

CALIFORNIA COASTAL COMMISSION

NORTH CENTRAL COAST DISTRICT
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5260
FAX (415) 904-5400

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STAFF REPORT: REGULAR CALENDAR

APPLICATION FILE NO.: 2-01-026

APPLICANT: City of Pacifica

PROJECT DESCRIPTION: Repair of seawall and rock revetment and replacement of handrail along Beach Boulevard between Santa Rosa and Bella Vista Avenues

PROJECT LOCATION: The west side of Beach Boulevard between Santa Rosa and Bella Vista Avenues, City of Pacifica, San Mateo County (Exhibits 1-2)

OTHER APPROVALS: CDP-187-00; SLC Lease PRC 6065.9

1.0 EXECUTIVE SUMMARY

This permit application is for repair of an existing seawall and revetment and replacement of an existing handrail along Beach Boulevard in Pacifica, from the municipal pier at Santa Rosa Avenue north to Bella Vista Avenue. The application for repair of the seawall and revetment includes (1) work performed in January 2001 under Emergency Permit 2-01-002-G, involving the placement of 60 cubic yards of 4000 psi concrete and 150 tons of rock to repair 56 feet of revetment and seawall, (2) reconstruction of the toe of the revetment and replenishment of revetment rock with 10,000 tons of 7-10 ton rock along the length of the revetment, (3) repair of existing sheetpile protecting the foundation of the pier building, and (4) additional work to the area repaired under the emergency permit including adding a wave deflector and repaving the street and sidewalk to match that existing. As part of the project, the applicant also proposes to replace approximately 1,250 feet of existing, corroded handrail at the top of the seawall with new, steel post-and-cable handrail.

The existing seawall and revetment, originally constructed in 1984 to protect Beach Boulevard and single- and multi-family residences on the east side of Beach Boulevard, were damaged

during winter storms in December 2000 - January 2001. The revetment failed through settling and displacement of revetment stone due to winter storm waves. Overtopping of the shoreline protection caused soil behind the revetment to give way, resulting in sectional collapses of the reinforced earth wall. Repair work under Emergency Permit 2-01-002-G, described above, was begun on January 11, 2001 and completed on January 12, 2001. In addition to approval of the emergency permit work, the City seeks Commission approval to replenish rock washed out by waves and reconstruct the toe of the revetment with 10,000 tons of 7-10 ton rock.

Reconstruction of the revetment toe will involve temporarily removing existing stone, excavating the toe-way, and replacing the toe with large, quarry stone to buttress the revetment. According to the project plans, the reconstructed revetment will result in a revetment footprint reduced by approximately 15,000 square feet, or an average 12 feet of revetment width.

Staff recommends approval of this shoreline protection repair project, inasmuch as the revetment and seawall are existing shoreline protection measures which protect Beach Boulevard and adjacent residences. The proposed revetment reconstruction will result in a reduced revetment footprint and is conditioned to protect public access. The project is also conditioned to include a Water Quality Protection Plan to protect water quality and a revetment Monitoring and Maintenance Program to prevent future revetment failure.

2.0 STAFF RECOMMENDATION

The staff recommends that the Commission approve Coastal Development Permit No. 2-01-026 subject to the conditions in Sections 2.1 and 2.2 below.

Motion:

I move that the Commission approve Coastal Development Permit No. 2-01-026 subject to conditions pursuant to the staff recommendation.

Staff Recommendation of Approval:

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 to Approve the Permit:

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. 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.

2.1 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.

2.2 Special Conditions

1. Approved Development; Conformance of Design and Construction Plans to Geotechnical Evaluation.

- A. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.
- B. All final design and construction plans, including foundations, grading and drainage plans, shall be consistent with all recommendations contained in the Geotechnical Evaluation prepared by Kelly Engineering, in its letters to the City of Pacifica Public Works Department dated January 14 and 16, 2002. **PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the Executive Director's review and approval, evidence that an appropriate licensed professional has reviewed and approved all final design and construction plans and certified that each of those final plans is consistent with all of the recommendations specified in the above-referenced geologic evaluation approved by the California Coastal Commission for the project site.

2. Shoreline Protection Monitoring Plan.

- A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit a monitoring plan, prepared by a licensed geologist, or civil or geotechnical engineer for the review and written approval of the Executive Director. The plan shall be sufficient to assess movement and prevent future failure of the revetment which is the subject of this permit, and shall include at a minimum:
 1. A description of the approved shoreline protection device;

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2. A discussion of the goals and objectives of the plan, which shall include assessment of movement and prevention of future failure of the revetment;
 3. Provisions for installation of five, fixed benchmarks along the top of the seawall directly behind the revetment, spaced evenly from the Pacifica municipal pier at Santa Rosa Avenue to the northern end of the project area at Bella Vista Avenue, which shall be surveyed in during construction;
 4. Provisions for submission of "as-built" plans, showing the permitted structure in relation to the existing topography and showing the measurements described in subsection (A)(5) of this Special Condition below, within 30 days after completion of construction;
 5. Provisions for taking revetment and beach profile measurements annually every fall by a licensed professional engineer or surveyor along range lines perpendicular to the seawall at each fixed benchmark. Measurements shall include elevations taken along the range lines at intervals of not more than five feet for a distance from the benchmarks of not less than 60 feet with baseline survey information plotted to compare changes along each range line;
 6. At the time of the annual survey, photographs of the revetment shall be taken from the fixed range lines and from the beach showing the entire revetment and will be compared with the previous year's photographs to determine if any change in the location of individual revetment stones has occurred.
- B. By November 1 of every year for the life of the structure, the permittee shall submit a monitoring report to the Executive Director that has been prepared by a licensed geologist, or civil or geotechnical engineer. Each monitoring report shall contain the following:
1. An evaluation of the condition and performance of the approved shoreline protection device, including an assessment of whether any weathering or damage has occurred that could adversely impact future performance of the device;
 2. The measurements described in subsection (A)(5) of this condition taken in conformance with the approved monitoring plan, including revetment and beach profile measurements;
 3. An analysis of erosion trends, annual retreat, and rate of retreat of the beach fronting the revetment which is the subject of this permit, in conformance with and based upon the measurements contained in the approved monitoring plan;
 4. A description of any migration or movement of rock that has occurred on the site; and

5. Recommendations for repair, maintenance, modifications or other work to the device.

If a monitoring report contains recommendations for repair, maintenance or other work, the permittee shall contact the Coastal Commission District Office to determine whether such work requires a coastal development permit.

3. Water Quality Protection Plan (WQPP).

Prior to the Issuance of the Coastal Development Permit, the applicant shall submit, for review and approval of the Executive Director, a Water Quality Protection Plan (WQPP), which shall provide for appropriate Best Management Practices (BMPs), including at minimum all of the following:

- a. Construction activities shall be timed to avoid the rainy season and shall not occur between November 1 and March 15.
- b. Hazardous wastes and construction materials shall be stored in areas away from construction entrances, away from construction activities with heavy equipment and vehicles, and away from drainage courses and waterways.
- c. No construction materials or debris shall be placed where it may be subject to wave erosion or dispersion. Construction materials will be stored on pallets, under cover and in secondary containment whenever possible. When not in use, all hazardous materials shall be covered and sealed.
- d. Hazardous wastes shall be removed from the construction site as soon as possible or in a timely manner.
- e. Only that amount of construction materials, including hazardous materials, required for construction activities for five working days shall be stored on-site at any given time.
- f. Public roadway surface adjacent to the construction entrances shall be swept at the end of each day to remove sediment and/or other construction materials deposited due to the construction activities.
- g. Mobile fueling of construction equipment and vehicles on and around the construction site shall be prohibited. Fueling shall be done off-site or on-site in confined areas specifically designed to contain runoff and, at a minimum, 50 feet away from all drainage courses and waterways.
- h. Vehicle washing shall be done off-site.
- i. Stormdrain inlet protection shall be installed that traps sediment before it enters the storm sewer system. All waste and material storage areas shall have curbs or dikes for preventing water from entering the storage area.
- j. Hazardous wastes should be removed from construction site in a timely manner as soon as possible.

