

## CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000  
 SAN FRANCISCO, CA 94105-2219  
 VOICE AND TDD (415) 904-5200



PROPOSED FINDINGS  
ON CONSISTENCY DETERMINATION

# W 14a

Consistency Determination  
 No. CD-52-96  
 (U.S. Army Corps of Engineers)  
 Staff: MPD-SF  
 45th Day: 6/22/96  
 60th Day: 7/7/96  
 Filed: 5/8/96  
 Commission Vote: 6/12/96  
 Hearing on Findings: 7/10/96

FEDERAL AGENCY: **U.S. Army Corps of Engineers**

DEVELOPMENT LOCATION: Pillar Point Promontory, Pillar Point Harbor, north of Half Moon Bay in San Mateo County (Exhibits 1 and 2)

DEVELOPMENT DESCRIPTION: Construction of a 110 ft. extension to the existing west breakwater (Exhibits 3 and 4)

PREVAILING COMMISSIONERS: Commissioners Belgard, Flemming, Rick, Staffel, Wear, and Chairman Calcagno

SUBSTANTIVE FILE DOCUMENTS: See page 9.

### EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers (Corps) has submitted a consistency determination for a 110 ft. long, 15 ft. wide, extension to the west breakwater at Pillar Point Harbor. The extension would be located where the existing breakwater joins the land at the southern tip of the U.S. Air Force Pillar Point Tracking Station (a.k.a. Pillar Point Promontory). The footprint of the extension would be approximately be 900 sq. ft. (110 ft. long and 15 ft. wide at the base). The top elevation of the breakwater would be +13 ft. MLLW (mean lower low water). A 10 ft. wide concrete ramp would be constructed at the northernmost point of the extension at the base of the bluff, to allow emergency vehicle and pedestrian access. Construction would occur during July-August, 1996, taking approximately 60 days. An approximately 1/2 acre construction staging area would be located immediately east of the proposed extension.

The Corps states the project is necessary to minimize sand erosion that occurs during conditions when waves overtop the project site. According to the Corps, the San Mateo County Harbor District believes that wave overwashing in this unarmored reach of the western breakwater is transporting sand into Pillar Point Harbor, and causing a delta to form on the harbor side of the project site. The Corps is also concerned that continued overwashing in this area will further erode the existing bedrock berm, which could lead to an increase in the frequency of wave flanking. The Harbor District believes the project is needed to protect existing and proposed aquaculture operations in the western portion of the harbor.

Section 30235 of the Coastal Act provides for the authorization of shoreline structures in situations where they are required to serve coastal dependent uses, or to protect existing structures or public beaches in danger of erosion. Boating uses and aquaculture operations within Pillar Point Harbor are coastal dependent uses. These coastal dependent uses are threatened by shoaling from waves which carry sand into the western portion of the harbor during storm events. The project is required to serve coastal dependent uses, and is, therefore, consistent with the shoreline structures policy of the Coastal Act (Section 30235).

The project site is a heavily used and regionally important recreational beach. Based on clarifications submitted by the Corps, the project would not prohibit access to the shoreline west of the site, either during or upon completion of construction. Temporary impacts would occur during construction (scheduled for the peak summer month recreation season) due to construction noise and the presence of equipment and materials; however this impact is insignificant. The project is consistent with the public access and recreation policies of the Coastal Act (Sections 30210-30213 and 30240).

The area's scenic significance has been previously established through, among other things, a signed Scenic Preservation Agreement between the Coastal Commission and the San Mateo County Harbor District. The proposed additional armoring in this scenic area would not significantly reduce visual quality, and the project is consistent with the view protection policy of the Coastal Act (Section 30251).

The project is consistent with the environmentally sensitive habitat policies of the Coastal Act (Section 30240), as the Corps has taken adequate measures to avoid affecting snowy plover wintering activities during construction, and because the project would not otherwise adversely affect any sensitive wildlife species. The project is also consistent with the geologic hazards policy of the Coastal Act (Section 30253), as the Corps has established that the project would not cause the adjacent bluffs to become further destabilized.

