interests. First, changes in the shoreline profile, particularly changes in the slope of the profile, which result from reduced beach width, alter the usable area under public ownership. A beach that rests either temporarily or permanently at a steeper angle than under natural conditions will have less horizontal distance between the mean low water and mean high water lines. This reduces the

actual area of public property available for public use. The second effect on access is through a progressive loss of sand, as shore material is no longer available to nourish the bar. The lack of an effective bar can allow such high wave energy on the shoreline that materials may be lost far offshore where it is no longer available to nourish the beach. The effect that this has on the public is loss of area between the mean high water line and the actual water. Third, shoreline protective devices such as a revetments and bulkheads cumulatively affect public access by causing accelerated and increased erosion on adjacent public beaches. This effect may not become clear until such devices are constructed individually along a shoreline, eventually affecting the profile of a public beach. Fourth, if not sited as far landward as possible, in a location that ensures that the seawall is only acted upon during severe storm events, beach scour during the winter season will be accelerated because there is less beach area to dissipate wave energy. Finally, revetments and bulkheads interfere directly within public access by their occupation of beach area that will not only be unavailable during high tide and severe storm events but also potentially throughout the winter season.

In this case, the applicant has indicated that the existing non-engineered rock revetment protection on site has reached the end of its expected life and is no longer adequate to ensure the protection of the subject reach of Pacific Coast Highway from wave action. The applicant's engineers have further found that due to the deteriorated and damaged state of the existing non-engineered revetment, it is necessary to demolish and replace the existing revetment on site in order to ensure the continued use of the adjacent public highway. The new revetment will be located entirely within the footprint of the existing non-engineered revetment and will not result in any seaward encroachment by new development on the sandy beach. Additionally, the loose rocks that currently exist beyond the toe of the existing revetment will be removed and re-used for the new proposed revetment and thus will allow for more usable beach area after the project has been completed. Therefore, in order to ensure the applicant's proposal is implemented in a manner adequate to minimize adverse impacts to shoreline processes and create more public access on site, Special Condition Five (5) requires the applicant to remove all loose rocks that currently exist beyond the toe of the existing revetment concurrent with the construction of the new proposed rock revetment authorized by the approval of this permit.

Moreover, in past permit actions, the Commission has found that adverse impacts to shoreline sand supply from shoreline protective devices are greater the more frequently that they are subject to wave action. As such, in past permit actions, the Commission has required that all new development on a beach, including shoreline protective devices, be located as landward as possible in order to reduce adverse impacts to the sand supply and public access resulting from the development.

In this case, all portions of the new proposed revetment will be located either further landward or within the existing footprint of the existing revetment on site. Thus, the new revetment will not result in any seaward encroachment by new development on the sandy beach and will not result in any impacts to sand supply. Commission staff worked with the applicant to evaluate the alternative of relocating the new revetment further landward; however, any further landward relocation would only serve to further reduce the area along the seaward shoulder of the highway currently available for public parking by beachgoers and would further reduce the existing public access trail located at the top of the revetment between the roadway and the revetment. Thus, in this case, the Commission finds that further landward relocation of the new revetment would

result in additional adverse impacts to public access and recreational facilities and would not significantly reduce impacts to shoreline processes or sand supply.

However, the replacement of an existing shoreline protective device with a new shoreline protective device, as proposed by this project, serves to extend the period of time that the shoreline protective device will result in adverse impacts to shoreline sand supply and public access. Thus, in order to address these adverse impacts, the applicant, in consultation with Commission staff, has designed the proposed project to incorporate public access and recreational improvements including the immediate creation of four public access stairways and sloping paths over the proposed new rock revetment by reconfiguring existing stones within the revetment. In addition, the application includes improvements to an existing informal blufftop pathway through creating a wider and more continuous public access pathway between the roadway and the proposed rock revetment. Lastly, the applicant also proposes to improve the existing dirt parking area by resurfacing the dirt surface area with Class D aggregate base (Class D consists of any combination of the following: broken stone, crushed gravel, sand and/or reclaimed processed asphalt concrete) over the parking lot to create a more leveled and usable surface. Although the applicant has proposed four new public vertical accessways to replace the existing vertical access path to the beach and new parking lot surface improvements, the project plans submitted as part of this application does not include parking lot road surface improvements and does not depict the fourth proposed public accessway. Therefore, in order to ensure that the applicant's proposal is adequately implemented in a manner to minimize adverse effects to public access and recreation, Special Condition One (1) requires the applicant to submit final revised project plans, for the review and approval of the Executive Director, which includes the above mention improvements. Special Condition One (1) also requires the applicant to make minor corrections to the width dimensions of the proposed rock revetment that the applicant has indicated were made in error in order to ensure that the revetment is constructed to the minimum necessary width.

Additionally, the proposed project also includes the installation of two signs along the highway indicating the availability of public access to the beach on site. Special Condition Five (5) further requires that all proposed public access improvements shall be constructed concurrently with the construction of the new rock revetment. Additionally, in order to ensure that the applicant's proposal is implemented in a manner adequate to minimize impacts to public access, Special Condition Seven (7) requires the applicant to submit a Public Access Signage Plan to include details regarding the location and wording of the proposed coastal access signs.

The following special condition is required, as determined in the findings above, to assure the project's consistency with Sections 30210, 30212.5, 30213, 30223, and 30252 of the Coastal Act:

Special Condition 1: Final Project Plans

Special Condition 5: Removal of Existing Rock Revetment and Construction of Public Access Improvements

Special Condition 7: Public Access Signage Plan

The Commission therefore finds that the proposed project, as conditioned, is consistent with Sections 30210, 30212.5, 30213, 30223, and 30252 of the Coastal Act.



## F. VISUAL RESOURCES

The Malibu LCP provides for the protection of scenic and visual resources, including views of the beach and ocean, views of mountains and canyons, and views of natural habitat areas. The LCP identifies Scenic Roads, which are those roads within the City that traverse or provide views of areas with outstanding scenic quality, or that contain striking views of natural vegetation, geology, and other unique features, including the beach and ocean. The LCP policies require that new development not be visible from scenic roads or public viewing areas. Where this is not feasible, new development must minimize impacts through the project site.

Section 30251 of the Coastal Act, which has been incorporated in the Malibu LCP, states that:

*The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

In addition, the following Malibu LCP policies are applicable in this case:

- 6.1 The Santa Monica Mountains, including the City, contain scenic areas of regional and national importance. The scenic and visual qualities of these areas shall be protected and, where feasible, enhanced.
- 6.2 Places on and along public roads, trails, parklands, and beaches that offer scenic vistas are considered public viewing areas. Existing public roads where there are views of the ocean and other scenic areas are considered Scenic Roads. Public parklands and riding and hiking trails which contain public viewing areas are shown on the LUP Park Map. The LUP Public Access Map shows public beach parks and other beach areas accessible to the public that serve as public viewing areas.
- 6.3 Roadways traversing or providing views of areas of outstanding scenic quality, containing striking views of natural vegetation, geology, and other unique natural features, including the ocean shall be considered Scenic Roads. The following roads within the City are considered Scenic Roads:
  - a. Pacific Coast Highway
  - b. Decker Canyon Road
  - c. Encinal Canyon Road
  - d. Kanan Dume Road
  - e. Latigo Canyon Road
  - f. Corral Canyon Road
  - g. Malibu Canyon Road
  - h. Tuna Canyon Road

- 6.4 Places on, along, within, or visible from scenic roads, trails, beaches, parklands and state waters that offer scenic vistas of the beach and ocean, coastline, mountains, canyons and other unique natural features are considered Scenic Areas. Scenic Areas do not include inland areas that are largely developed or built out such as residential subdivisions along the coastal terrace, residential development inland of Birdview Avenue and Cliffside Drive on Point Dume, or existing commercial development within the Civic Center and along Pacific Coast Highway east of Malibu Canyon Road.
- 6.5 New development shall be sited and designed to minimize adverse impacts on scenic areas visible from scenic roads or public viewing areas to the maximum feasible extent. If there is no feasible building site location on the proposed project site where development would not be visible, then the development shall be sited and designed to minimize impacts on scenic areas visible from scenic highways or public viewing areas, through measures including, but not limited to, siting development in the least visible portion of the site, breaking up the mass of new structures, designing structures to blend into the natural hillside setting, restricting the building maximum size, reducing maximum height standards, clustering development, minimizing grading, incorporating landscape elements, and where appropriate, berming.
- 6.12 All new structures shall be sited and designed to minimize impacts to visual resources by:
- a. Ensuring visual compatibility with the character of surrounding areas.
  - b. Avoiding large cantilevers or understories.
  - c. Setting back higher elements of the structure toward the center or uphill portion of the building.
- 6.13 New development in areas visible from scenic roads or public viewing areas, shall incorporate colors and exterior materials that are compatible with the surrounding landscape. The use of highly reflective materials shall be prohibited.
- 6.15 Fences, walls, and landscaping shall not block views of scenic areas from scenic roads, parks, beaches, and other public viewing areas.
- 6.17 Where parcels on the ocean side of and fronting Pacific Coast Highway, Malibu Road, Broad Beach Road, Birdview Avenue, or Cliffside Drive descend from the roadway, new development shall be sited and designed to preserve bluewater ocean views by:
- a. Allowing structures to extend no higher than the road grade adjacent to the project site, where feasible.
  - b. Limiting structures to one story in height, if necessary, to ensure bluewater views are maintained over the entire site.