4. Construction Responsibilities and Debris Removal.

The permittee shall comply with the following construction-related requirements:

- a. Any and all debris resulting from construction activities shall be removed from the beach immediately;

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- b. The permittee shall be responsible for removing or replacing any debris, rock or material that becomes dislodged after completion of the approved shoreline protection as soon as possible after such displacement occurs. The permittee shall contact the Coastal Commission District Office immediately to determine whether such activities require a coastal development permit or permit amendment;
- c. Keyway excavation and similar work that could potentially impact the marine environment shall be conducted only during the low tide portions of the daily tidal cycle;
- d. Operation of construction vehicles on the beach or in intertidal areas shall be avoided wherever possible and is permissible only to the extent that construction vehicles cannot otherwise physically reach areas of the revetment to perform permitted work.
- e. To avoid impacts to water quality, construction activities shall be timed to avoid the rainy season and shall not occur between November 1 and March 15.
- f. Staging and storage of construction machinery and storage of debris shall not take place on the beach. No construction materials or debris shall be placed where it may be subject to wave erosion or dispersion.

5. Construction Staging Area

Prior to the Issuance of the Coastal Development Permit, the applicant shall submit a Construction Staging Area Plan for review and approval of the Executive Director which indicates that the construction staging area(s), materials storage area(s) and construction corridor(s) will avoid impacts to public access and water quality consistent with all special conditions of this permit:

A. The plan shall demonstrate that:

- 1. construction equipment and activity shall not occur outside the staging area and construction corridor identified on the site plan required by this condition
- 2. construction staging area(s), materials storage area(s) and construction corridor(s) will comply with all requirements of the WQPP required by **Special Condition 3**.
- 3. Staging and storage of construction machinery and storage of debris shall not take place on the beach.

B. The plan shall include, at minimum, a site plan that depicts:

- 1. limits of the staging area(s),
- 2. materials storage area(s),
- 3. construction corridor(s),
- 4. construction site, and
- 5. location of construction fencing and any temporary job trailers.

6. Assumption of Risk, Waiver of Liability and Indemnity Agreement.

A. By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from wave action, flooding, shoreline retreat, erosion, and revetment and

seawall stability; (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.

B. 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.

C. PRIOR TO THE CONVEYANCE OF THE PROPERTY THAT IS THE SUBJECT OF THIS COASTAL DEVELOPMENT PERMIT, the applicant shall execute and record a deed restriction, in a form and content acceptable to the Executive Director incorporating all of the above terms in subsection (A) of this condition. The restriction shall include a legal description of the applicant's entire parcel. The deed restriction shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without a Commission amendment to this coastal development permit.

7. State Lands Commission Approval. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the review and approval of the executive director, either (1) approval of the proposed repair project by the California State Lands Commission, or (2) a written determination by the California State Lands Commission that no such approval is required for the project.

3.0 FINDINGS AND DECLARATIONS

The Commission hereby finds and declares as follows:

3.1 Project and Site Description

The proposed project involves the repair of an existing reinforced earth seawall and quarry rock revetment and replacement of an existing handrail along Beach Boulevard in Pacifica, from the municipal pier at Santa Rosa Avenue north to Bella Vista Avenue. The proposed repair of the seawall and revetment includes (1) work performed in January 2001 under Emergency Permit 2-01-002-G, (2) reconstruction of the toe of the revetment and replenishment of revetment rock with 10,000 tons of 7-10 ton rock along the length of the revetment, (3) repair of existing sheetpile protecting the foundation of the pier building, and (4) additional work to the area repaired under the emergency permit including adding a wave deflector and repaving the street and sidewalk to match existing. The City proposes to perform the reconstruction work by means of an excavator from Beach Boulevard and the revetment. The applicant also proposes to replace approximately 1,250 feet of existing handrail at the top of the seawall, which has become severely corroded, with new, steel post-and-cable handrail.

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The Pacifica shoreline along Beach Boulevard from the municipal pier at Santa Rosa Avenue to Bella Vista Avenue is protected by an existing quarry stone revetment and reinforced earth wall which were originally constructed in 1984. The revetment and seawall were constructed to protect Beach Boulevard and single- and multi-family residences which line the east side of Beach Boulevard. Failure of the shoreline protection in this area threatens both Beach Boulevard itself and adjacent residences. During the 2000-2001 winter storms, high waves overtopped the revetment and seawall causing both the failure of the revetment and the sectional collapse of the reinforced earth seawall.

Following damage to the revetment and seawall during these winter storms, emergency repair work was performed under Emergency Permit 2-014-002-G, which was begun on January 11, 2001 and completed on January 12, 2001. The emergency work included pouring of 60 cubic yards of 4000 psi concrete to repair the portion of the collapsed seawall and repair of 56 feet of revetment with placement of 150 tons of rock. The work currently proposed includes adding a wave deflector at the top of the seawall and repaving the street and sidewalk in the area repaired under the emergency permit (**Exhibit 4**).

The proposed repair and reconstruction of the revetment includes replenishment of rock washed away by waves or lost through settling of the revetment with 10,000 tons of 7-10 ton rock and reconstruction of the revetment toe. **Exhibit 5** shows the existing revetment in plan and section view in relation to Beach Boulevard as permitted in 1984, current failure revetment profiles and in section after the proposed repair. The concave failure profile of the revetment in its present condition shows movement and/or loss of rock from the revetment profile as originally permitted. Reconstruction of the revetment toe will involve temporarily removing existing stone, excavating the toe-way, and replacing the toe with large, quarry stone to buttress the revetment. This work will be accomplished by means of a crane, backhoe or other heavy equipment from Beach Boulevard. As originally designed and constructed, the existing revetment had a slope of 1:2 (vertical:horizontal) and extends from approximately -6 feet MSL to +15 feet MSL. The revetment rests against the reinforced earth wall, which extends from approximately +10 feet MSL to +23 feet MSL. As constructed, the existing revetment has an average width, measured seaward from the seawall, of 62 feet and a footprint of 80,600 square feet. According to the project plans, the reconstructed revetment will result in a reduced revetment footprint of 65,000 square feet and a calculated, average revetment width of 50 feet, 12 feet less than the existing revetment (**Exhibit 5**).

The City proposes to replace approximately 1,250 feet of existing handrail along the top of the seawall. The existing handrail at this location has become severely corroded, unsightly and dangerous. The new handrail proposed by the City is a simple, steel post-and-cable design with cables placed horizontally 4 inches on center. The handrail is a functional and open design which does not obstruct views from or toward the ocean (**Exhibit 4, 6**).

The existing revetment and seawall, as well as the proposed development, lie partially within the City's 50-foot right-of-way for Beach Boulevard. The portion of the revetment and seawall that is seaward of the Mean High Tide Line is located on state tidelands. The City has an existing lease with the California State Lands Commission (SLC), encompassing lands belonging to the SLC underlying the existing revetment and seawall along Beach Boulevard from a point between

Bella Vista and Paloma Avenues on the north to between Salada and San Jose Avenues on the south (SLC Lease # PRC 6065.9).

