

**CALIFORNIA COASTAL COMMISSION**

CENTRAL COAST AREA OFFICE

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W176



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Staff: SG  
Staff Report: 07/25/97  
Hearing Date: 08/13/97

**STAFF REPORT  
REGULAR CALENDAR**

**APPLICATION:** 3-97-039, Rock Slope Protection for Highway One

**APPLICANT:** CALIFORNIA DEPARTMENT OF TRANSPORTATION

**PROJECT LOCATION:** Adjacent to Highway One approximately seven miles north of the village of San Simeon and 1.1 miles south of Arroyo de la Cruz, at Post Mile 65.7, San Luis Obispo County

**PROJECT DESCRIPTION:** Place rock slope shoreline/bluff protection with 4 - 8 ton class rock along approximately 150 linear feet of shoreline at base of bluff

**LOCAL APPROVALS:** San Luis Obispo County permit D960151P for portion of work above the mean high tide line

**FILE DOCUMENTS:** Permit D960151P, San Luis Obispo County LCP

**SUMMARY OF STAFF RECOMMENDATION**

This project is for the placement of a rock rip rap shoreline protection structure to protect scenic Highway 1 from collapse. This permit would cover that portion of the project seaward of San Luis Obispo County's coastal permit jurisdiction. Staff recommends **approval** of the project with conditions including a requirement that the rip rap be removed after five years unless the permit is amended to allow an additional amount of time. This condition encourages Caltrans to pursue realignment of Highway One, which may be the environmentally superior alternative for protecting Highway One from erosion in this region. The other recommended conditions of approval incorporate the County's coastal development permit conditions and the environmental safeguards generally applied by the Commission for installation of shoreline protection structures, including coordination with the State Lands Commission.

**EXHIBITS**

1. Location map
2. Site map
3. Cross-sections
4. SLO County's Conditions (CDP #D960151P)

**I. STAFF RECOMMENDATION**

Staff recommends that the Commission adopt the following resolution:

Approval with Conditions

*The Commission hereby grants a permit, subject to the conditions below, for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, is located seaward of the first through public road (Highway One) and is in conformance with the public access and public recreation policies of Chapter 3 of the Coastal Act, will not prejudice the ability of the County of San Luis Obispo to implement its certified Local Coastal Program, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.*

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**II. STANDARD CONDITIONS**

SEE APPENDIX A

**III. SPECIAL CONDITIONS****1. Revised Plans**

**PRIOR TO TRANSMITTAL OF THE COASTAL DEVELOPMENT PERMIT**, permittee shall submit to the Executive Director for review and approval two copies of revised plans showing that the rock slope protection will have a maximum slope of 1.5:1.

**2. State Lands Commission Review**

**PRIOR TO TRANSMITTAL OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit a letter from the State Lands Commission or other documentation that shows that:

- a. No state Lands are involved in the development; or
- b. State lands are involved in the development, and all permits required by the State Lands Commission have been obtained; or
- c. State lands may be involved in the development, but pending a full determination of state lands involvement, an agreement has been made by the applicant with the State Lands Commission for the project to proceed without prejudice to the determination.

**3. Other Approvals**

**PRIOR TO COMMENCEMENT OF CONSTRUCTION**, permittee shall submit a letter of approval or other documentation from the US Army Corps of Engineers and the Monterey Bay National Marine Sanctuary showing that the project has been approved by those agencies, or that no approval is necessary.

**4. Approved Development**

This permit is for the **temporary** installation of rock slope protection in the manner and form as described in the application material and the findings contained herein. This permit is valid from August 15, 1997 through August 15, 2002. Unless amended, this permit shall expire, and permittee shall remove all rock slope protection from the site and return it to pre-construction conditions, **by August 15, 2002.**

**5. Permit Amendment to Authorize Continued Use of Rock Slope Protection**

This permit may be amended no more than twice to authorize the continued use of the rock slope protection for a maximum of two, five year terms beyond the initial expiration date of this permit. If permittee chooses to do this, then permittee shall submit a completed amendment application form with all necessary supporting material no later than May 15 of the year in which the then current five year term will expire, i.e., May 15, 2002, and May 15, 2007. Supporting material shall include, but not be limited to, either 1) a time table for relocating Highway One inland so as not to necessitate permanent reliance on the rock slope protection at this site and future sites immediately upcoast from this site where bluff erosion will soon threaten the highway; or 2) a proposed future method or comprehensive plan for protecting Highway One from cumulative bluff erosion in the general vicinity of this project when the final five year period is over.