- c. Setting fences away from the road edge and limiting the height of fences or walls to no higher than adjacent road grade, with the exception of fences that are composed of visually permeable design and materials.
- d. Using native vegetation types with a maximum growth in height and located such that landscaping will not extend above road grade.

6.33 The Pacific Coast Highway corridor shall be protected as a scenic highway and significant viewshed.

Section 30251 of the Coastal Act requires that visual qualities of coastal areas shall be considered and protected, landform alteration shall be minimized, and where feasible, degraded areas shall be enhanced and restored. The proposed project location is directly adjacent to Pacific Coast Highway (a Malibu LCP-designated scenic road), within the existing footprint of the existing rock revetment to be demolished, and is therefore directly adjacent to a public beach. In such a location, it is necessary to assess any potential visual impacts that may result from the completion of the proposed project. In this case, blue water views of the ocean from Pacific Coast Highway are available along the entire reach of the project site; however these views are partially obscured by the existing concrete k-rail road barriers located between the roadway and the top of the existing revetment. The top of the currently existing revetment on site extends to the elevation of Pacific Coast Highway roadbed and the existing concrete road barriers extend 3.6 ft. in height above the revetment.

A solid concrete barrier in this location between the first public road and the sea blocks public views of the ocean. The Commission has typically required the use of more visually permeable rails or barriers in road or bridge projects that are in visually sensitive locations. However, as proposed, the new rock revetment will not be any greater in height than the existing rock revetment and will not result in adverse impacts to blue water views from Pacific Coast Highway or other public viewing areas. Moreover, the existing 3.6 ft. concrete solid road barriers will be removed and no new road barrier is proposed. Therefore, the removal of the existing concrete road barrier will enhance public views of the ocean. Staff notes the proposed project does include a 6-inch high solid dike wall along the road shoulder to control storm water runoff, and a 1.6' ft. high rock berm around the existing parking lot, however these low-profile improvements will not result in any significant adverse impacts to public views and will serve to maintain relatively unobstructed bluewater views from the project site and the adjacent highway. Furthermore, during construction, impacts to visual resources associated with construction work and equipment would occur; however, these impacts would be temporary in nature.

Additionally, the proposed revetment will be located further landward than the existing revetment and scattered rock will be removed from the site, enhancing the visual qualities of the site from the existing condition. Thus, the proposed project will not result in any new adverse impacts to public views of the ocean from the highway, and will restore and enhance visual quality in a visually degraded area, as required by Section 30251.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Section 30251 of the Coastal Act and the Malibu LCP.

**G. CALIFORNIA ENVIRONMENTAL QUALITY ACT**

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

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As discussed above, the proposed development, as conditioned, is consistent with the policies of the Coastal Act. Feasible mitigation measures, which will minimize all adverse environmental effects, have been required as special conditions. The following special conditions are required to assure the project's consistency with Section 13096 of the California Code of Regulations:

Special Conditions 1 through 9

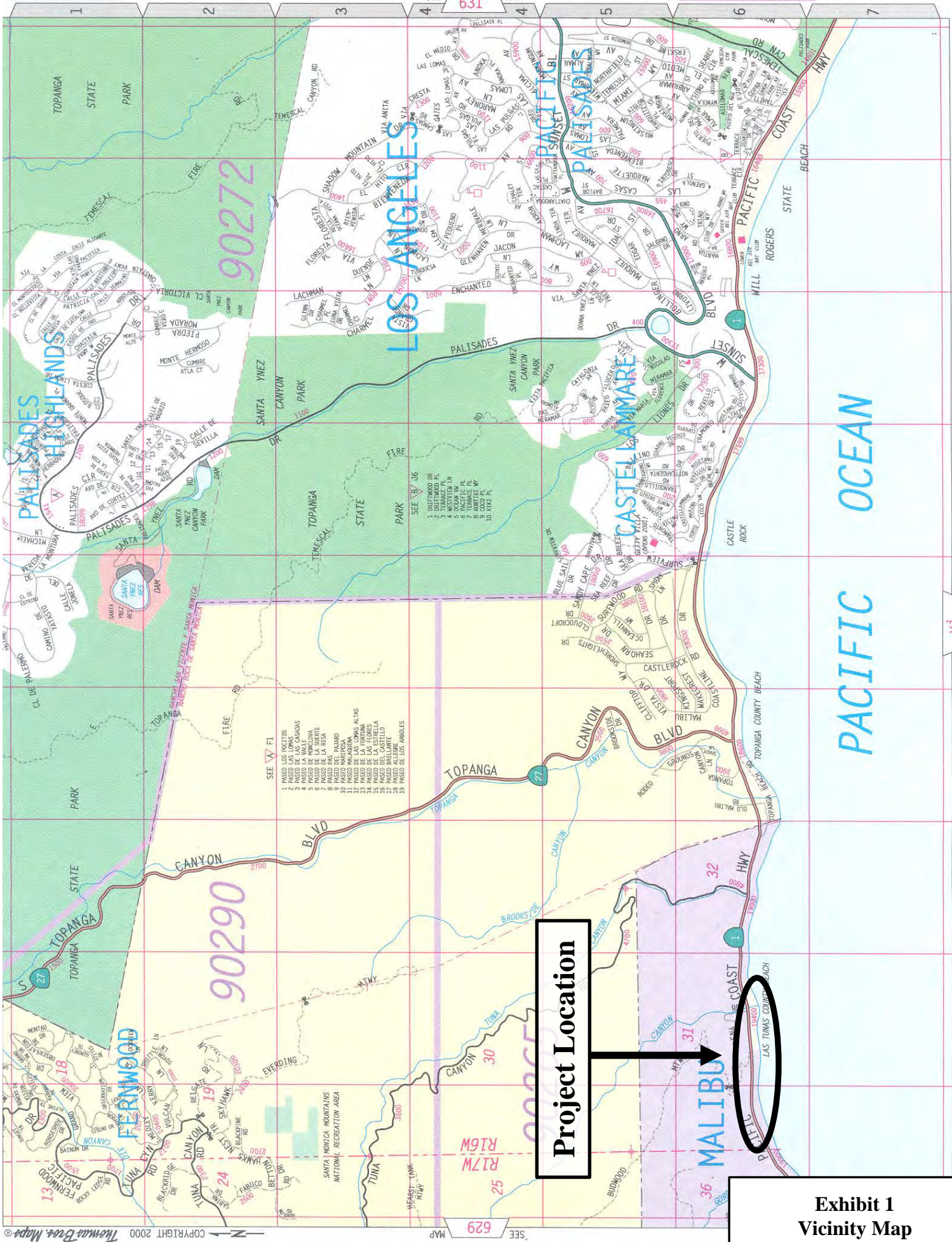
As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned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

# APPENDIX 1

## Substantive File Documents

City of Malibu, Local Coastal Program; Emergency Permit No. 4-92-184-G; Emergency Permit 4-93-218-G; Coastal Development Permit No. 4-92-184; Emergency Permit No.4-06-149-G; Emergency Permit No. G-4-14-0032; California State Lands Commission General Lease No. 9064.9, dated 5/9/2013; Wave Run-up Study Final by CWE, dated 7/11/14; Geotechnical Report Pacific Coast Highway Las Tunas State Beach, prepared by California Department Of Transportation District 7, dated May 1994; Final Preliminary Geotechnical Report, prepared by CH2MHILL, dated 4/2000; Embankment Review Report, prepared by Department of Transportation, Division of Engineering Services, dated February 15, 2013; Embankment Review Report, prepared by Department of Transportation, Division of Engineering Services, dated July 7, 2014; Alternative Analysis Report for Las Tunas Beach Stabilization Project, prepared by California Department Of Transportation District 7, dated 4/8/14; Natural Environment Study, prepared by California Department of Transportation, dated 8/2012.