---

STAFF SUMMARY AND RECOMMENDATION:

I. Staff Summary:

A. Project Description/Background. The proposed project consists of a 110 ft. extension to an existing breakwater at Pillar Point Harbor in San Mateo County (Exhibits 2-4). The existing rubblemound west breakwater was originally constructed in 1962 and was 2,620 ft. long. A 1,050 ft. extension was added in 1967, bringing the total length to 3,670 ft. The proposed extension would be located where the existing west breakwater joins the land at the southern tip of the U.S. Air Force Pillar Point Tracking Station.

The project would consist of the placement of 78 tons of armor stone, with an average stone weight of 500 lbs., on either side of a 3 ft. thick concrete wall (Exhibit 4). The concrete wall would consist of 42 cu. yds. of concrete, keyed into the underlying sandstone, including removal of approximately 15 cu. yds. of underlying "highly weathered bedrock consisting of mudstone and sandstone." An additional up to 75 sq. yds. of loose debris from pre-excitation cleanup would also be removed. The footprint of the extension would be 900 sq. ft. (110 ft. long and up to 15 ft. wide at the base). The top elevation of the structure would be +13 ft. MLLW (mean lower low water), which would be approximately 3 ft. above the existing ground level. Upon completion of construction a 10 ft. wide concrete ramp would be added to the extension to allow emergency vehicle and pedestrian access at the base of the bluff at the northernmost point of the extension.

Construction is scheduled for July-August, 1996, and would take approximately 60 days. An approximately 1/2 acre construction staging area would be located immediately east of the proposed extension (Exhibit 3).

B. Status of Local Coastal Program. The standard of review for federal consistency certifications is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) of the affected area. If the LCP has been certified by the Commission and incorporated into the CCMP, it can provide guidance in applying Chapter 3 policies in light of local circumstances. If the LCP has not been incorporated into the CCMP, it cannot be used to guide the Commission's decision, but it can be used as background information. The San Mateo County LCP has been certified by the Commission and has been incorporated into the California Coastal Management Program (CCMP).

C. Federal Agency's Consistency Determination. The Corps has determined the project to be consistent to the maximum extent practicable with the California Coastal Management Program.

## II. Staff Recommendation:

The staff recommends that the Commission adopt the following resolution in support of its decision:

### Concurrence

The Commission hereby concurs with the consistency determination made by the Corps for the proposed project, finding that the project is consistent to the maximum extent practicable with the California Coastal Management Program.

## III. Findings and Declarations:

The Commission finds and declares as follows:

A. Shoreline Structures. Section 30235 of the Coastal Act provides 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 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.

This section sets out a two-part test for shoreline structures such as the proposed breakwater extension, the first relating to the need for the project, and the second relating to sand supply effects. Regarding the first test, the Corps states the project is necessary to correct design deficiencies in the existing breakwater and to minimize sand erosion that occurs during conditions when waves overtop the project site. According to the Corps, the San Mateo County Harbor District believes that wave overwashing in this unarmored reach of the western breakwater is transporting sand into Pillar Point Harbor, and causing a delta to form on the harbor side of the project site. The Corps is also concerned that continued overwashing in this area will further erode the existing bedrock berm, which could lead to an increase in the frequency of wave flanking. The Harbor District believes the project is needed to protect existing and proposed aquaculture operations in the western portion of the harbor. The Commission finds that boating uses and aquaculture operations within Pillar Point Harbor are coastal dependent uses which are threatened by wave carrying sand into the harbor during storm events, and, thus, that the project meets the first test of Section 30235 because it is required to serve coastal dependent uses.

Regarding the second test, effects on sand supply, the Corps states the project would protect the beach area on the east (harbor) side of the breakwater by "... alleviating some of the sand erosion presently experienced due to wave overwashing and wave flanking in this unarmored reach of the west breakwater." The Corps also states:

... sand transport along the coast (i.e. littoral drift) will not be blocked in the existing portion of the breakwater located underwater. The on-land breakwater extension is designed to alleviate erosion (caused by wave overwashing/flanking) to the beach located in the lee side of the breakwater, and stop sand from being lost from the beach to the northwest, thus, it would eliminate adverse impacts of erosion on the shoreline sand supply in the immediate project area.

The Commission finds that the project will not cause sand loss in the immediate project area, due to the scour effect of wave action against the breakwater, in part because waves breaking against the proposed extension will have already lost much of their energy due to offshore natural reefs located seaward of the extension. Regarding overall sand transport for the area, the fact that the project is only a 3-4% extension to an existing extensive breakwater will also serve to minimize any sand transport effects. The Commission concludes that the project is necessary to protect coastal dependent uses, would not cause adverse impacts on local shoreline sand supply, and is consistent with the requirements of Section 30235 of the Coastal Act.