**6. Incorporation of Local Government Conditions.**

The conditions of San Luis Obispo County Coastal Development Permit No. D960151P, attached as Exhibit 4, shall be considered as conditions of this permit as well. Any change in these conditions shall not be effective until: a) such change is submitted to the Executive Director for a determination of materiality; and, b) if found to be material, it is approved in accordance with the requirements of the Commission permit amendment process.

**7. Maintenance.**

Maintenance of the permitted shoreline protection device shall be the responsibility of the permittee. If after inspection, it is apparent that repair or maintenance is necessary, the permittee shall contact the Commission office to determine whether additional permits are necessary.

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**IV. FINDINGS AND DECLARATIONS**

**1. Project Description:** The site of this proposal is immediately adjacent to Highway One in northern San Luis Obispo County. In this general area, the highway at places is only a few yards from the bluff edge. At this particular site, erosion has continued to the point that the edge of the bluff is approximately two feet from the edge of the highway. Caltrans proposes to protect the highway from continued erosion by placing rock slope protection along a 150 foot stretch of shoreline. The coastal bluff at the project site is approximately 25 to 30 feet high. A rock ledge along the northern half of the site extends out from the bluff as much as 25 feet and is from two to five feet higher in elevation than the ocean. The proposed rockwork will extend

up the bluff face about 20 feet with the top of the placed rock forming a flat shelf extending from approximately five to 20 feet out from the bluff. This flat shelf area would be "topped off" with dirt to the elevation of the top of the bluff. The dirt will provide a recovery area should a vehicle run off of the pavement. The toe would be seaward of the mean high tide line by just a few feet to as much as 28 feet

Caltrans' initial proposal was that all work would be landward of the mean high tide line and therefore not subject to a permit from the Coastal Commission. Following winter storms in December 1996, Caltrans placed some rock at the base of the bluff to prevent emergency closure of Highway One. In January 1997, San Luis Obispo County issued a permit authorizing the placement of the existing and additional rock. Subsequent to the winter storms Caltrans reevaluated the on-site conditions and found that some of the rock was in fact seaward of the mean high tide line and that the protective rock slope could not be effectively contained landward of the mean high tide line.

Caltrans is now requesting a coastal development permit from the Commission to authorize placement of existing rock and additional rock for that portion of the rock slope protection that extends seaward of the mean high tide line.

## 2. Coastal Resource Issues:

### a. Shoreline Structures

Section 30235 of the California Coastal Act governs proposed shoreline structures in the coastal zone. It states, in part:

*Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required . . . 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.*

Under this section, the Commission may approve a shoreline structure if it finds that (1) there is an existing structure in danger from erosion; (2) shoreline altering construction is required to protect the existing threatened structure; and (3) the required protection is designed to eliminate or mitigate the adverse impacts on shoreline sand supply. Of course, shoreline structures must also be reviewed for conformance with other relevant sections of the Coastal Act as discussed later in this staff report.

Existing Structure at Risk. In this project, Caltrans is proposing to protect an existing section of Highway One. Roads are considered structures under the Coastal Act definition of development (Section 30106). Rapid wave erosion has come within two feet of the highway in this location. Caltrans has indicated that the failure to protect the roadway would lead to at least partial closure of Highway 1 and impairment of public access along the San Luis Obispo County North Coast. Their plan is to complete the placement of rock slope protection prior to the onset of seasonal rains. This project, therefore, meets the first test of section 30235.

Feasible Alternatives. The second test of section 30235 that must be met is that Caltrans's proposal to alter the shoreline with the placement of rock slope protection must be *required* to protect the existing structure. In other words, there must be no feasible alternative to the use of a shoreline structure to protect Highway One. In this case, it is not clear that the placement of rock slope protection is the only feasible alternative for protecting Highway One in this vicinity over the long run. The section of highway at risk appears to be within a stretch Highway One containing a number of other sections of highway similarly at risk from rapid wave erosion. It would not be unreasonable to anticipate a need for additional rock slope protection projects in this area over the long run. This project, then, may be merely the first in a series of shoreline structures that would cumulatively alter the shoreline along this section of the North San Luis Obispo coast.