**Exhibit 1**  
**Vicinity Map**  
**CDP No. 4-13-010**



4449 5

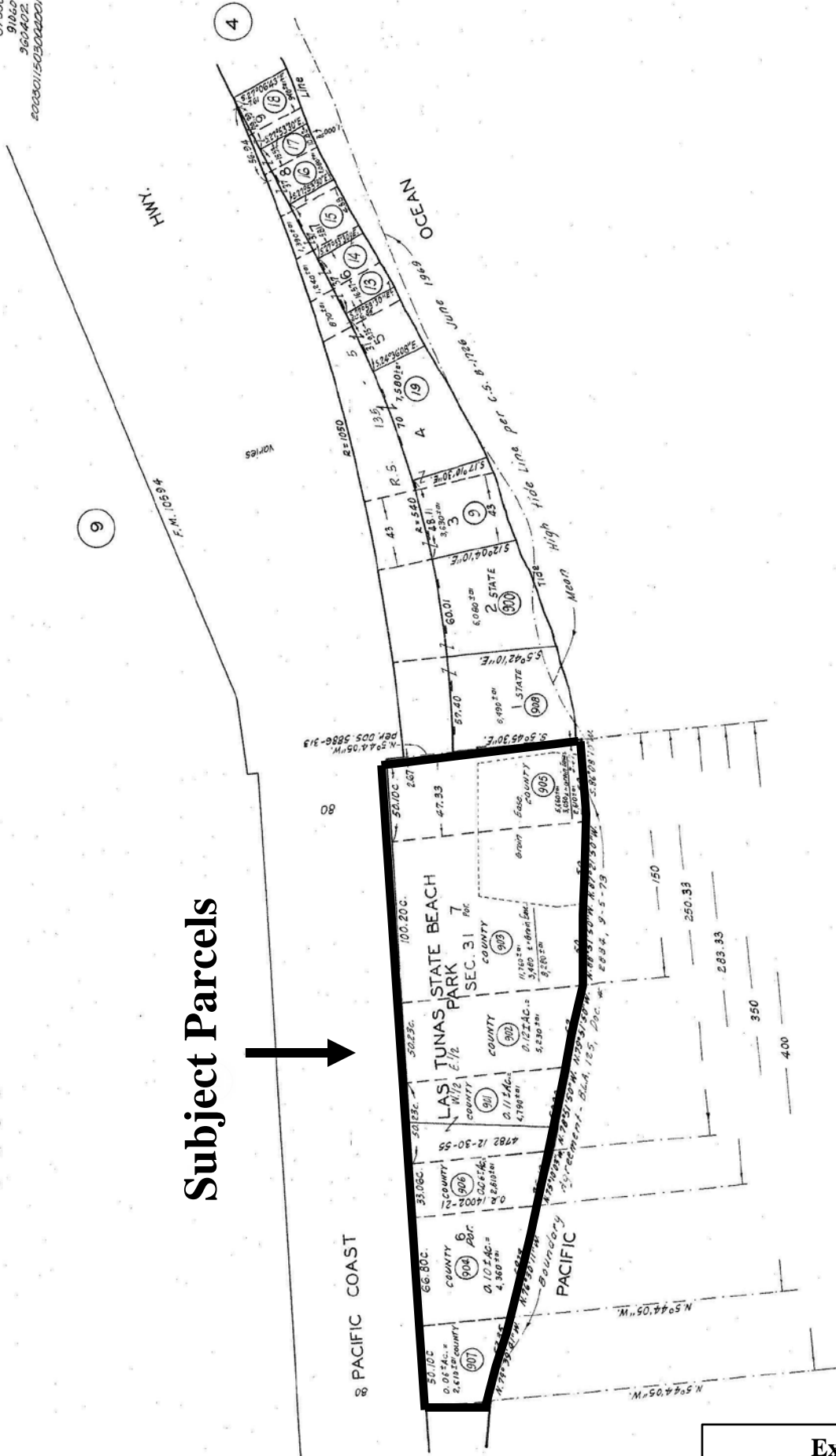
SCALE 1" = 60'

2003

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9106206  
9604026  
R000011503000001-07



# Subject Parcels



Distances shown measured at right angles to W. line lot 1, L.S. 26-43-44, are actually measured parallel to N. line lot 6, Sec. 31, T.15., R.16 W., from compromise line per. D.D.S. 5886-315

T.15., R.16 W.

LICENSED SURVEYOR'S MAP - L.S. 26 - 43 - 44

REV. ASSM'T SEE: 278-28

ASSESSOR'S MAP

**Exhibit 2a**  
**Parcel Map**  
**CDP No. 4-13-010**

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910606  
962422

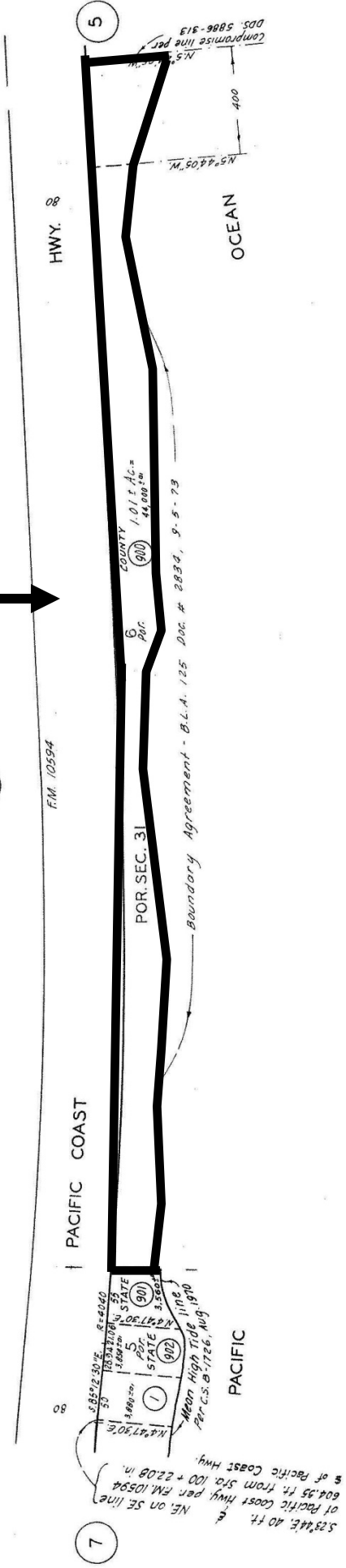
1996

0  
SCALE 1" = 100'



# Subject Parcels

(10)



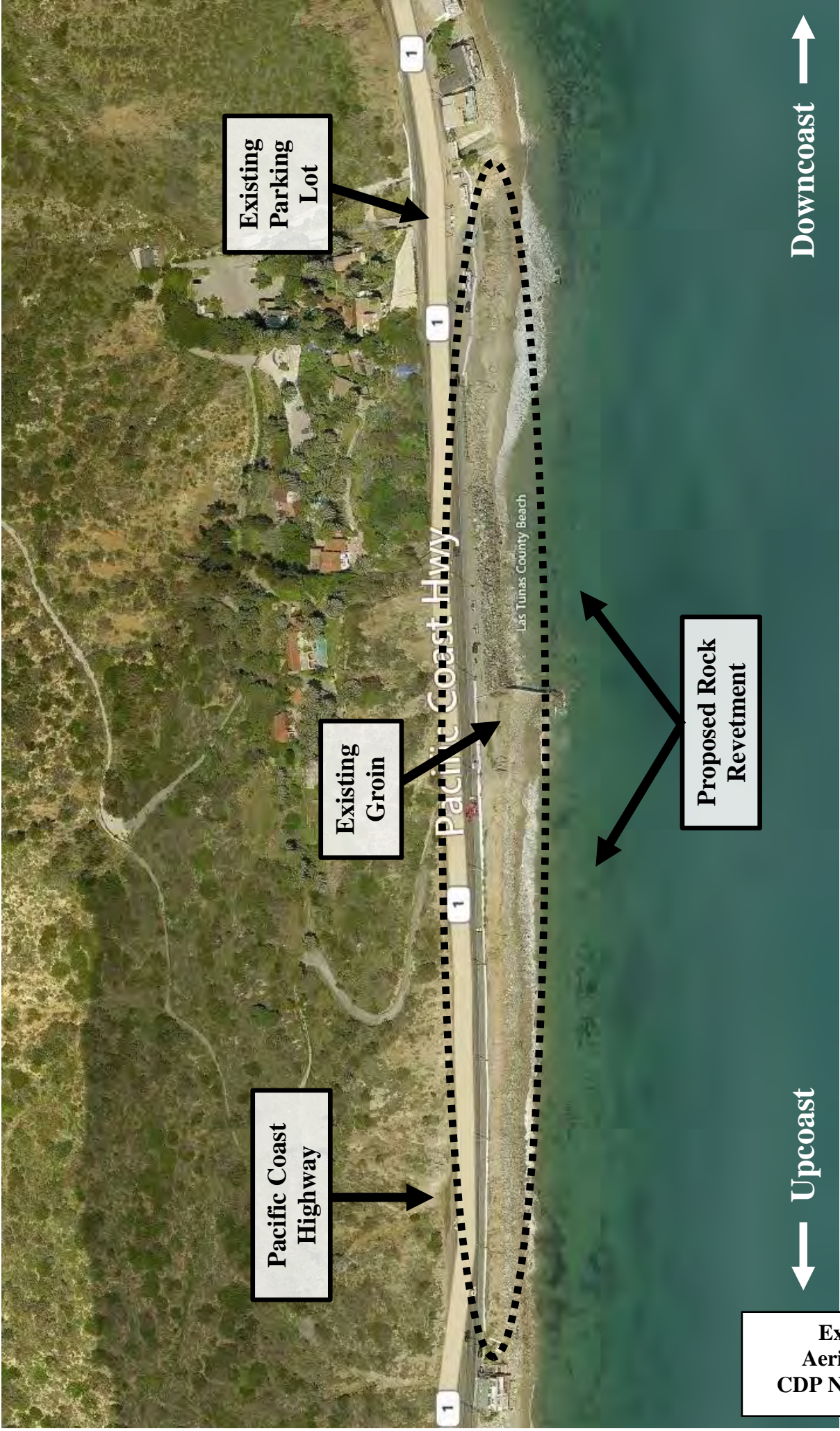
**Exhibit 2b**  
**Parcel Map**  
**CDP No. 4-13-010**

REV. ASSMT SEE:  
27 & 48

T. I S., R. 16 W.

ASSESSOR'S MAP  
COUNTY OF LOS ANGELES, CALIF.