Vertical beach access presently exists via steps at San Jose Avenue and a second set of steps approximately 650 feet south of the municipal pier. A beach access sign is posted adjacent to each of these steps. The proposed project will preserve this existing beach access.

3.2 Other Agency Approvals

3.2.1 California State Lands Commission

The portion of the revetment and seawall that is seaward of the Mean High Tide Line is located on state tidelands. As such, the proposed repair project must be authorized by the SLC. The City has an existing lease with the SLC, encompassing lands belonging to SLC underlying the existing revetment and seawall along Beach Boulevard from a point between Bella Vista and Paloma Avenues on the north to between Salada and San Jose Avenues on the south (Lease # PRC 6065.9). According to the project plans and description provided by the City, the proposed project extends from just north of Bella Vista Avenue to the municipal pier at Santa Rosa Avenue (**Exhibits 3-5**), beyond the area currently leased from the SLC lease.

Accordingly, **Special Condition 7** requires as a prerequisite to the issuance of the coastal development permit that the applicant provide the Executive Director written verification of either: (1) approval of the proposed repair project from the SLC, or (2) a determination by the SLC that no such approval is required for the project.

3.3 Permit Authority, Extraordinary Methods of Repair and Maintenance, Shoreline Protection Structures

Coastal Act Section 30610(d) generally exempts from Coastal Act permitting requirements the repair or maintenance of structures that does not result in an addition to, or enlargement or expansion of the structure being repaired or maintained. However, the Commission retains authority to review certain extraordinary methods of repair and maintenance of existing structures which involve a risk of substantial adverse environmental impact as enumerated in Section 13252 of the Commission regulations.

Section 30610 of the Coastal Act provides, in relevant part:

Notwithstanding any other provision of this division, no coastal development permit shall be required pursuant to this chapter for the following types of development and in the following areas: . . .

(d) Repair or maintenance activities that do not result in an addition to, or enlargement or expansion of, the object of those repair or maintenance activities; provided, however, that if the commission determines that certain extraordinary methods of repair and maintenance involve a risk of substantial adverse environmental impact, it shall, by regulation, require that a permit be obtained pursuant to this chapter. [Emphasis added.]

Section 13252 of the Commission regulations provides, in relevant part:

(a) For purposes of Public Resources Code section 30610(d), the following extraordinary methods of repair and maintenance shall require a coastal development permit because they involve a risk of substantial adverse environmental impact:

(1) Any method of repair or maintenance of a seawall revetment, bluff retaining wall, breakwater, groin, culvert, outfall, or similar shoreline work that involves:

(A) Repair or maintenance involving substantial alteration of the foundation of the protective work including pilings and other surface or subsurface structures;

(B) The placement, whether temporary or permanent, of rip-rap, artificial berms of sand or other beach materials, or any other forms of solid materials, on a beach or in coastal waters, streams, wetlands, estuaries and lakes or on a shoreline protective work except for agricultural dikes within enclosed bays or estuaries;

...

(D) The presence, whether temporary or permanent, of mechanized construction equipment or construction materials on any sand area, bluff, or environmentally sensitive habitat area, or within 20 feet of coastal waters or streams.

...

(b) Unless destroyed by natural disaster, the replacement of 50 percent or more of a single family residence, seawall, revetment, bluff retaining wall, breakwater, groin or any other structure is not repair and maintenance under section 30610(d) but instead constitutes a replacement structure requiring a coastal development permit.

[Emphasis added.]

The proposed project will not involve replacement of 50% or more of a seawall and is thus considered a repair and maintenance project under Section 13252(b) of the Commission's regulations. Section 13252 of the Commission's regulations requires a coastal development permit for extraordinary methods of repair and maintenance enumerated in the regulation. The proposed development involves repair to an existing seawall and revetment that would include substantial alteration of the revetment foundation and placement of rip-rap. The proposed development may also involve limited use of mechanized equipment on a sand area. The proposed repair and maintenance therefore requires a coastal development permit under Section 13252(a)(1) of the Commission's regulations.

In considering a permit application for a repair or maintenance project pursuant to the above-cited authority, the Commission reviews whether the proposed *method* of repair or maintenance is consistent with the Chapter 3 policies of the Coastal Act. The Commission's evaluation of such repair and maintenance projects does not extend to an evaluation of the conformity with the Coastal Act of the underlying existing development.

3.4 Public Access

Section 30210 of the Coastal Act 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.

Section 30211 of the Coastal Act 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.

Vertical public beach access within the project area is via steps at San Jose Avenue. A sign indicating such beach access is posted adjacent to the steps. A second set of steps to the beach lies approximately 650 feet south of the municipal pier. The proposed development would not affect either of these vertical beach accessways.

The rock revetment originally constructed in 1984 had a footprint of 80,600 square feet, with an average width measured seaward from the seawall of 62 feet. The proposed reconstruction of the rock revetment and revetment toe would reduce the area of beach coverage to 65,000 square feet, a reduction in footprint of some 15,000 square feet. The reconstructed revetment would have a reduced average width of 50 feet, or 12 feet less than the existing revetment as originally approved. According to the City's engineering consultant, over 95% of the reconstructed revetment will lie landward of the mean high tide line (**Exhibit 5**). By reducing the area of beach coverage, the reconstructed revetment will result in improved lateral access along the beach. After project completion, unimpeded lateral passage along the beach should be possible at all but extreme high tide.

Special Condition 2 provides for a Shoreline Protection Monitoring Plan, which includes an annual survey of the rock revetment and report to the Executive Director, including a description of any migration or movement of rock that has occurred on the site and recommendations for repair and maintenance to the revetment. In addition, **Special Condition 4** makes the City responsible for removing or replacing any debris, rock or material that becomes dislodged during construction or after completion of the approved shoreline protection as soon as possible (subject to review by the Executive Director as whether a separate coastal development permit or permit amendment is required for these activities). **Special Condition 4** also limits the operation of construction vehicles on the beach and requires that keyway excavation and similar work be conducted only during low tide. **Special Condition 5** requires the applicant to submit a Construction Staging Area Plan to insure that construction activity and storage of materials will not occur outside defined areas. These conditions together insure that the beach fronting the revetment shall remain free from debris and any rock dislodged from the revetment and that lateral access along the beach will not be impeded.

As conditioned, the Commission finds that the project is consistent with Sections 30210 and 30211 of the Coastal Act because the project reduces the revetment footprint, improving beach access seaward of the revetment, and preserves existing vertical beach access.

3.5 Marine Environment and Polluted Runoff

Section 30231 of the Coastal Act states:

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

Section 30231 of the Coastal Act requires that any adverse effects of runoff be minimized to protect the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes.

The proposed repair project does not alter storm drains on Beach Boulevard or drainage in the project area. To prevent impacts to water quality through polluted runoff from construction activities, **Special Condition 3** requires the creation of a Water Quality Protection Plan (WQPP) for review and approval by the Executive Director. By the terms of **Special Condition 3**, the WQPP must incorporate all appropriate Best Management Practices (BMPs) to reduce the likelihood of polluted runoff from construction activities, including measures to insure the proper storage and handling of construction materials, the installation of appropriate screening around drainage inlets and the timing of construction to avoid the rainy season.