One alternative to this project would be to maintain the status quo -- no rock slope protection. As just discussed, however, the risks to Highway One appear sufficiently imminent in this case to rule out this option. There is too much uncertainty about whether the winter rainy season would produce erosion that completely undermined the road. This alternative, therefore, is not feasible.

A second alternative to rock slope protection is to realign Highway One inland. A general review of the topography in the area, as well as the possibility of numerous future rock slope protection projects in this vicinity, supports this alternative as a feasible longrun strategy for protection of the highway. Realignment would also avoid the various shoreline impacts associated with rock slope protection, such as alteration of natural land forms and impacts to public access, that are discussed in more detail below. The difficulty with the realignment alternative in this case is that it is not feasible to pursue prior to the onset of the winter rainy season. The current Caltrans process for approving and implementing road realignments can be long and drawn out (in some cases as long as ten years), and involves the setting of funding priorities among statewide alignment proposals. According to Caltrans, projects where safety has been identified as a major factor typically have a higher priority over other projects. Although this project is not an immediate emergency (the need for protection in this area has been anticipated for some time), it is clear that realignment is not a viable strategy for avoiding the nearterm risks to public safety and maintenance needs of Highway One. However, it should be noted that public safety is one of the primary reasons for pursuing rock slope protection in this case, which suggests that this section of Highway One may be a good candidate for realignment in the longrun.

Because there may be a feasible, environmentally superior alternative to rock slope protection over the long run in this case, special condition four specifies that this permit is for the *temporary*, five year placement of rock to protect Highway One. Special Condition five allows for the possibility of amending the permit to allow for two additional five year periods, for a total of 15 years. This should be enough time for Caltrans to not only assess the longrun highway protection needs in this area of San Luis Obispo County, including the likely cumulative impacts of shoreline erosion and potential response, but also to obtain funding for realignment or to create some other way of protecting the highway which does not involve rock slope protection. With these conditions, the project meets the second test of section 30235.

Sand Supply Impacts. To be approved, shoreline structures must be designed to eliminate or mitigate adverse impacts on shoreline sand supply. As a general rule, all shoreline protective devices, such as seawalls and rock slope protection, lead to decreased local sand supply due to

the cessation of bluff erosion. They also lead to the loss of sandy beach in front of the structure due to accelerated erosion. Because this project is temporary, its impact on local sand supply will be limited and/or mitigated over the long run, when Caltrans reconsiders the project over the next five years. In addition, rock slope protection tends to induce less erosion than alternative structures such as seawalls, since more of the energy of the waves is absorbed by and between the rocks rather than being directed downward or to the ends of the structure. Rock slope protection, then, minimizes the adverse impacts to sandy beach immediately adjacent to the project location relative to other designs (see also public access discussion below).

With respect to littoral drift, rock slope protection structures can trap sand within the voids between rocks, and thereby reduce the quantity of sand that would otherwise be delivered to downcoast beaches. Special Condition 1, which requires that the seawall be constructed at a 1.5:1 horizontal to vertical slope, minimizes this impact by reducing the structures encroachment beyond the mean high tide line. In addition, Special Condition 4, which allows the installation of the rock structure as a temporary shoreline protection device only, encourages Caltrans to pursue realignment of Highway One as a long term solution to addressing the erosion problems facing Highway One in this region. Eventual removal of this project, and the potential realignment of Highway One, will eliminate the reduction in sand supplied by littoral drift resulting from this project and similar projects that can be anticipated in the future should the Highway not be realigned. Thus, the project as conditioned meets the sand supply impacts test and is therefore consistent with section 30235.

*b. Public Access*

Section 30210 of the Coastal Act provides for maximum public access to the shore and recreational opportunities consistent with, among other things, public safety.