B. Public Access and Recreation. Sections 30210-30213 of the Coastal Act provide for the maximization of public access and recreation opportunities. These sections provide:

Section 30210: 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.

Section 30212: (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,

Section 30213: Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.

In addition, Section 30240 (b) provides:

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

The immediate project site is part of a heavily used and regionally important public beach. The Commission has expended significant efforts to preserve and enhance access at this beach, which is important to surfers, fishermen, birdwatchers, and other passive recreational uses (see Consistency Certification No. CC-36-85 and CC-36-85A, U.S. Air Force, Cable Fence, Pillar

Point Harbor and "Public Access & Mitigation Summary for the Pillar Point Harbor Boat Ramp Facilities," San Mateo County Harbor District, June 18, 1990.) The world-famous "Mavericks" surf break is accessed by surfers from this beach, which at high tide can only be reached by crossing the site of the proposed breakwater extension. The project raises several public access concerns, due to both temporary construction impacts during the peak summer recreation period, and permanent beach displacement by the proposed breakwater extension.

The construction period would occur during the peak summer recreational period. The Commission would be extremely concerned over any prohibition of access to the ocean across the project site during this period. The Corps has responded to this concern by committing to maintaining a six foot wide access corridor across the site, close to the bluff edge, throughout the construction period. The Corps states:

Although the project calls for the breakwater extension to be tied into the existing bluff, it will tie in at an elevation of +13 feet Mean Lower Low Water (MLLW). This leaves a path approximately six feet wide for public access between where the project ends and where the bluff begins to become too steep for easy walking. Although the access path width is somewhat narrow, the path would be less than 20 ft. in length and it is apparent from foot traffic, that the area where the access path would be located is presently the preferred path to the north beach. A temporary fence would be put up to prevent the public from entering the construction area.

Thus, based on clarifications submitted by the Corps, the project would not prohibit access to the shoreline west of the site during the construction period. After construction, the Corps has committed to constructing a concrete ramp to facilitate access over the breakwater extension. Other access effects caused by the project would be minor and temporary. Furthermore, the Corps believes the extension will help retain sand on the beach, which would offset the loss of sandy beach caused by placement of the rocks on the beach. The Commission concludes that the project would not block access or significantly diminish the quality of the recreational experience, and that the project is consistent with the requirements of Sections 30210-30213 and 30240 to maximize and protect public access and recreation opportunities.

C. Visual Impact. Section 30251 of the Coastal Act provides:

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.

The scenic significance of this area has been well established by the Commission through, among other things, a signed Scenic Preservation Agreement between the Coastal Commission and the San Mateo County Harbor District (see Appeal No. 133-76 and subsequent amendments; Coastal Development Permit 3-90-56 (San Mateo County Harbor District); and the Scenic Preservation Agreement between Coastal Commission and San Mateo County Harbor District). Although the Scenic Preservation Agreement does not bind the Corps, which is not a signatory to it, the fact that the agreement prohibits structural development within the "open space" area, which includes the project site (which is owned by the Harbor District), certainly evidences the Commission's intent to protect the scenic quality of this area.

Based on the analysis in the Section A. of this report (Shoreline Structures), the existing rock formations underlying the proposed breakwater adequately protect the harbor from erosional wave forces. The proposed extension is too low to block any ocean views, and, being an only 3-4% extension to an existing extensive breakwater, its visual impact would be practically the same as the existing situation. The Commission finds that landform alteration and adverse effects on public views have been minimized, and that the project is consistent with Section 30251 of the Coastal Act.

D. Geologic Hazards. Section 30253 of the Coastal Act provides 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, geologic 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.

The Corps states:

Although, this extension is designed to alleviate wave overwashing/flanking and sand erosion in this bedrock area, it will not affect the west breakwater's permeability (i.e., water circulation) associated with that portion of existing breakwater that is underwater. In addition, sand transport along the coast (i.e., littoral drift) will not be blocked in the existing portion of the breakwater located underwater. The on-land breakwater extension is designed to alleviate erosion (caused by wave overwashing/flanking) to the beach located in the lee side of the breakwater, and stop sand from being lost from the beach to the northwest, thus, it would eliminate adverse impacts of erosion on the shoreline sand supply in the immediate project area.