The marine environment immediately adjacent to the Beach Boulevard revetment is not characterized by rocky intertidal areas, eelgrass, or other sensitive nearshore habitats. Given its proximity to an urbanized area, the adjacent marine environment appears rather to be adapted to frequent disturbance, and is not likely to be impacted by the proposed development. To minimize any potential impacts to the marine environment, **Special Condition 4** nevertheless requires that keyway excavation and similar work that could potentially affect the marine environment be conducted only during the low tide portions of the daily tidal cycle. The applicant's engineering consultant has indicated that most of the proposed reconstruction work can be accomplished entirely from Beach Boulevard and the revetment, and that the proposed development may require construction equipment to move onto the beach only where work areas cannot otherwise be reached. **Special Condition 4** accordingly requires that operation of construction vehicles on the beach or in intertidal areas be avoided wherever possible and limits such operation only to work areas that construction vehicles cannot otherwise physically reach.

Special Condition 5 requires the applicant to submit a Construction Staging Area Plan for review and approval of the Executive Director indicating the construction staging area(s), materials storage area(s) and construction corridor(s). The Construction Staging Area Plan will insure that construction activity will not occur outside of defined areas and that the siting of these areas will comply with the WQPP required by **Special Condition 3**

The Commission finds that the project, as conditioned, will protect the biological productivity and quality of coastal waters and wetlands in conformity with Section 30231 of the Coastal Act.

3.6 Flood and Geologic Hazards

Section 30253 of the Coastal Act states:

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.

Section 30253 requires that new development minimize risks to life and property and assure stability and structural integrity, and neither create nor contribute to erosion or geologic stability. **Special Condition 1** requires the project plans to be reviewed and certified by a licensed engineer and to be built according to approved final plans. In accordance with **Special Condition 1**, the project has been designed and approved by Power Engineering Contractors in consultation with Skelly Engineering, both licensed engineers. In addition, Skelly Engineering, an engineering consultant retained by the City, has analyzed the design of the revetment reconstruction and provided certification that, while periodic revetment maintenance will be necessary, "the reconstruction of the revetment should withstand storms comparable to the recent El Nino winters."

Special Condition 2 provides for a Shoreline Protection Monitoring Plan, designed to assess movement of the revetment and prevent future failure. As part of this program, five, fixed benchmarks will be installed along the top of the seawall directly behind the revetment. These five benchmarks will be evenly spaced from the pier to the northern end of the project area just north of Bella Vista Avenue, and surveyed in during construction. The Shoreline Protection Monitoring Plan requires that revetment and beach profile measurements be taken annually by a licensed professional engineer or surveyor every fall along range lines perpendicular to the seawall at each benchmark, and that results of the survey, including photographs, be reported to the Executive Director, together with recommendations for any necessary maintenance work. Pursuant to **Special Condition 4**, the City is responsible for removing or replacing any rock or material that becomes dislodged from the revetment as soon as possible, consistent with Coastal Act permit requirements.

In addition, **Special Condition 3**, which requires that the applicant provide a WQPP for approval of the Executive Director, will guarantee that runoff from the site will be appropriately handled and not contribute to beach erosion. By the terms of **Special Condition 3**, the WQPP is required to incorporate all appropriate Best Management Practices (BMPs) to reduce the likelihood of polluted runoff from construction activities. The BMPs include measures to insure the proper storage and handling of construction materials, the installation of appropriate screening around

drainage inlets and the timing of construction to avoid the rainy season to the maximum extent practicable.

The proposed development is located on the Pacifica shoreline, in an area subject to inundation and extreme wave forces, as well as shoreline retreat and erosion. Although the project as designed is required pursuant to **Special Condition 1** to be reviewed and certified by a licensed engineer and to be built according to approved final plans, the location of the revetment and seawall expose these structures to powerful shoreline processes. The construction of shoreline protection structures involving the use of heavy construction equipment and the placement of large boulders is inherently hazardous. Because the City voluntarily proposes to undertake an inherently hazardous activity, the Commission imposes **Special Condition 6**, requiring the applicant to assume the risks of any injury or damage from such hazards, waive any claim of liability against the Commission for such injury or damage, and indemnify the Commission against any resulting third party claims or liability.

The Commission finds that the project is conditioned to minimize risks to life and property, assure stability and structural integrity of the revetment and seawall, neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area and is therefore consistent with Section 30253.

3.7 Visual Resources

Section 30251 of the Coastal Act states, in applicable part:

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.

As part of the project, the City proposes to replace approximately 1,250 feet of handrail along the top of the revetment from Santa Rosa to Bella Vista Avenues (**Exhibit 4**). The balance of the project involving reconstruction of the revetment would not substantially alter existing views either inland from the beach or toward the ocean from Beach Boulevard (**Exhibit 5**).

Exhibit 6 shows simulated views of the existing handrail and the proposed replacement handrail from the beach below the revetment and from Beach Boulevard. The existing handrail is corroded and broken in places from long exposure to the elements. The post-and-cable handrail design selected by the City for the replacement is a simple, functional and open design which will preserve views both from the beach inland and westward toward the ocean from Beach Boulevard.

Special Condition 2 provides for a Shoreline Protection Monitoring Plan, which includes an annual survey of the rock revetment and report to the Executive Director, including a description of any migration or movement of rock that has occurred on the site and recommendations for repair and maintenance to the revetment. In addition, **Special Condition 4** makes the City

responsible for removing or replacing any debris, rock or material that becomes dislodged during construction or after completion of the approved shoreline protection as soon as possible (subject to review by the Executive Director as whether a separate coastal development permit or permit amendment is required for these activities). These conditions together insure that the beach fronting the revetment shall remain free from debris and any rock dislodged from the revetment which might affect coastal views or the sightliness of the area.

The Commission finds that the handrail design is appropriate to the setting, will not have no adverse effect on coastal views and that the project is therefore consistent with Section 30251.