Existing  
Parking  
Lot

Existing  
Groin

Pacific Coast  
Highway

Proposed Rock  
Revetment

Downcoast →

← Upcoast

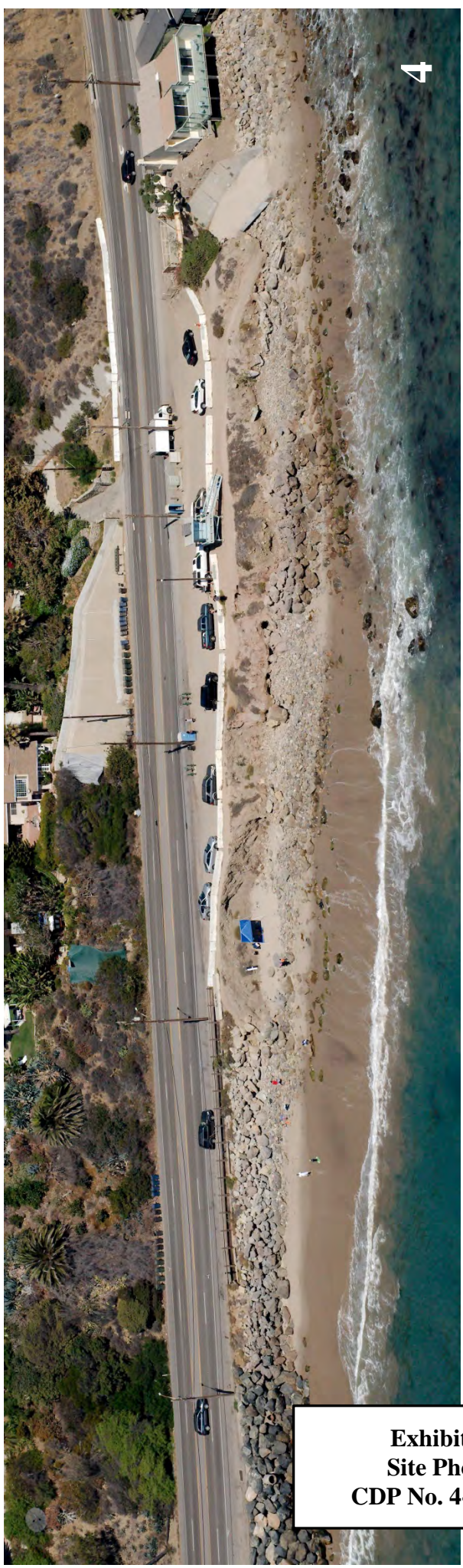
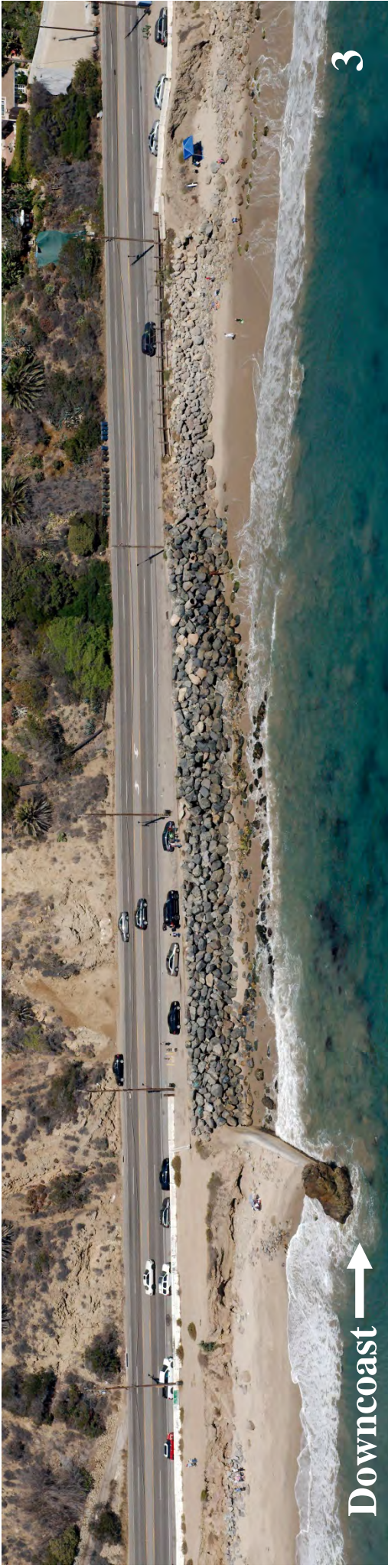
**Exhibit 3**  
**Aerial Photo**  
**CDP No. 4-13-010**





**Exhibit 4a  
Site Photos  
CDP No. 4-13-010**



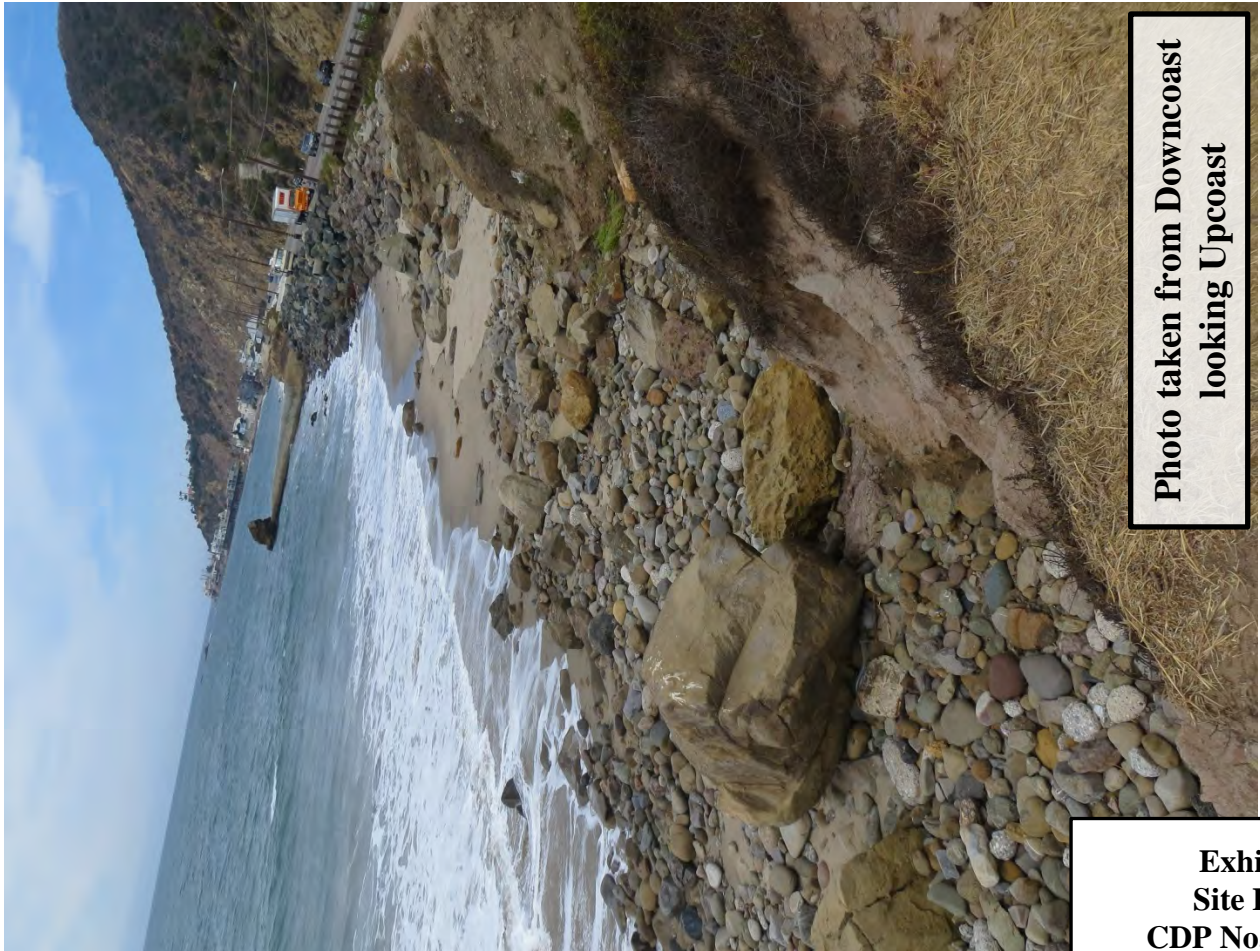


**Exhibit 4b  
Site Photos  
CDP No. 4-13-010**





**Photo taken from Upcoast  
looking Downcoast**



**Photo taken from Downcoast  
looking Upcoast**

DATE: 07/15/14  
 TIME PLOTTED: 17:48:25  
 LAST SYSTEM: 10-15-14

PROJECT: 07 LA 1 41.8/42.1  
 COUNTY: LA  
 ROUTE: 1  
 SHEET TOTAL: 42  
 SHEETS: 1

REGISTERED CIVIL ENGINEER  
 DATE: \_\_\_\_\_  
 PLANS APPROVAL DATE: \_\_\_\_\_  
 STATE OF CALIFORNIA  
 CIVIL ENGINEER