*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.*

More specific direction is given by section 30211 which 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.*

In this case, the nearest formal, established public access to the beach is south of Piedras Blancas lighthouse, about four miles south of the project site. The land surrounding the site is part of the Hearst Ranch. In 1972 Hearst recorded a Notice of Permissive Use which allows the public to traverse the ranch land seaward of the highway subject to revocation of permission at any time. Immediately south of the site, the beach is mostly passable for over a mile, although at high tide, some parts, such as the headland some 1,000 feet to the south, are not passable. For about three-quarters of a mile upcoast from the project site there are a series of informal turnouts which provide access to the bluff top and the possibility of access to a

shoreline characterized mostly by rocks with some small sandy and cobbly pocket beaches. Such beach access is attained only by scrambling down the bluff face. Just north of that stretch of shoreline informal access exists to the sandy beach at the mouth of Arroyo de la Cruz.

In the immediate vicinity of the project, there are also no stairways; access is attained by scrambling down the bluff face. Immediately north of the site there is no beach; the bluff extends out into the ocean, blocking lateral access to the north. From that point south for about half the length of the project site a rock ledge extends to as much as 25 feet out from the bluff a few feet above sea level. The ledge is about two to five feet higher in elevation than the ocean surface. The northern end of the rock shelf ends where the bluff extends farther out into the ocean. At that point, the way around the bluff is impassable at high tides and is traversed only with very great difficulty at other times. There is only a small horizontal difference between the location of the landward edge of low and high tides. Additionally, those few rocks that are exposed at low tide are covered with a layer of slippery marine vegetation which is hazardous to traverse. The southern half of the site is a cobble and sand beach which extends downcoast about 1,000 feet to a headland. At high tides, the beach around the headland is impassable.

In terms of the project's impacts to public access, approximately 1,750 square feet of sandy, cobbly beach would be covered by rock slope protection, as would approximately 750 square feet of rock ledge. The primary problem with this rock placement is not the blockage of lateral access along the beach, as lateral access to the north is already naturally blocked by the bluff. One might even argue that the rock would enable a beach-user to clamber up the rocks and over the top of the bluff, in order to continue upcoast. Rather, the main difficulty with the project vis-a-vis access is that it would initially cover about 2,500 square feet of existing usable beach, which could be increased should the rocks be dispersed over a greater area as a result of wave action. Special condition 7 requires the permittee to maintain the structure so that the amount of beach coverage is not increased during the temporary life of the project.

Typically, the Commission requires that such impacts to public access -- the physical loss of beach area -- be mitigated, with lateral access dedications, beach replenishment, or contributions to in lieu beach access funds. In this case, however, the impact of the rock slope protection on the beach and access is limited initially to five years, with the possibility of a maximum of 15 years, after which all rock slope protection would have to be removed. Of course, permanent loss of beach area would require adequate mitigation measures. Therefore, the Commission finds that no lateral access dedication is required and that the proposal, as conditioned, is consistent with Coastal Act section 30210.

*c. Marine Environment.*

Section 30230 of the Coastal Act requires:

*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.*

This project could have impacts on marine habitat; most notably haul-out areas for elephant seals, which are found in abundance in the general area. However, the best evidence available from staff with the National Biological Survey is that the use of this beach area by elephant seals is unlikely, given its narrow character. A site visit also indicated that no elephant seals were present. Because the project will not impact an area which provides habitat necessary to maintain healthy populations of this marine organism, the project is consistent with section 30230 of the Coastal Act.