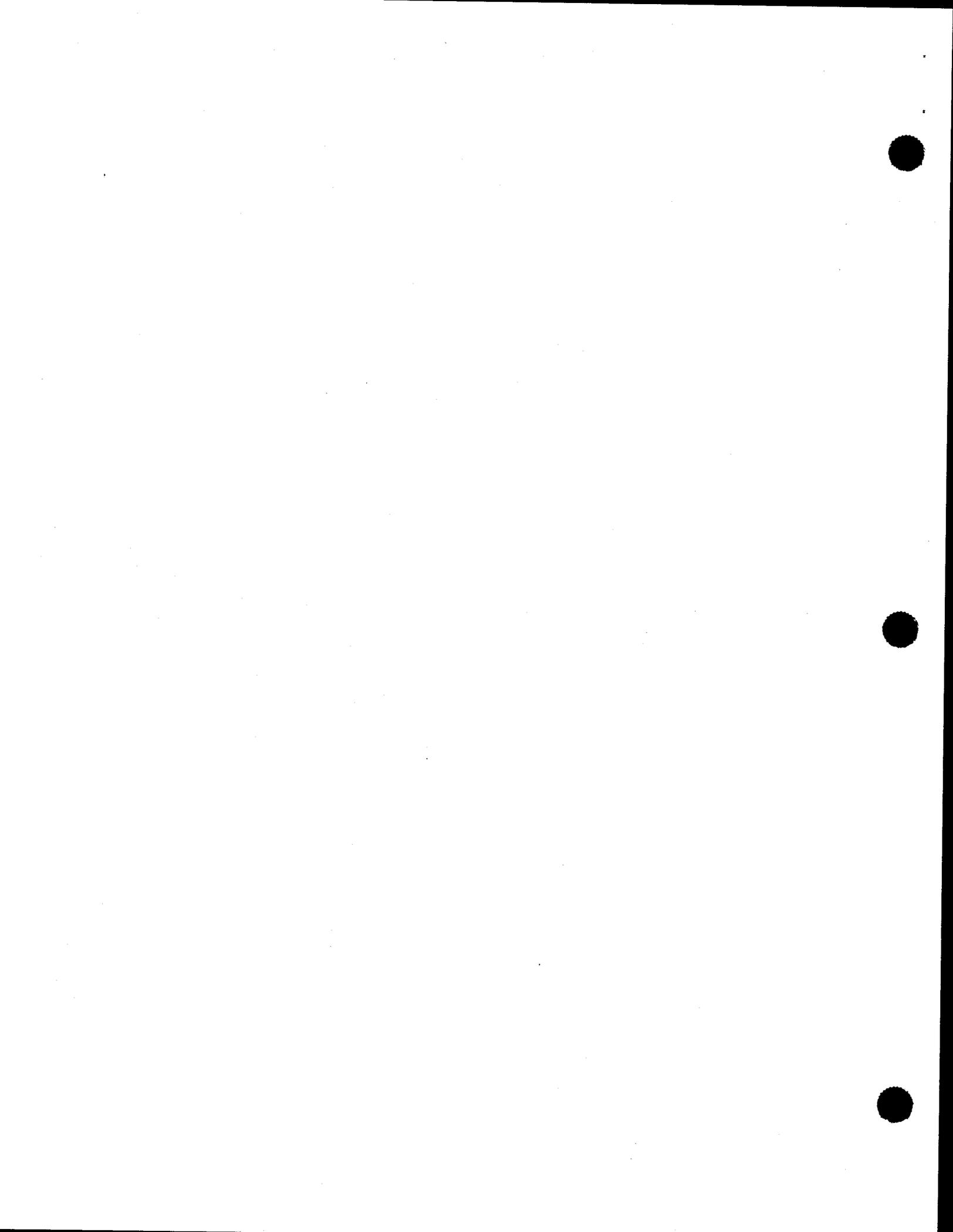
4.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

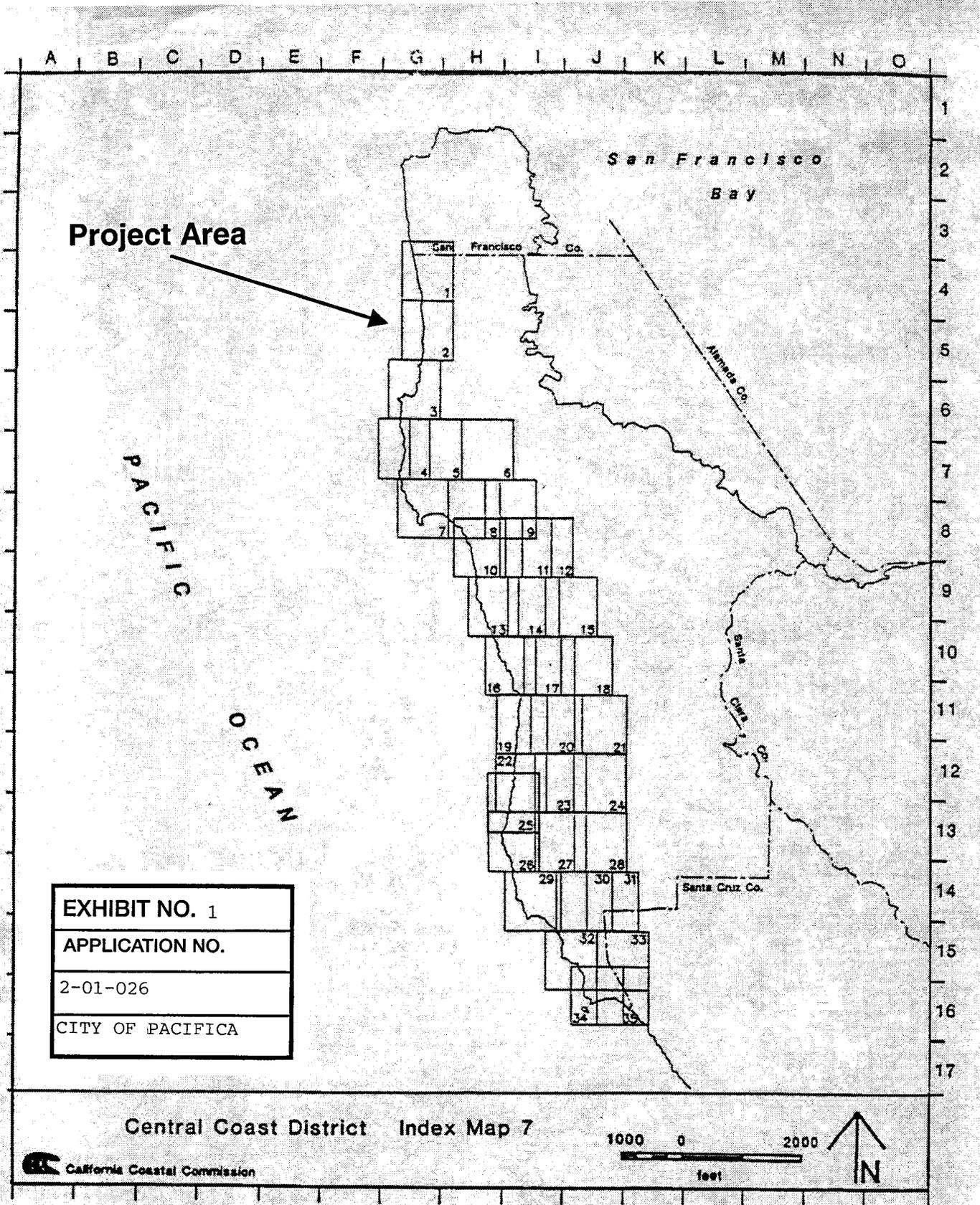
Section 13096 of the California Code of Regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing that the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental 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 effects which 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. The proposed project has been conditioned to mitigate or eliminate any significant impacts to public access, the marine environment, geologic hazards and visual resources. As discussed above, as conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impacts which the development may have on the environment. Therefore, the Commission finds that the proposed project has been conditioned to mitigate the identified impacts and can be found consistent with Coastal Act requirements to conform to CEQA.