NOTE:  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

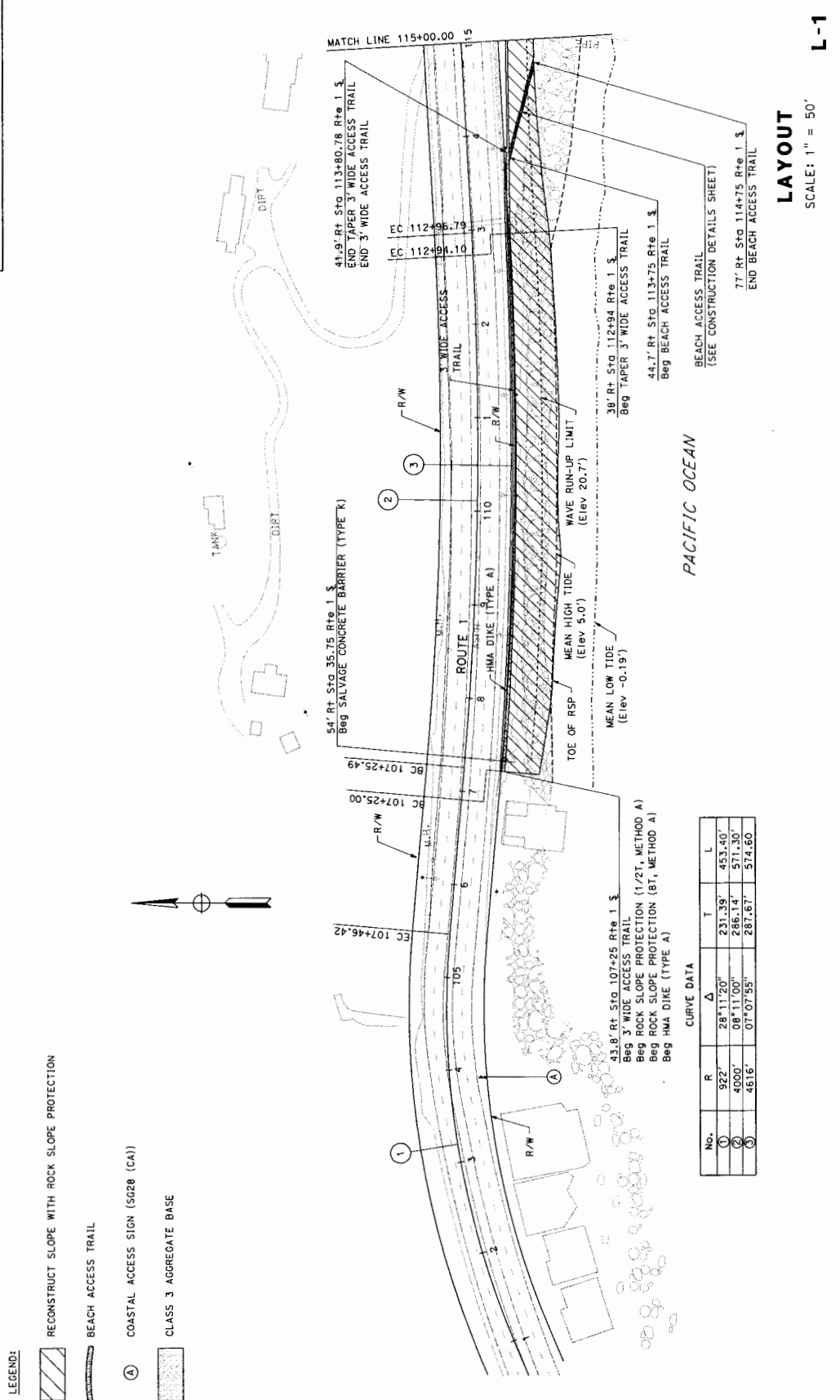
LEGEND:  
 RECONSTRUCT SLOPE WITH ROCK SLOPE PROTECTION  
 BEACH ACCESS TRAIL  
 COASTAL ACCESS SIGN (S020 (CA))  
 CLASS 3 AGGREGATE BASE

CURVE DATA

No.	R	Δ	T	L
1	922'	28°11'20"	231.39'	453.40'
2	4000'	08°11'00"	286.14'	571.30'
3	4616'	07°07'55"	287.67'	574.60'

REVISIONS:

NO.	DATE	BY	DESCRIPTION
1	07/15/14	OC LEE	DESIGNED BY
2	07/15/14	MIKE NGUYEN	REVISOR
3	07/15/14	JOSE OCHOA	DATE REVISOR



**Exhibit 5a**  
**Site Plan Part 1**  
**CDP No. 4-13-010**

PROJECT NUMBER & PHASE: 07120001641  
 UNIT: 1B14  
 SCALE: 1" = 50'  
 L-1

Dist COUNTY ROUTE POST MILES SHEET TOTAL  
 07 LA 1 41.8/42.1

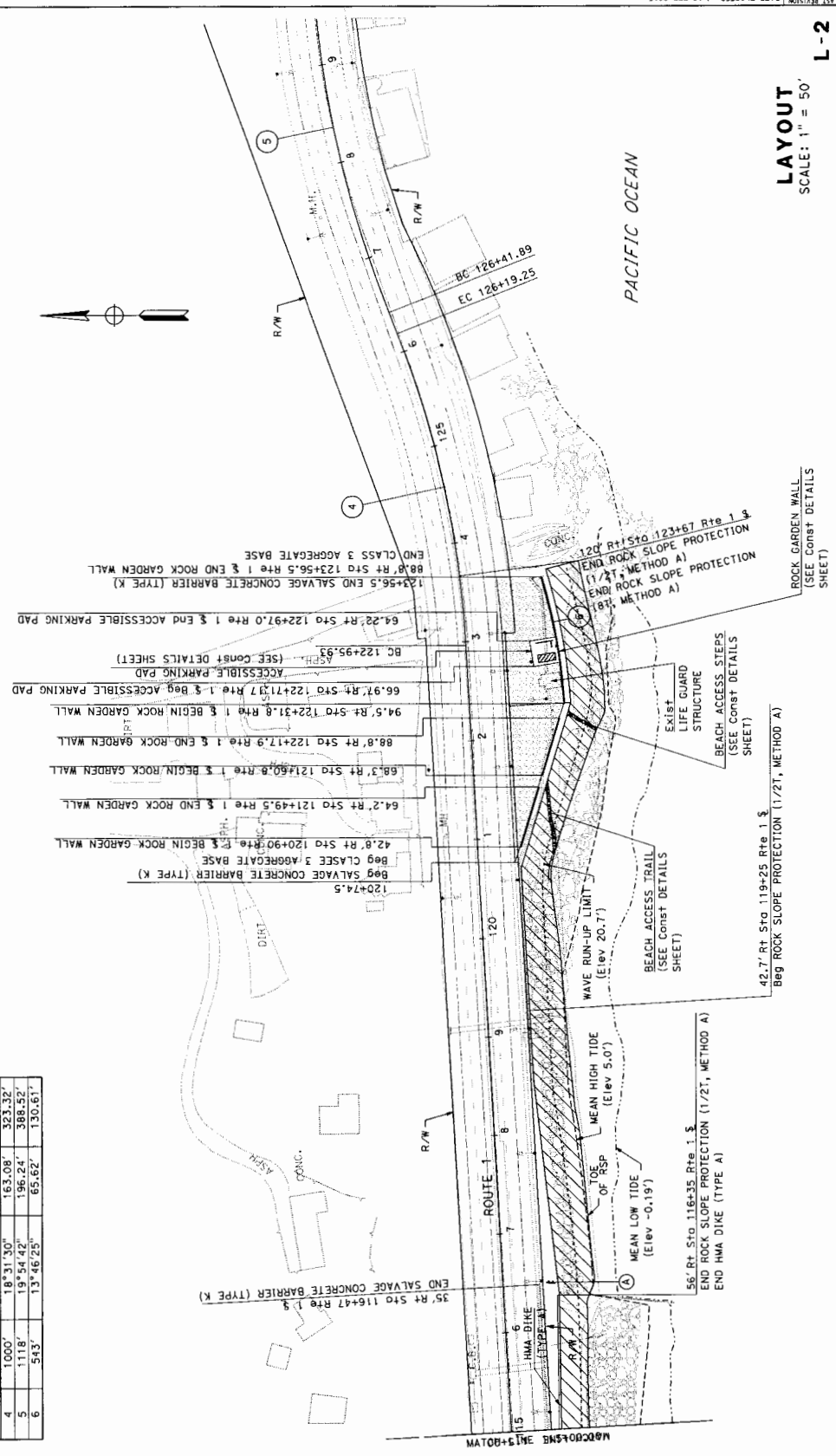
REGISTERED CIVIL ENGINEER DATE 11-5-14  
 WIKI A. HOIEN No. 87796 Exp. 6-30-15

PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA BY THE OFFICE OF AGENTS SHALL NOT BE RESPONSIBLE FOR CONSEQUENCES OF THIS PLAN SHEET.

NOTE:  
 FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

CURVE DATA

No. @	R	Δ	T	L
4	1000'	18°31'30"	163.08'	323.32'
5	1118'	19°54'42"	196.24'	388.52'
6	543'	13°46'25"	65.62'	130.61'



LAYOUT  
 SCALE: 1" = 50'

PROJECT NUMBER & PHASE UNIT 1814  
 RELATIVE BORDER SCALE IS IN INCHES  
 USERNAME: P3123371 DON FILE #3734506002.dgn  
 D: 7/2/2010



Exhibit 5b  
 Site Plan Part 2  
 CDP No. 4-13-010




DESIGNED BY	WIKI A. HOIEN	REVISOR	
CHECKED BY	JOSE OCHOA	DATE REVISOR	
DESIGNED BY	WIKI A. HOIEN	REVISOR	
CHECKED BY	JOSE OCHOA	DATE REVISOR	



Dist	LA	ROUTE	1	POST MILES	41.8/42.1	SHEET	2	TOTAL SHEETS	31
REGISTERED CIVIL ENGINEER DATE 11-5-14 PLANS APPROVAL DATE 11-17-14 THE STATE OF CALIFORNIA BY ITS OFFICE OF REGISTERED PROFESSIONAL ENGINEERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF THIS PLAN SHEET.									