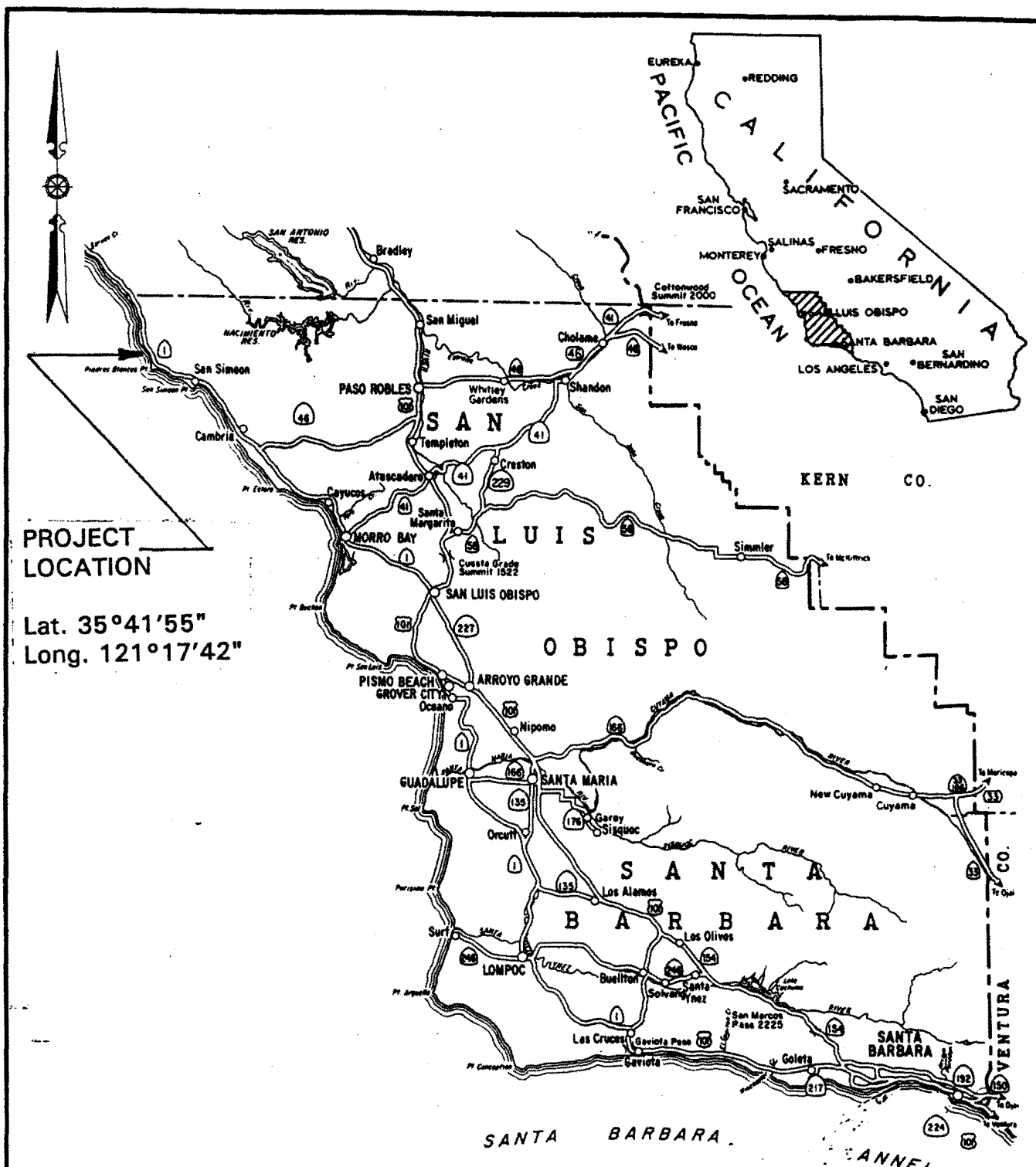
**3. Consistency with the California Environmental Quality Act (CEQA)**

The Coastal Commission's environmental review process has been certified by the Secretary for Resources as being the functional equivalent of CEQA. Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(i) 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 impact which the activity may have on the environment. The County's review process found that there were no feasible less environmentally damaging alternatives and that there were no significant adverse impacts associated with the proposal. The Commission finds that as approved and conditioned by the County and by the Commission, the proposed project will not have any significant adverse impacts on the environment and can be found consistent with CEQA.



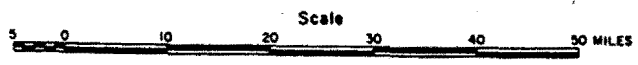
**Appendix A -- Standard Conditions**

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 this permit is reported to the Commission. 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. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24-hour advance notice.
6. 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.
7. 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.