The Corps also states, in response to questions from Commission staff regarding the need for an analysis of bluff erosion potential:

Although the planned breakwater extension will be tied into the base of Pillar Point, it is not expected that the project will have a significant impact on the present bluff erosion rates. The slope of the bluff at the transition point is less than 5H:1V and does not become steep for at least another 10 ft. The wall will be fronted by rubble material and the resulting energy dissipation effects should prevent significant wave reflection and any mach-stem or similar phenomenon from occurring which would cause waves to runup the beach further than they would without the barrier in place. Under setup conditions where waves are able to attach the base of the bluff, it is possible that reflected waves from the breakwater extension may increase the wave energy reaching the bluff line. However, the amount of reflected wave energy is anticipated to be small due to the dissipative effects of both the rubble material as well as bottom friction.

With this information, the Commission finds that the project is consistent with Section 30253 of the Coastal Act because it: (1) will avoid contributing to erosion, geologic instability, or destruction of the site or surrounding area; or (2) will not lead to the need for the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

#### E. Habitat.

Section 30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.

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

The Corps consulted with the U.S. Fish and Wildlife Service to determine sensitive species potentially affected by the project. Based on this consultation, the Corps believes the species most likely to be affected is the Western Snowy Plover, a federally listed threatened species. The Corps states:

The Pacific coast population breeds primarily on coastal beaches from southern Washington to southern Baja California, Mexico. In fall and winter, the snowy plover is common on sandy marine and estuarine shores. The snowy plover feeds on insects and amphipods from the dry sand of upper beaches along the coast, occasionally foraging in wet sands for young sand crabs. Historically, there were at least 80 nesting sites on the west coast; 28 remain today. The plover's numbers have declined due to human activity on the beaches during nesting season. Jogging, off-road vehicles, pets and horseback riding either destroy the nests outright, or cause adults to leave incubating eggs. European beach grass is considered a secondary threat because it has been planted to stabilize dunes and grows so thickly that it reduces available nesting habitat.



Locally, the coastal population of the western snowy plover breeds and winters in the Half-Moon Bay area, using intertidal beaches and foredunes. Historically, snowy plovers are known to winter in the western shoreline area adjacent to the northwest jetty. According to information from local naturalists, a flock of between 18 to 38 snowy plovers winters at the beach located on the northeast (lee side) of the west outer breakwater. They arrive as early as September, and leave for their nesting grounds by mid-April. The snowy plover does not nest at this location, possibly due to disturbances caused by human access and especially dogs.