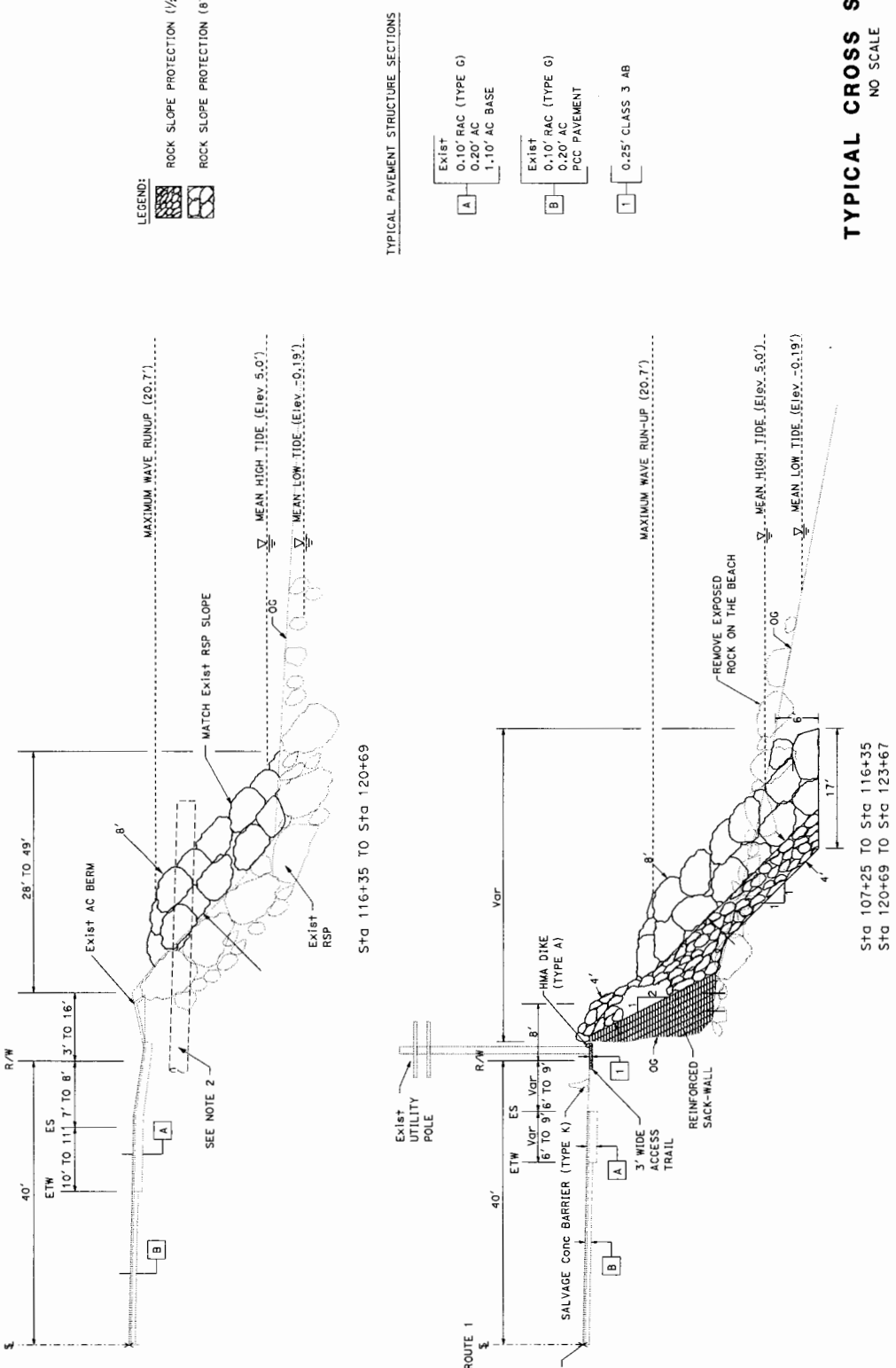
M. Nguyen  
 REGISTERED CIVIL ENGINEER  
 No. 57196  
 Exp. 12-31-15

LEGEND:  
 ROCK SLOPE PROTECTION (1/2t, METHOD A)  
 ROCK SLOPE PROTECTION (8t, METHOD A)

TYPICAL PAVEMENT STRUCTURE SECTIONS  
 A  
 B  
 T

TYPICAL CROSS SECTIONS  
 NO. SCALE  
 PROJECT NUMBER & PHASE 0715000212

NOTES:  
 1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES IN THE STANDARD SPECIFICATIONS.  
 2. FOR DRAINAGE WORK SEE DRAINAGE PLANS.



FUNCTIONAL SUPERVISOR	OC LEE	CHECKED BY	JOSE OCHOA	DATE REVISID	
DESIGNED BY	MIKE NGUYEN	REVISID BY			
UNIT	1814	PROJECT NUMBER & PHASE	0715000212		

USERNAME: 8129317  
 DGN FILE: 73x4500-0014.dgn  
 1/2010

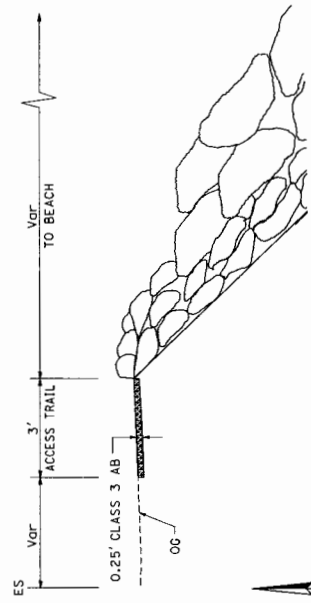
Exhibit 6  
 Proposed Revetment  
 Cross-Sections  
 CDP No. 4-13-010

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET TOTAL NO. SHEETS
07	LA	1	41.8/42.1	8 31

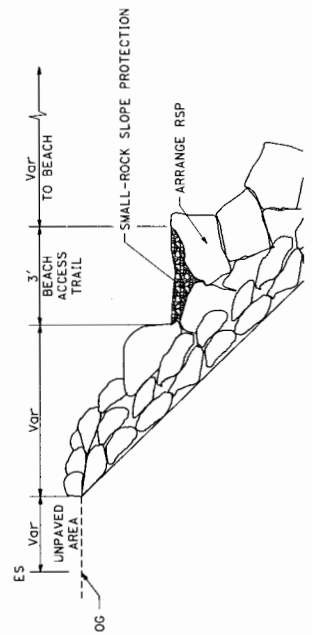


REGISTERED CIVIL ENGINEER  
 DATE 11-5-14  
 PLANS APPROVAL DATE 11-17-14  
 THE ENGINEER'S SEAL IS VALID FOR THE STATE OF CALIFORNIA ONLY.  
 THE ACCURACY FOR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

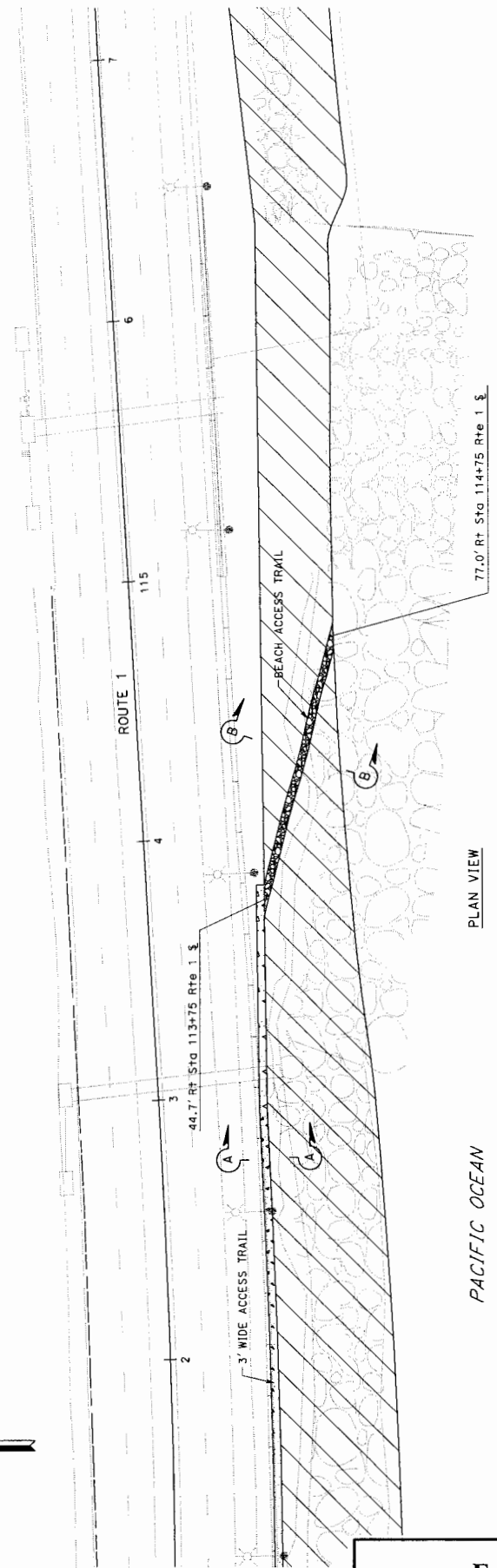
NOTE:  
 ARRANGE RSP TO FORM BEACH ACCESS TRAIL.