**FIGURE 1**

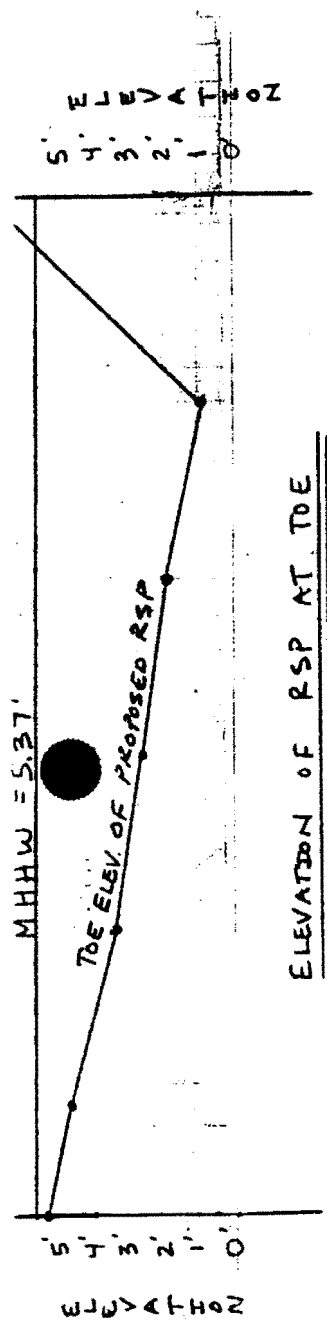
**PROJECT LOCATION MAP**  
**ROCK SLOPE SHORE PROTECTION**  
**SLO-1-65.7**



**EXHIBIT NO. 1**

**APPLICATION NO.**  
**3-97-039**

**CALTRANS - HWY. 1**  
**ROCK SLOPE PROTECTION PROJECT -**  
**LOCATION MAP**



ELEVATION OF RSP AT TOE

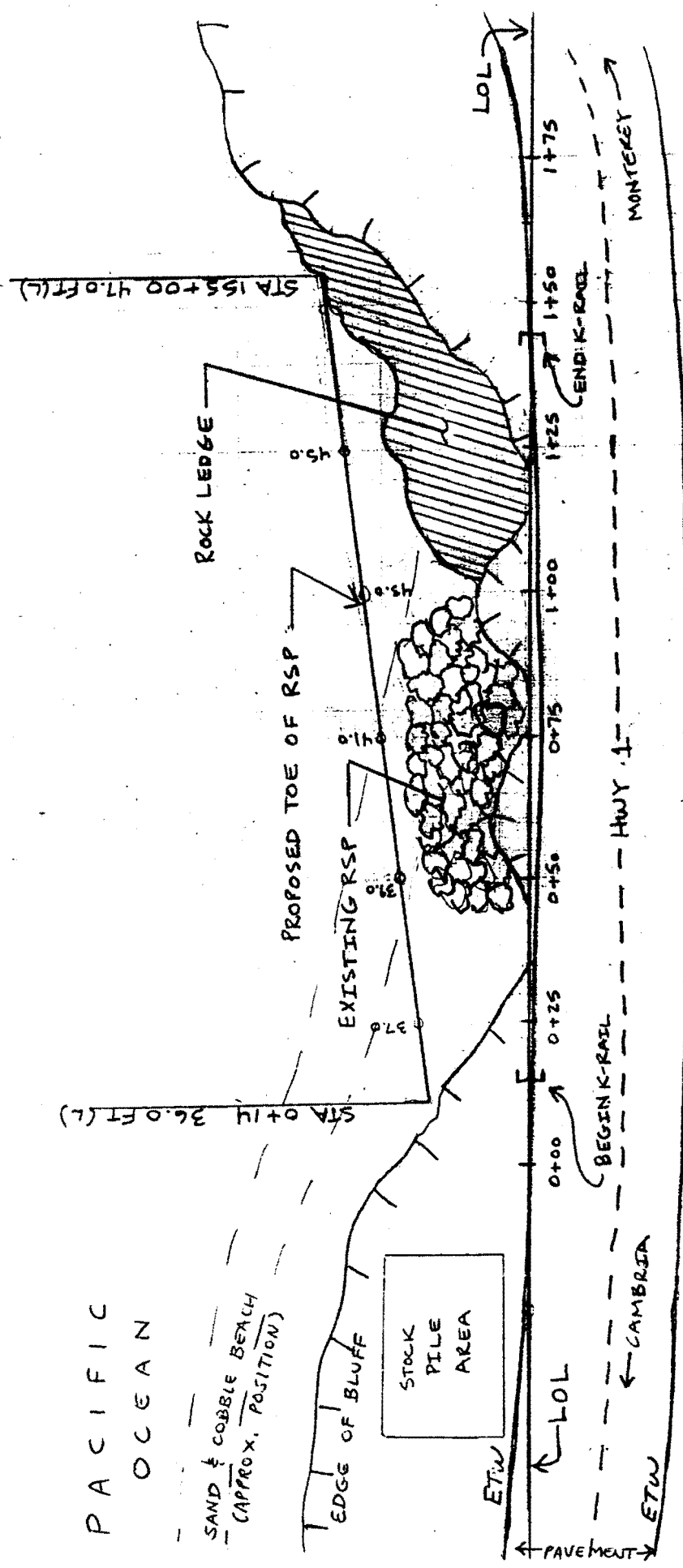


EXHIBIT NO. 2
APPLICATION NO. 3-97-039
CALTRANS-HWY. 1
ROCK SLOPE PROTECTION-SITE MAP

SLO - 1 - 65.7

PLACE ROCK SLOPE PROTECTION (RSP)