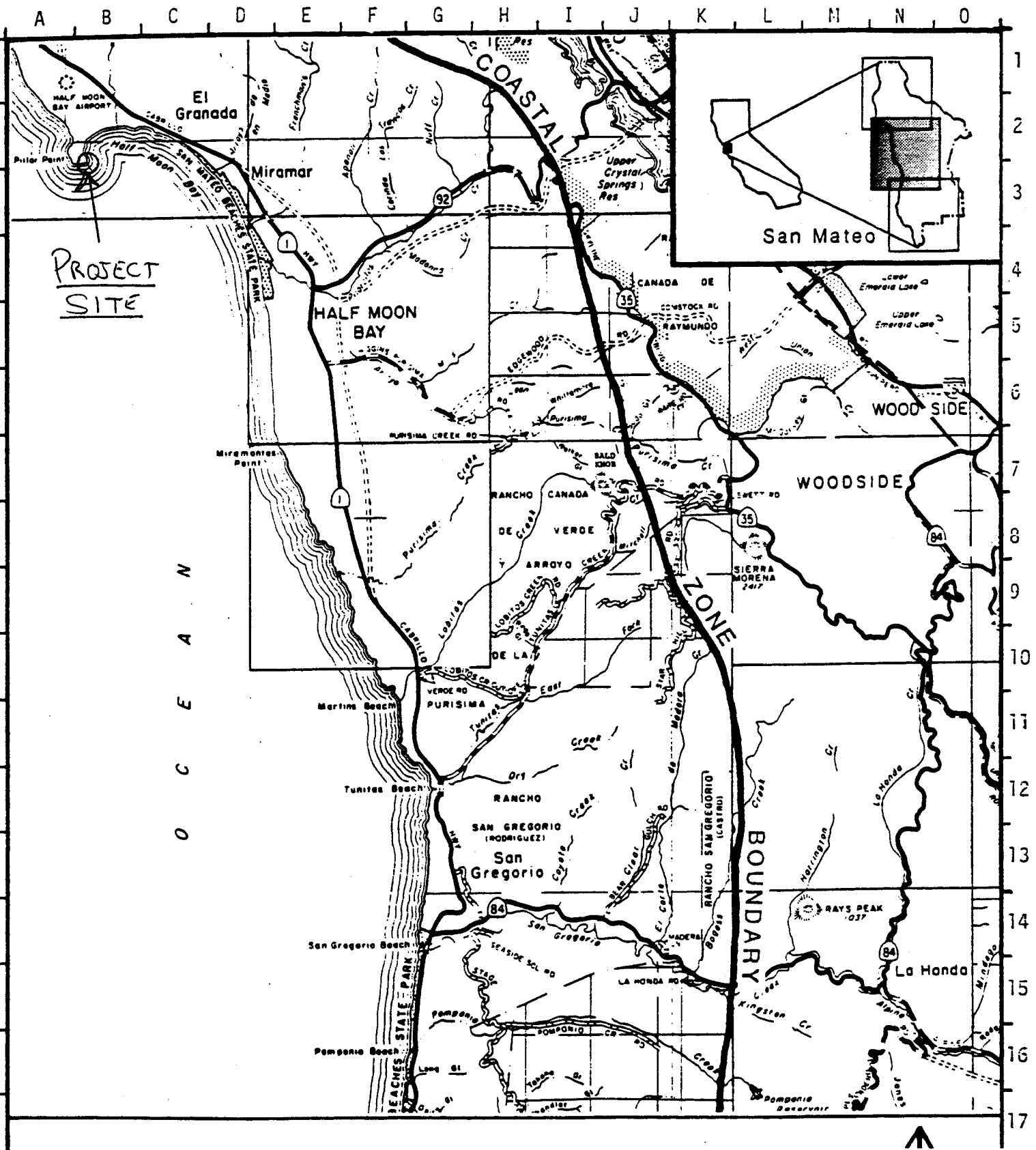
Analyzing project impacts, the Corps states:

No significant impacts are expected to occur to the snowy plover since the plover does not nest at Pillar Point Harbor, is highly mobile, and can avoid any of the proposed breakwater repair activities. In addition, breakwater repair activities will be scheduled to avoid the September through mid-April time frame, and therefore, avoid disturbance of any wintering snowy plovers in Pillar Point Harbor. Thus, any impacts upon the snowy plovers would be expected to be minimal and insignificant.

While the Fish and Wildlife Service has not completed its review of the project as of the date of this writing, the Commission finds that the preponderance of available evidence supports the Corps' conclusion that the project will not adversely affect snowy plovers or any other environmentally sensitive habitat. The Commission therefore finds the project consistent with the habitat protection provisions of Section 30240 of the Coastal Act.

IV. Substantive File Documents:

1. Pillar Point Harbor, San Mateo County, California, Reconnaissance Report, U.S. Army Corps of Engineers, March 1996.
2. Consistency Certification No. CC-36-85 and CC-36-85A, U.S. Air Force, Cable Fence, Pillar Point Harbor.
3. Appeal No. 133-76 and subsequent amendments, San Mateo County Harbor District.
4. Coastal Development Permit 3-90-56, San Mateo County Harbor District.
5. Scenic Preservation Agreement between Coastal Commission and San Mateo County Harbor District.
6. Public Access & Mitigation Summary for the Pillar Point Harbor Boat Ramp Facilities, San Mateo County Harbor District, June 18, 1990.