SECTION A-A  
NO SCALE



SECTION B-B  
NO SCALE



PLAN VIEW

PACIFIC OCEAN

**ACCESS TRAILS**

**CONSTRUCTION DETAILS**  
SCALE: 1" = 20'

UNIT 0000 PROJECT NUMBER & PHASE 07120001641  
 RELATIVE BORDER SCALE 0 1 2 3  
 1/2" INCHES 15" INCHES  
 USERNAME -> J1116405 DGN FILE -> 734450p002.dgn  
 DATE PLOTTED -> 14-NOV-2014 10:14:14  
 LAST REVISION

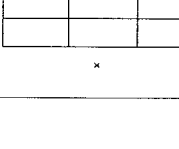
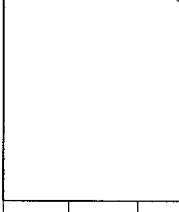
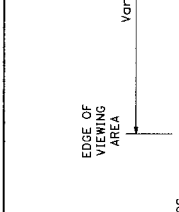
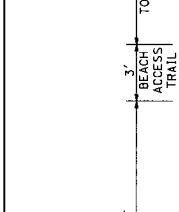
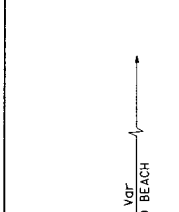
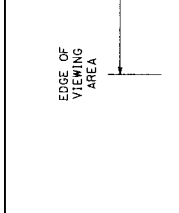
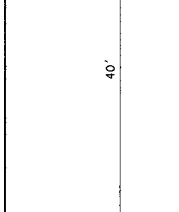
**Exhibit 7**  
**Proposed Access Trail**  
**CDP No. 4-13-010**

DESIGNED BY	MIKE NGUYEN
REVISIONS BY	
DATE REVISION	
CHECKED BY	JOSE OCHOA
FUNCTIONAL SUPERVISOR	OC LEE
CALCULATED BY	
DESIGNED BY	MIKE NGUYEN



DIST	COUNTY	ROUTE	POST MILES	SHEET NO.	TOTAL SHEETS
07	LA	1	41.8/42.1	9	31

REGISTERED CIVIL ENGINEER DATE 11-5-14  
 11-17-14  
 PLANS APPROVAL DATE  
 THE STATE OF CALIFORNIA OR ITS OFFICES  
 THE AUTHORITY FOR COMPLETENESS OF EXAMINED  
 COPIES OF THIS PLAN SHEET.



DESIGNED BY	FUNCTIONAL SUPERVISOR	OC LEE
CALCULATED BY	DESIGNED BY	GN
CHECKED BY	DESIGNED BY	GN
JOSE OCHOA	DESIGNED BY	GN
DATE REVISION	REVISION	

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

DATE PLOTTED: 26-NOV-2014  
 TIME PLOTTED: 12:39

PROJECT NUMBER & PHASE  
 07120001641

UNIT 1814

RELATIVE BORDER SCALE  
 15 IN. INCHES

SCALE: 1" = 20'

SCALE AS SHOWN

CONSTRUCTION DETAILS

BEACH ACCESS TRAIL AND BEACH ACCESS STEPS

C-3

**Exhibit 8**

**Proposed Beach Accessway**

**CDP No. 4-13-010**

DATE	COUNTY	ROUTE	POST MILES	SHEET TOTAL
07	LA	1	41.8/42.1	10
			TOTAL PROJECT	31

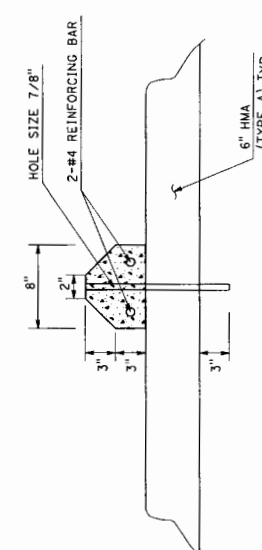
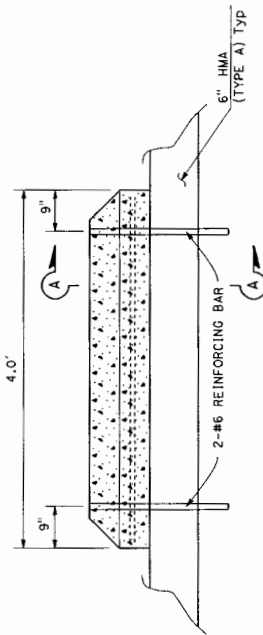
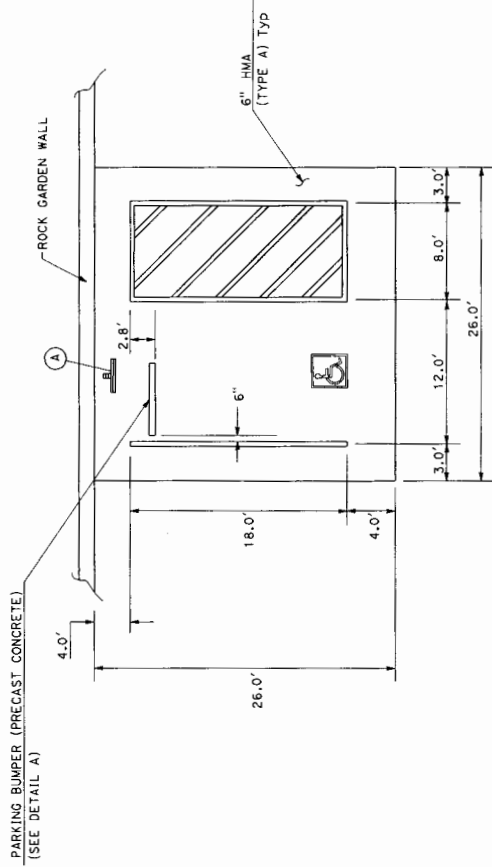


REGISTERED CIVIL ENGINEER  
 DATE 11-5-14  
 PLANS APPROVAL DATE 11-17-14  
 I, THE ENGINEER, HEREBY CERTIFY THAT I AM THE AUTHOR OF THIS PLAN SHEET.  
 I AM NOT PROVIDING ANY SERVICES TO THE CLIENT UNDER THIS PLAN SHEET.

**ROADSIDE SIGN (ACCESSIBLE PARKING)**

SIGN NO.	SIGN CODE	PANEL SIZE	No. OF POSTS AND SIZE	EA
A	R99(CA)	12' x 18"	1 - 6" x 6"	1

FUNCTIONAL SUPERVISOR	OC LEE
CHECKED BY	JOSE OCHOA
DESIGNED BY	MIKE NGUYEN
DATE REVISD	



**ACCESSIBLE PARKING**

**CONSTRUCTION DETAILS**  
NO SCALE  
**C-4**

**Exhibit 9**  
**Proposed Accessible**  
**Parking Space**  
**CDP No. 4-13-010**

RESOLUTION NO. 14-30

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MALIBU  
CONSENTING TO A CONSOLIDATED COASTAL DEVELOPMENT PERMIT BY  
THE CALIFORNIA COASTAL COMMISSION FOR THE LAS TUNAS STATE  
BEACH SLOPE STABILIZATION PROJECT LOCATED BETWEEN 19324.5  
PACIFIC COAST HIGHWAY AND 19562.5 PACIFIC COAST HIGHWAY  
(CALIFORNIA DEPARTMENT OF TRANSPORTATION AND CALIFORNIA  
STATE LANDS COMMISSION)

Section 1. Recitals.

A. On February 11, 2013, the State of California Department of Transportation (Caltrans) submitted an application for a coastal development permit (CDP) to the California Coastal Commission (CDP No. 4-13-010). A portion of the subject project, between Pacific Coast Highway and the mean high tide line, is within the City's jurisdiction. Ordinarily, a CDP from the City is required for this portion.

B. On April 15, 2013, pursuant to Public Resources Code Section 30601.3, Caltrans submitted a written request for the City's consent to have the California Coastal Commission process the CDP for the entire project pursuant to a consolidated CDP.

C. The subject project, the Las Tunas State Beach Slope Stabilization Project, is proposed to stabilize a slope along the beach that runs alongside Pacific Coast Highway between 19324.5 and 19562.5 Pacific Coast Highway. The project consists of installing a bank and shore rock protection to stabilize the slope, and repair of the undermined roadway shoulder on the seaward side of the highway. The bank and shore rock protection is an approximately 1,600 linear foot rock revetment along the shore of Pacific Coast Highway and adjacent to the Pacific Coast Highway road shoulder. The rock revetment would consist of two layers of more than eight tons of rocks on the outside armor and two layers of eight foot wide and four foot wide rocks underlain by filter fabric as the interior bedding. An embedded toe is also proposed to key-in the rock on the slope and protect the toe from wave scour.

D. On June 19, 2014, a Notice of City Council Public Hearing for the City Council's consideration of authorization of a consolidated CDP was mailed to interested parties and all property owners and occupants within a 500-foot radius of the proposed project area.

E. On June 23, 2014, the City Council reviewed the submitted request and materials, reviewed and considered the agenda report, public testimony, and all related information.

Section 2. City Council Findings.

A. A consolidated CDP would avoid unnecessary and duplicative processing as the majority of the project will occur within the jurisdiction of the Coastal Commission.