EXHIBITS:

1. Regional map
2. Project location map
3. Plat map
4. Handrail replacement plans
5. Revetment repair plans
6. Photo simulation of proposed handrail





Project Area



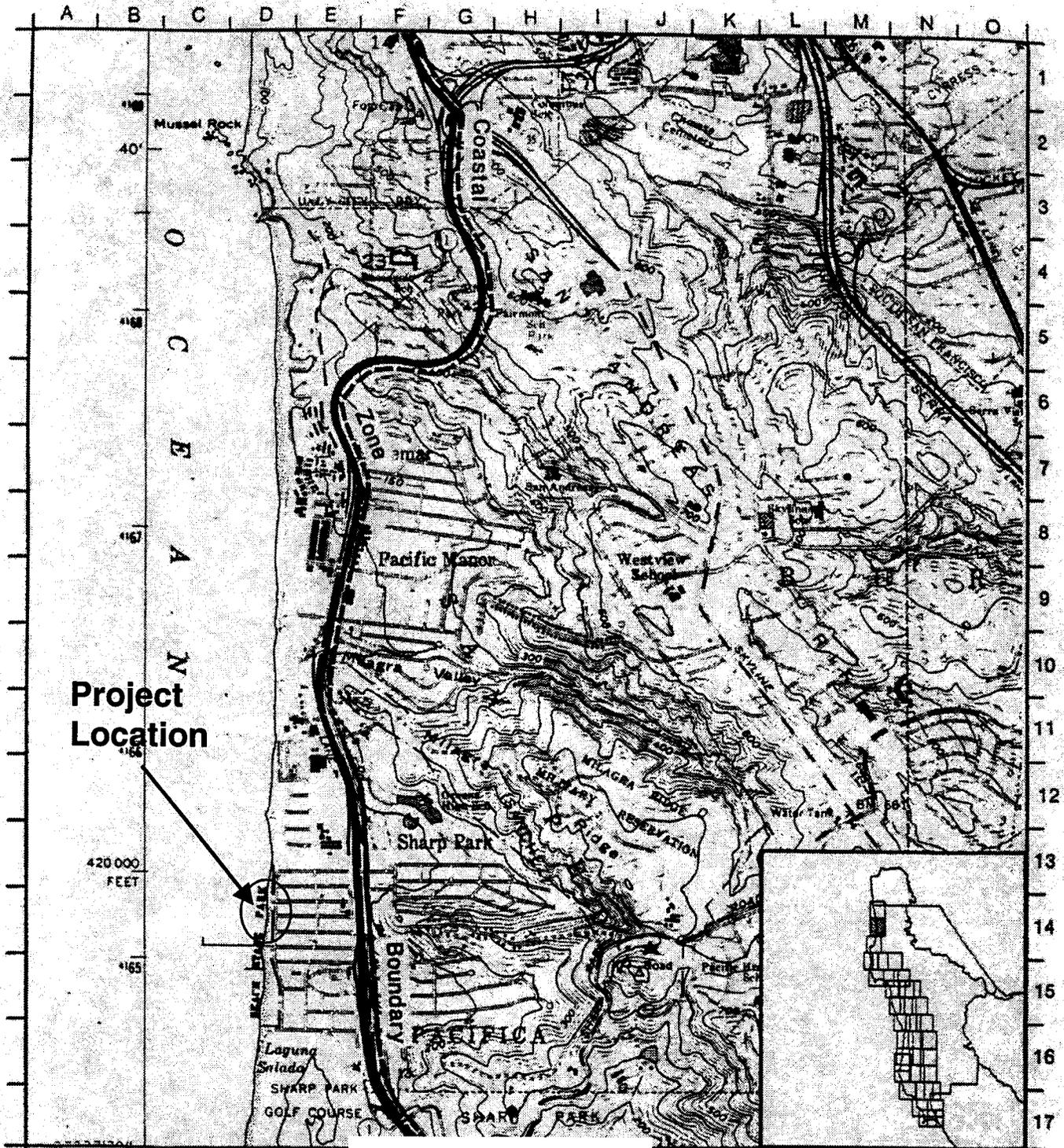
EXHIBIT NO. 1
APPLICATION NO.
2-01-026
CITY OF PACIFICA

Central Coast District Index Map 7

California Coastal Commission



County of San Mateo



Project Location

420 000
FEET

 California Coastal Commission

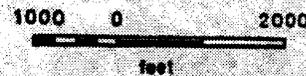
County of San Mateo

EXHIBIT NO. 2

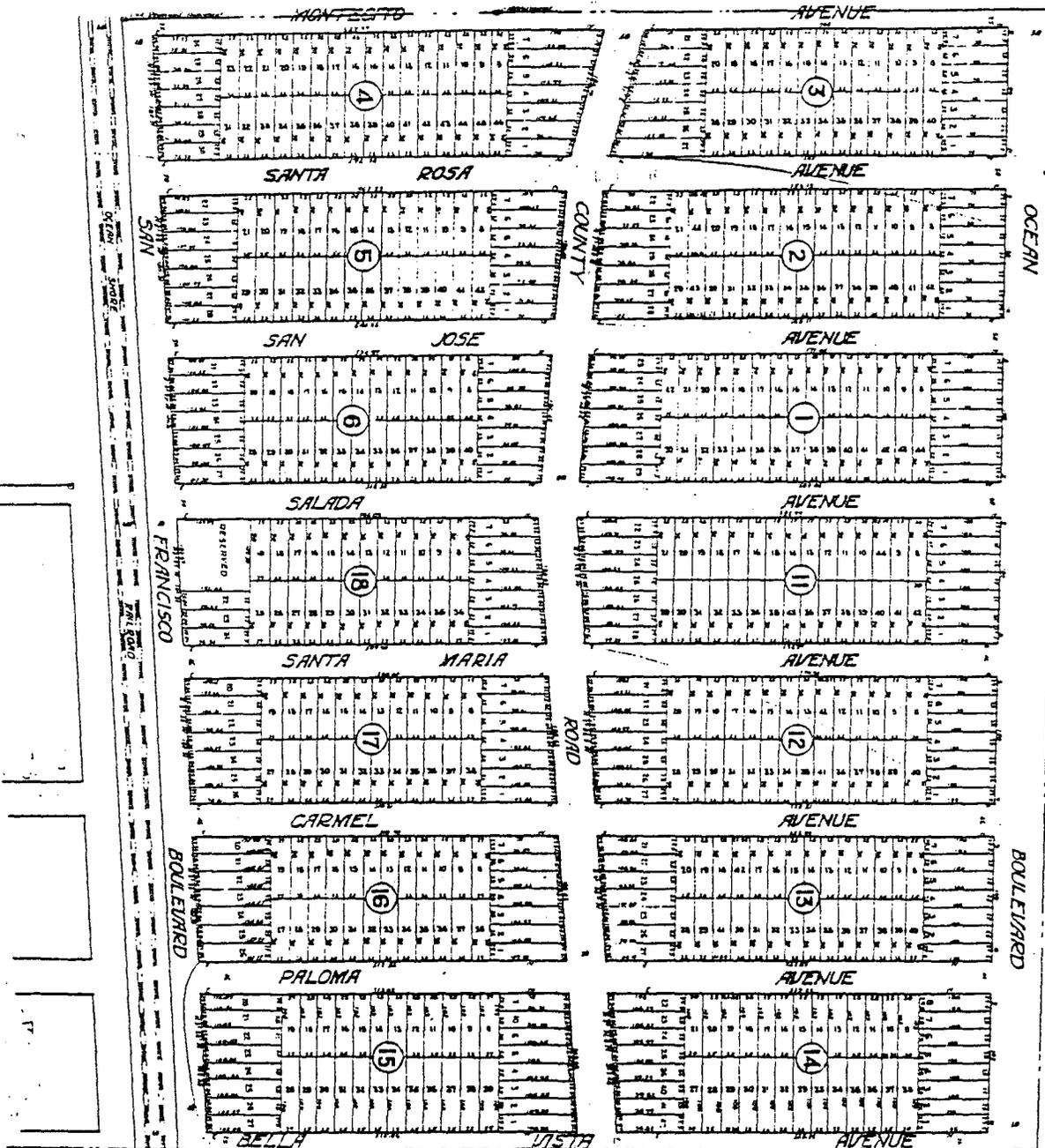
APPLICATION NO.