PROJECT  
SITE

O C E A N

EXHIBIT NO. 1
APPLICATION NO.
CD-52-96
California Coastal Commission

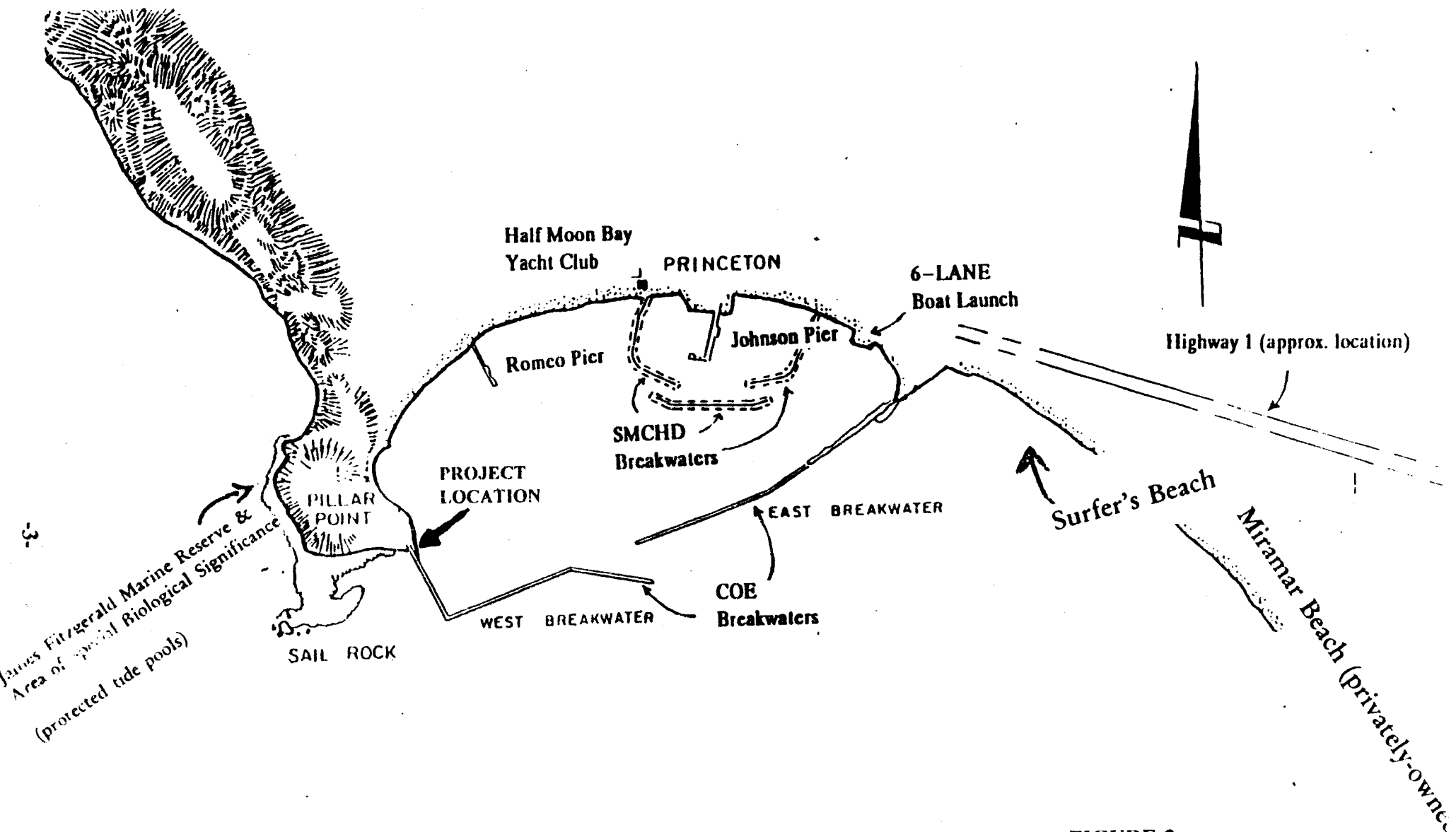