05 - 455501

NO SCALE

27

X-SEL 0+50  
SLO - 1 - 65.7  
Z. DELLAMAS

455501

4-10-97

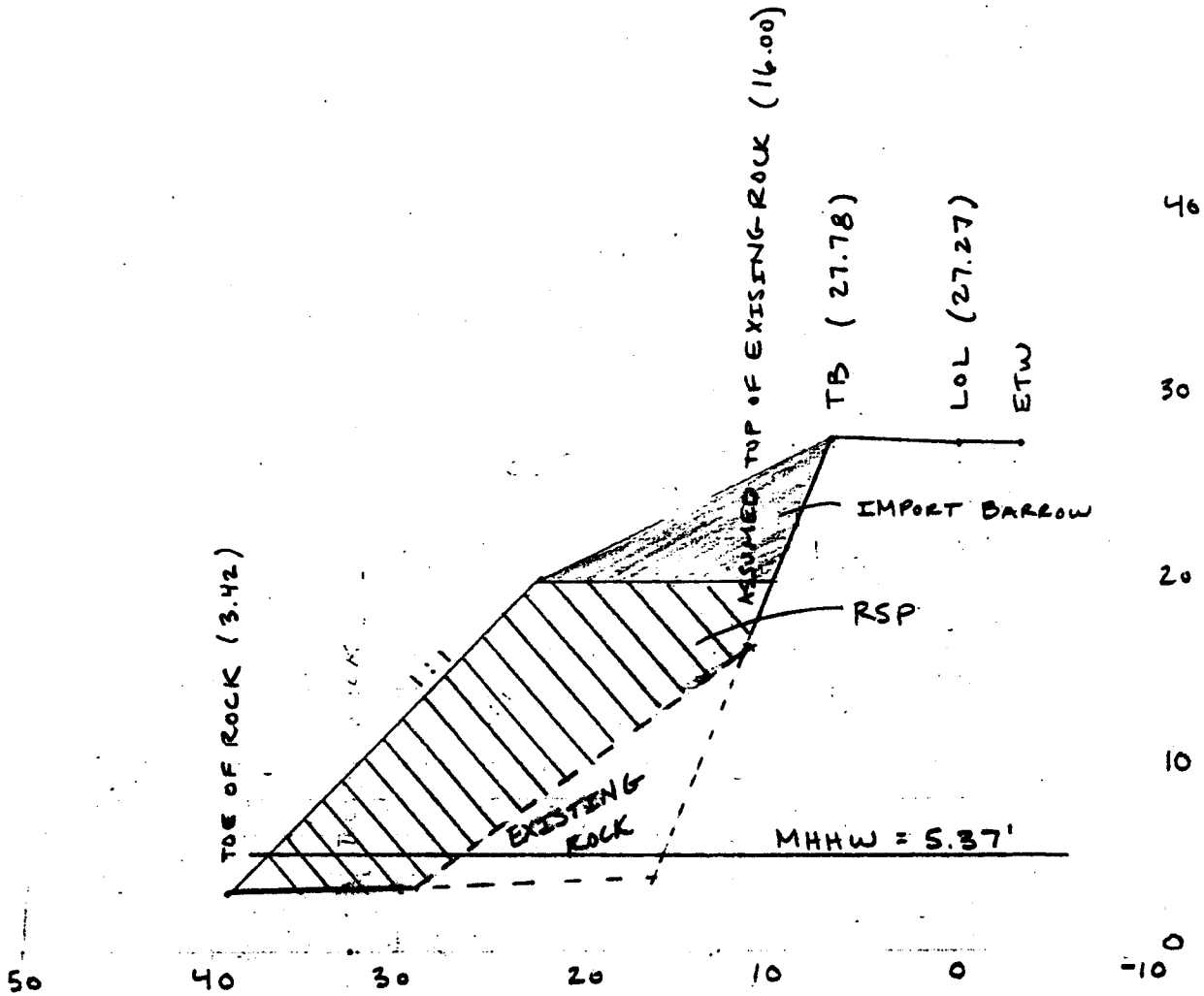


EXHIBIT NO.	3
APPLICATION NO.	3-97-039
CALTRANS - HWY. 1	ROCK SLOPE PROTECTION
CROSS SECTION (TYP.)	

D960151P - Conditions  
CalTrans Seawall

JANUARY 3, 1997.

1. This permit authorizes the a rock rip-rap seawall/slope and shore rock slope protection structure approximately 200 feet long and 25 feet high to protect Highway 1 from the rapid erosion by wave action.
2. Work under this permit shall be limited to the following:
  - a. the replanting of the bluff face where soils exist to stabilize the soils.
  - b. the rip rap seawall as shown on the approved plans and as further conditioned in this permit.
3. All work shall be done with review and approval of the project engineer with a minimum of three on site visits; to establish the mean high tide prior to construction, general placement of the filter fabric, inspection of the placement of the base rip rap, and a final inspection when work has been completed with a written letter or report by an engineering geologist on the project to be submitted to the Department of Planning and Building stating how the project met the conditions of approval.
4. Because the area near the base of the bluff is assumed to be tidelands, submerged lands, or public trust lands, no equipment shall be placed there or work done from or to that area below mean high tide without approval of California State Lands Commission and the California Coastal Commission. All equipment and materials storage shall take place above the bluff except for workers and light equipment as necessary near the face of the bluff to carry out the approved project.
5. The applicant shall place the toe of the new seawall as close as feasible to the existing toe of bluff.
6. All excavated material, if any, other than dirt, rock, and clean beach sand shall be removed from the beach prior to the next high tide following excavation. Such material shall be disposed of in either an approved fill location or a permitted landfill.