2-01-026

CITY OF PACIFICA



Sheet 2 of 35



PACIFIC SAND BEACH
OCEAN SAND BEACH

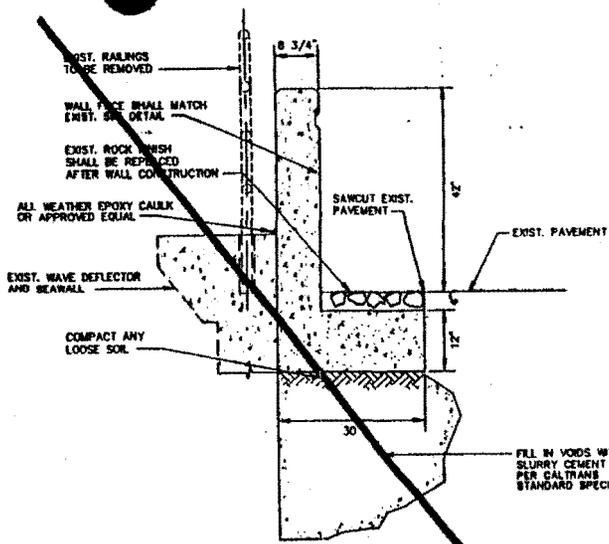
WORK FOR STUDY

PROBET AREA

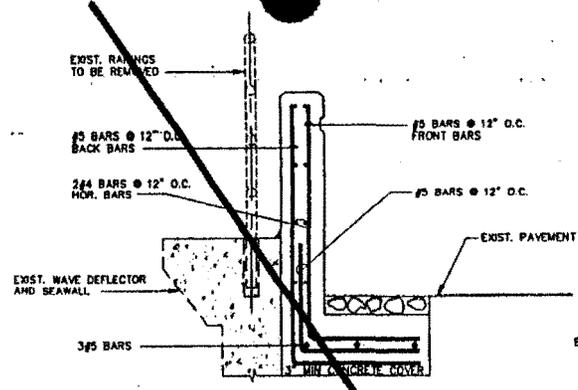
EXHIBIT NO. 3
APPLICATION NO.
2-01-026
CITY OF PACIFICA

I hereby certify that this is a true and correct copy of an original map recorded in Map Book 3 at page 29. *Paul G. Neuman*
County Surveyor
Fresno County, California

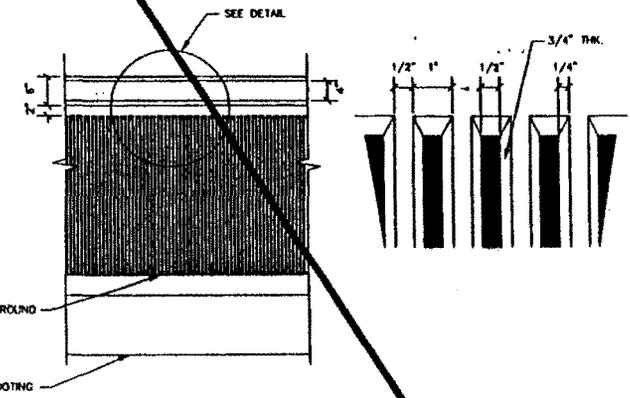
Section 1 - Revised Map Santa Rosa Beach - Sheet 1 of 2



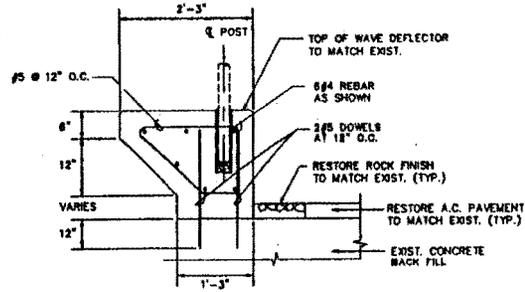
CONCRETE HANDRAIL SECTION
SCALE: 1" = 1'-0"



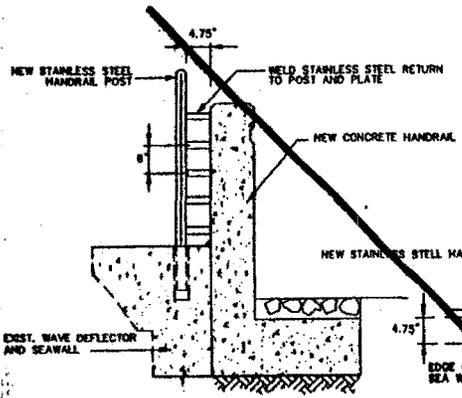
REBAR DETAIL
SCALE: 1" = 1'-0"



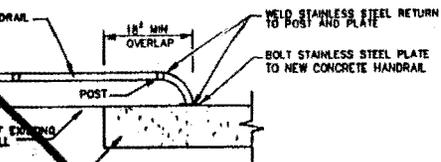
CONCRETE HANDRAIL FACE DETAIL
NOT TO SCALE



CONCRETE WAVE DEFLECTOR DETAIL
SCALE: 1" = 1'-0"

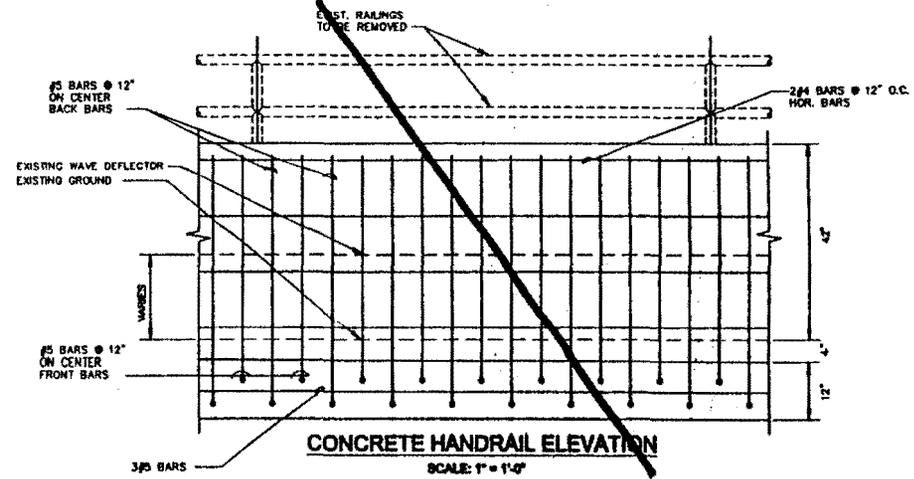


SECTION



PLAN

NEW CONCRETE HANDRAIL AND STAINLESS STEEL HANDRAIL CONNECTION
SCALE: 1" = 1'-0"



CONCRETE HANDRAIL ELEVATION
SCALE: 1" = 1'-0"

- NOTES:**
1. REINFORCING STEEL SHALL BE A615 GRADE 60.
 2. 3/8" x 3/8" CHAMFER ON EXPOSED FRONT FACE EDGES.
 3. INSTALL EXPANSION JOINTS @ 20 FT ON CENTER.
 4. THE CONTRACTOR SHALL FIELD VERIFY WALL FACE DIMENSIONS.