FIGURE 2

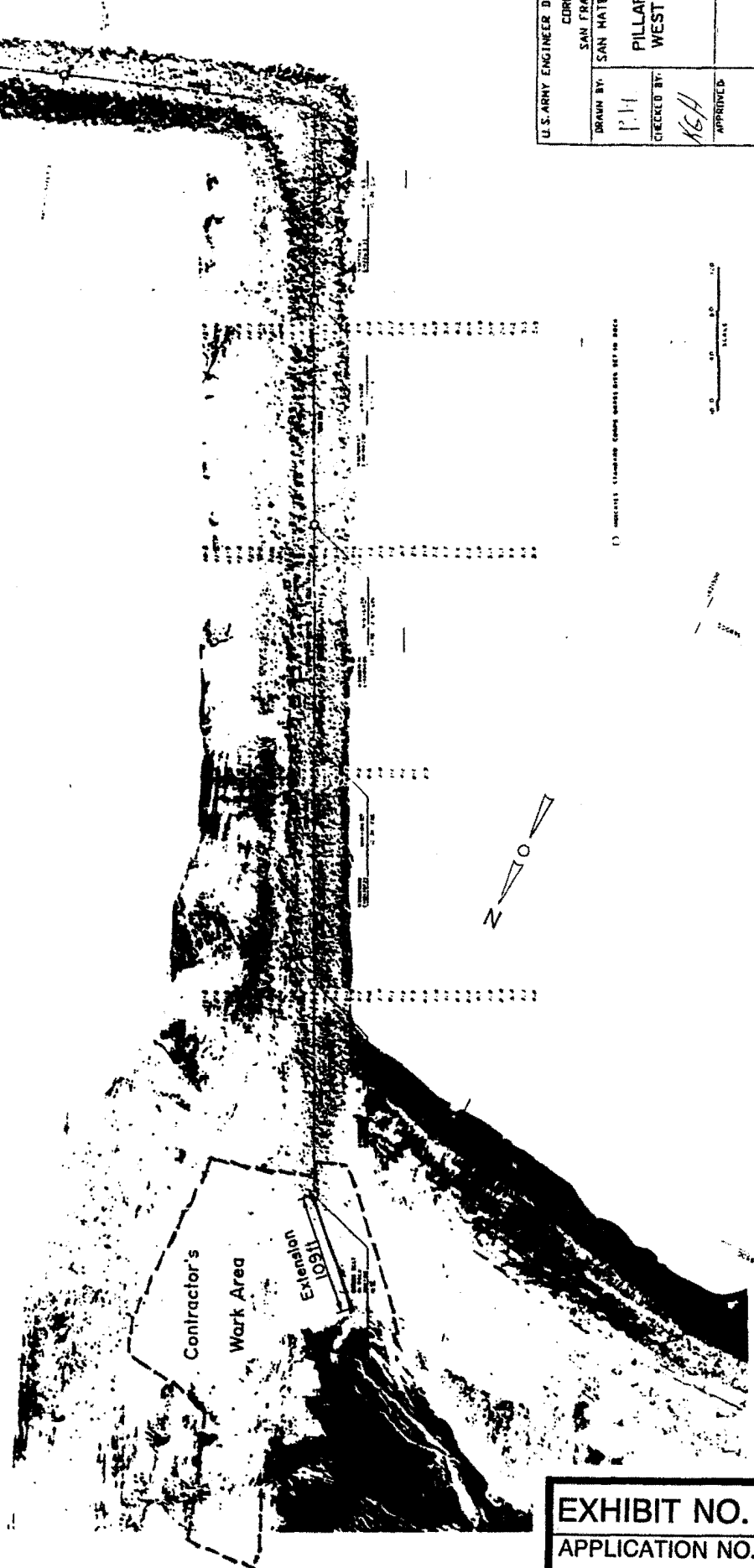
PILLAR POINT HARBOR  
(EXISTING HARBOR FACILITIES)