B. Public participation will not be substantially impaired by consolidated review because: 1) the California Coastal Commission will hold a noticed public hearing on the CDP

Exhibit 10  
City of Malibu Consolidated  
CDP Resolution No. 14-30  
CDP No. 4-13-010

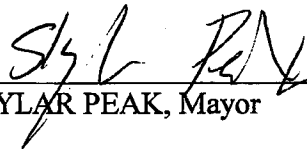
Coastal Commission will provide public notification of the public hearing when the CDP for the proposed project will be considered.

Section 3. Consent for Consolidated Coastal Development Permit.

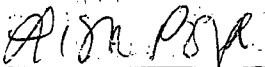
Pursuant to Public Resources Code Section 30601.3, the City Council hereby consents to the processing of a consolidated CDP for the Las Tunas State Beach Slope Stabilization Project.

Section 4. The City Clerk shall certify the adoption of this resolution.

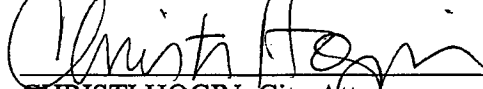
PASSED, APPROVED AND ADOPTED this 23<sup>rd</sup> day of June 2014.

  
\_\_\_\_\_  
SKYLAR PEAK, Mayor

ATTEST:


  
\_\_\_\_\_  
LISA POPE, City Clerk  
(seal)

APPROVED AS TO FORM:

  
\_\_\_\_\_  
CHRISTI HOGIN, City Attorney

I CERTIFY THAT THE FOREGOING RESOLUTION NO. 14-30 was passed and adopted by the City Council of the City of Malibu at the regular meeting thereof held on the 23<sup>rd</sup> day of June 2014 by the following vote:

AYES: 4 Councilmembers: La Monte, Rosenthal, Sibert, Peak  
NOES: 0  
ABSTAIN: 0  
ABSENT: 1 Councilmember: House

  
\_\_\_\_\_  
LISA POPE, City Clerk  
(seal)

DIST	COUNTY	ROUTE	PROJECT TOTAL MILES	SHEET TOTAL NO.
07	LA	1	41.8/42.1	1

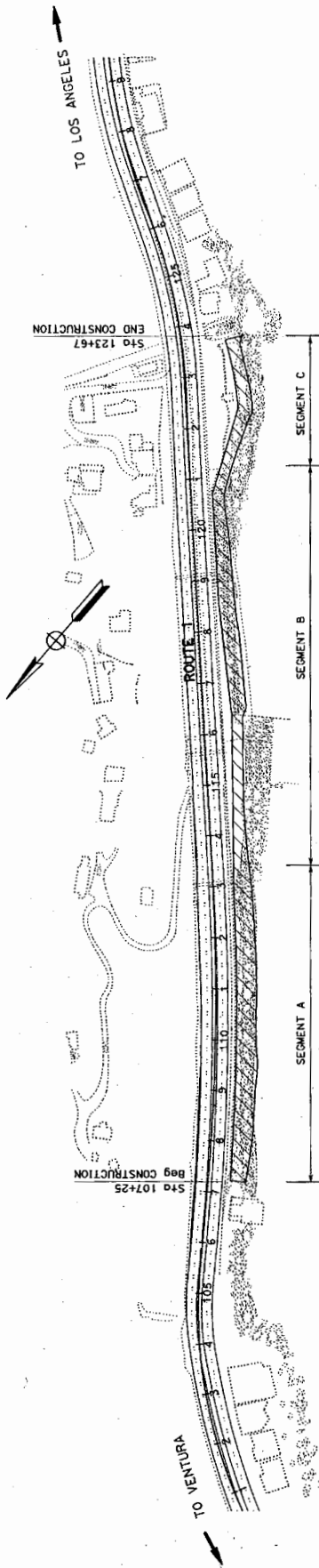
  

REGISTERED CIVIL ENGINEER	DATE
_____	_____

PLEASE APPROVAL DATE	REGISTERED PROFESSIONAL ENGINEER
_____	_____

CONSTRUCTION METHOD:  
 SEGMENT A: CONSTRUCT SLOPE FROM BEACH PER DETAIL A  
 SEGMENT B: CONSTRUCT SLOPE FROM TEMPORARY RAMP PER DETAIL B  
 SEGMENT C: CONSTRUCT SLOPE FROM TOP OF SLOPE



**CONSTRUCTION DETAILS**  
 NO SCALE  
**C-1**

DATE PLOTTED = 26-FEB-2015 10:20:14  
 PROJECT NUMBER & PHASE 07120001641  
 UNIT 1814  
 RELATIVE BORDER SCALE 15 IN. INCHES  
 0 1 2 3  
 7/2/2010  
 USERNAME = 43-1113201 DWT FILE = D:\32059001\_1800\CDP\1814.dgn

FUNCTIONAL SUPERVISOR	OO LEE
CALCULATED-DRAWN BY	DESIGNED BY
MIKE NGUYEN	MIKE NGUYEN
REVISOR	REVISION
DATE	REVISION

**Exhibit 11**  
**Proposed Construction**  
**Methods**  
**CDP No. 4-13-010**

DIST	COUNTY	ROUTE	TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	1	41,8/42,1		

REGISTERED CIVIL ENGINEER	DATE
PLANS APPROVAL DATE	

THE STATE OF CALIFORNIA OR ITS OFFICERS  
 AND AGENCIES SHALL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED IN THIS PLAN SHEET.

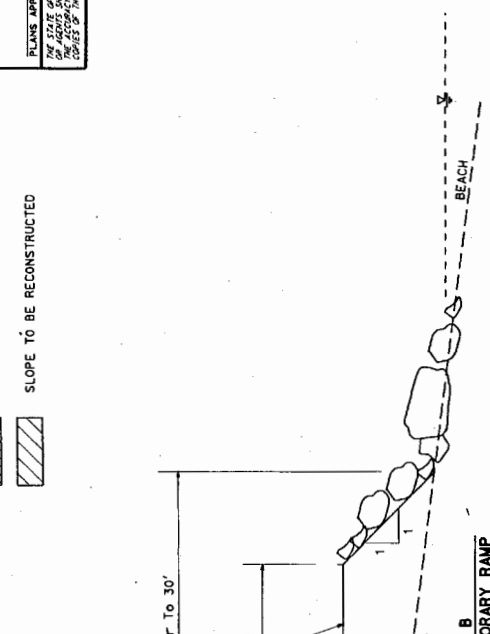
**LEGEND:**

TEMPORARY NONSKID-SURFACE STEEL PLATE

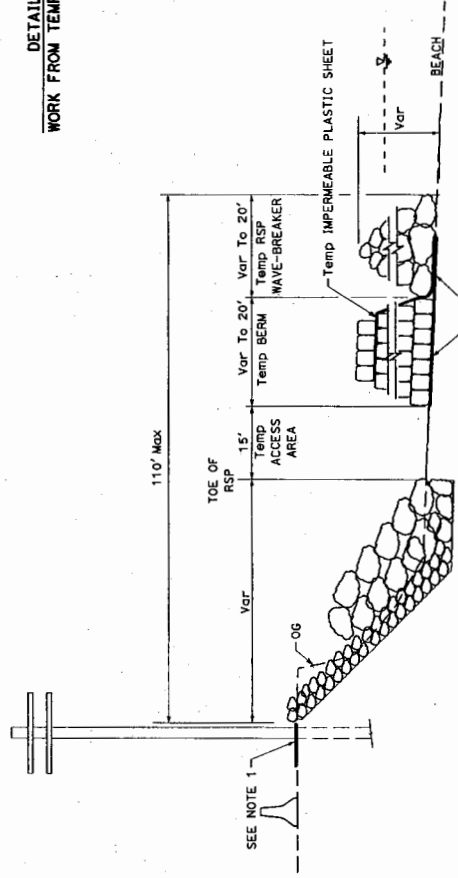
SLOPE TO BE RECONSTRUCTED

**NOTES:**

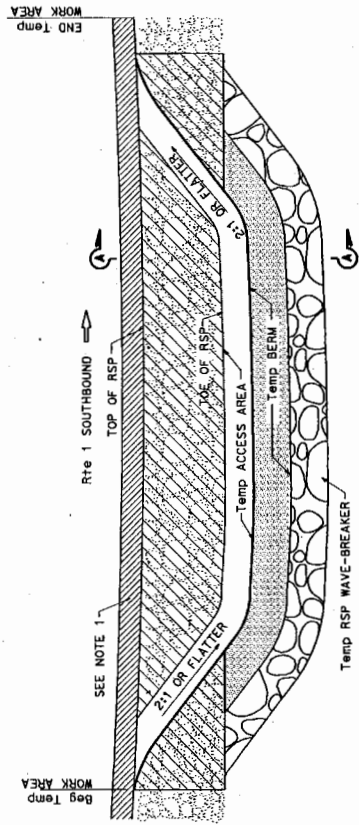
1. PLACE TEMPORARY NONSKID-SURFACE STEEL PLATES TO PROTECT UNDERGROUND UTILITIES DURING CONSTRUCTION.



**DETAIL B**  
 WORK FROM TEMPORARY RAMP



**SECTION A-A**



**DETAIL A**  
 WORK FROM BEACH

**CONSTRUCTION DETAILS**  
 NO SCALE

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	OC LEE	CHECKED BY	JOSE OCHOA	DATE REVISED
FUNCTIONAL SUPERVISOR			DESIGNED BY	MIKE NUVERN	REVISED BY