7. This permit does not provide for relocation of any part of the existing roadway lost to the natural actions of weather. It only permits for stabilization of the existing soils and structures.
8. All equipment used for seawall construction shall be removed from the beach at the end of the working day. If high tides encroach into the construction area, such equipment shall also be removed from the wetted beach area during each tidal cycle.
9. No fueling or scheduled maintenance of equipment shall occur on the beach. Equipment shall be removed from the sandy beach for such activities.
10. All equipment shall be inspected for leakage of petroleum products (e.g. gasoline, diesel fuel, hydraulic oil) or antifreeze on a daily basis. Equipment showing obvious signs of such leakage shall not be used on the beach.

EXHIBIT NO. 4
APPLICATION NO. 3-97-039
S.L.O. COUNTY CONDI- TIONS (CDP *D96015P)

11. The applicant is aware that construction of new or temporary equipment access-ways onto the beach may require additional review and permits.
12. The applicant is aware that spillage of any petroleum product on the beach requires immediate notification of the proper authorities. In the event of a spill, notification shall be accomplished as follows:

a. During normal business, notify the County Division of Environmental Health at (805) 781-5544.

or,

During "off" hours, contact the San Luis Obispo County Sheriff at (805)781-4553 or (805) 781-4550 and request to be connected with the On-duty Hazardous Materials Coordinator at County Environmental Health.

b. Contact the State Department of Fish and Game, Office of Oil Spill Prevention and Response at (805) 772-1756 (24 hours).

If the spill presents an immediate or imminent hazard to life and/or safety, call 911.

ctseawal.mdd

Ex. 4  
P.2

3-97-039  
SLO County Condition  
(CDP# 3960151P)