-3-

 California Coastal Commission	EXHIBIT NO. 2
	APPLICATION NO.
	CD-52-96

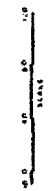
340

POINTS AT 100' INTERVALS



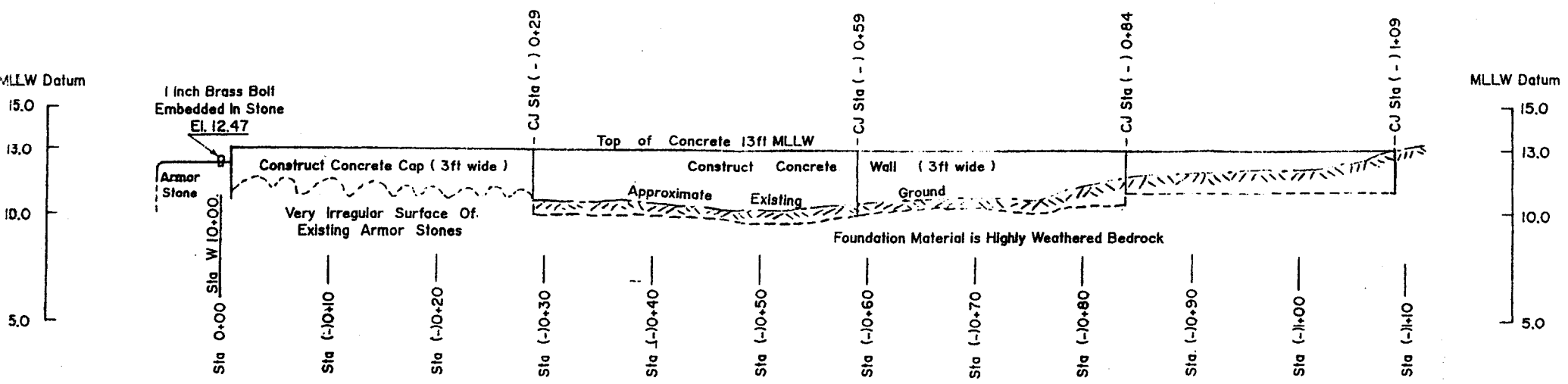
U.S. ARMY ENGINEER DISTRICT	
CORPS DISTRICT	
SAN FRANCISCO	
SAN MATEO COUNTY	
DRAWN BY:	12-1-1
CHECKED BY:	K6H
APPROVED:	
PILLAR NO.	WEST BR.
SCALE:	AS SHOWN
SHEET:	

1) INCLUDES STANDARD CONCRETE MASS DIRT RETAIN WALL



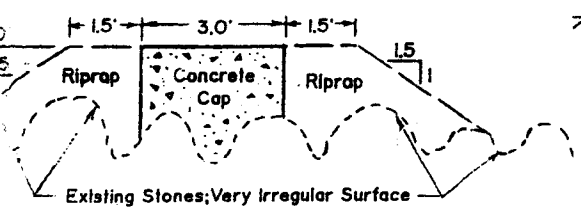
TEMPORARY STAGING AREA

EXHIBIT NO. 3
APPLICATION NO.
CD-52-96
California Coastal Commission



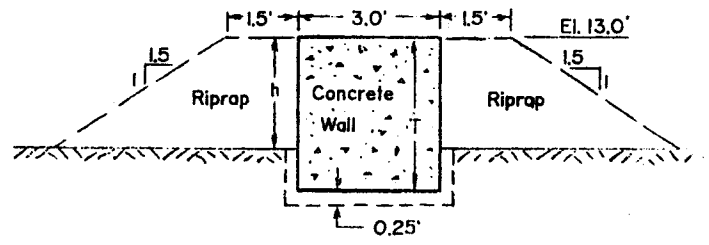
**LONGITUDINAL SECTION**

Horizontal Scale 1"=10'  
Vertical Scale 1"=5'



Station (-)0+01 To (-)0+29

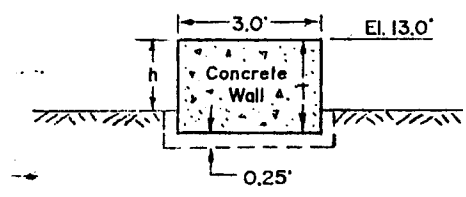
Not To Scale



Station (-)0+29 To (-)0+59  
T=The Greater Of 3ft Or h+0.5ft  
Station (-)0+59 To (-)0+84  
T=The Greater Of 2.5ft Or h+0.5ft

Not To Scale

**TYPICAL SECTION**



Station (-)0+84 To (-)1+09  
T=The Greater Of 2ft Or h+0.5ft  
Riprap Ends At Station (-)0+90

Not To Scale

**TYPICAL SECTION**

Note : Foundation Excavation Tolerance Is +0.25ft  
As Shown In The Typical Section

California Coastal Commission

EXHIBIT NO. 4

APPLICATION NO. CD-52-96

U.S. ARMY ENGINEER DISTRICT		SAN FRANCISCO, CALIFORNIA	
CORPS OF ENGINEERS			
SAN MATEO COUNTY CALIFORNIA			
DRAWN BY:	SAN MATEO COUNTY CALIFORNIA		
C. H.	PILLAR POINT HALF MOON BAY		
CHECKED BY:	WEST BREAKWATER EXTENSION		
K. E. H.			
APPROVED:	DATE:		
SCALE:	DRAWING NUMBER:		
SHEET:			