DATE ISSUED: 03-12-01
SCALE: AS SHOWN
DRAWN BY: RDD
DESIGNED BY: RDD/YDO
CHECKED BY: YDO/SJH

APPROVED BY:
DIRECTOR OF PUBLIC WORKS



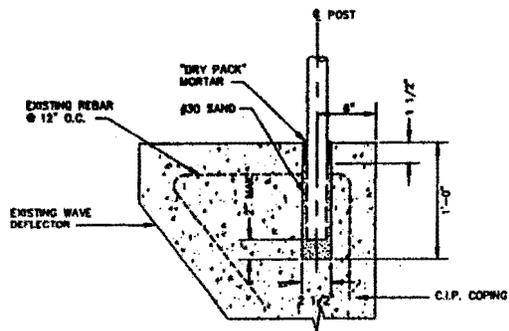
NO.	DATE	REVISION	BY



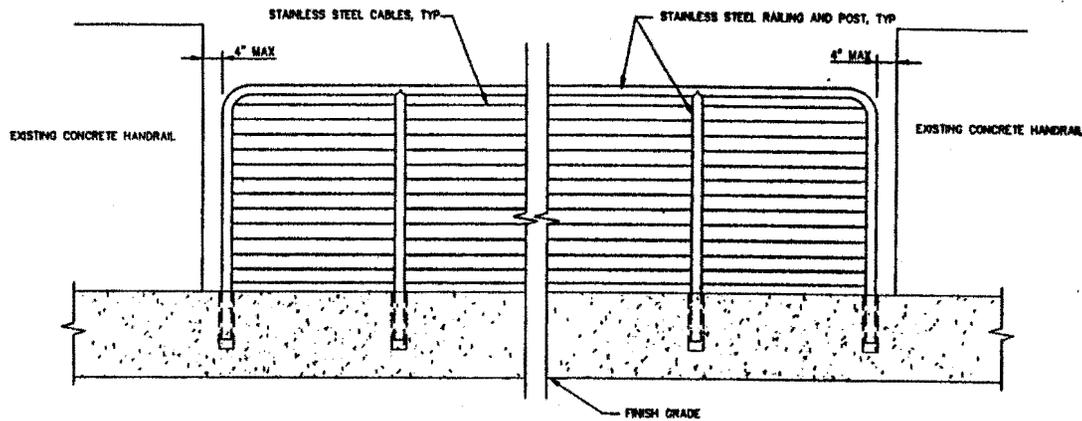
CITY OF PACIFICA
DEPARTMENT OF PUBLIC WORKS
170 SANTA MARIA BOULEVARD
PACIFICA CALIFORNIA 94044

**BEACH BOULEVARD
HANDRAIL PROJECT**
NEW CONCRETE HANDRAIL DETAILS

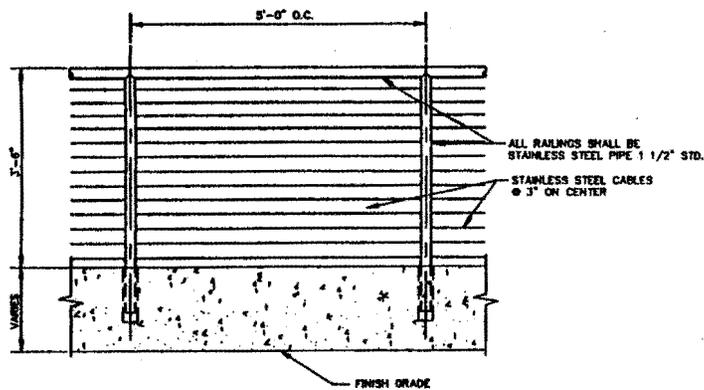
SHEET 2
OF 3 SHEETS



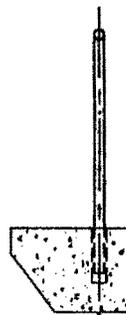
POST BASE DETAIL
NOT TO SCALE



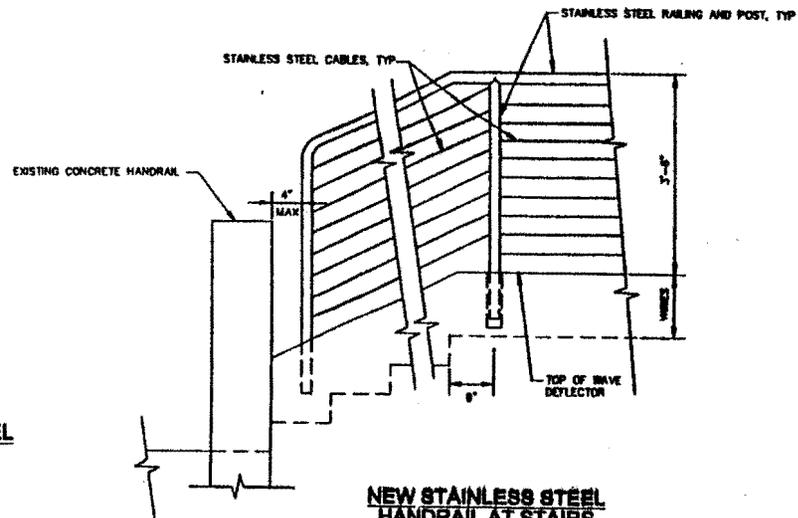
TYPICAL NEW STAINLESS STEEL HANDRAIL AT EXISTING CONCRETE HANDRAIL
NOT TO SCALE



TYPICAL NEW STAINLESS STEEL HAND RAIL ELEVATION
SCALE: 1" = 1'-0"



TYPICAL NEW STAINLESS STEEL HAND RAIL SECTION
SCALE: 1" = 1'-0"



NEW STAINLESS STEEL HANDRAIL AT STAIRS
NOT TO SCALE

NOTES:

1. RAILINGS SHALL BE 316L STAINLESS STEEL, 1 1/2" PIPE (1.9" O.D.)
2. REMOVE EXISTING GALVANIZED STEEL HANDRAIL, CLEAN AND PLUG EXISTING SOCKETS WITH MORTAR.

DATE ISSUED: 3-12-01
SCALE: AS SHOWN
DRAWN BY: RDD
DESIGNED BY: RDD/VDO
CHECKED BY: VDO/SH

APPROVED BY:
[Signature]
SOUTH HAVEN, P.E.
DIRECTOR OF PUBLIC WORKS



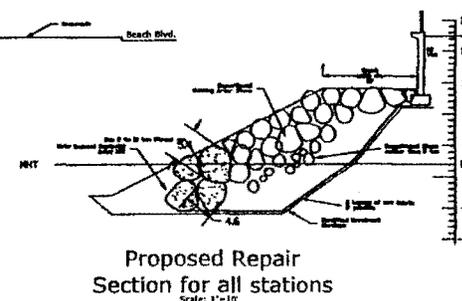
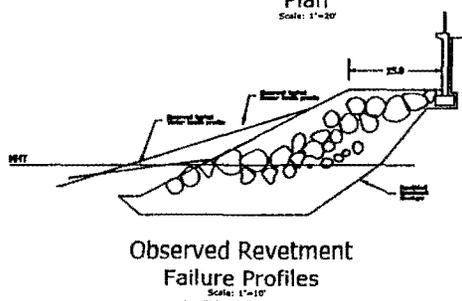
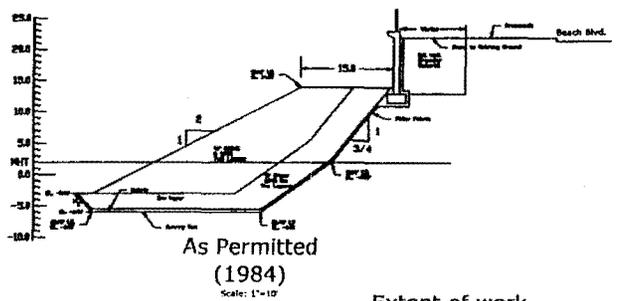
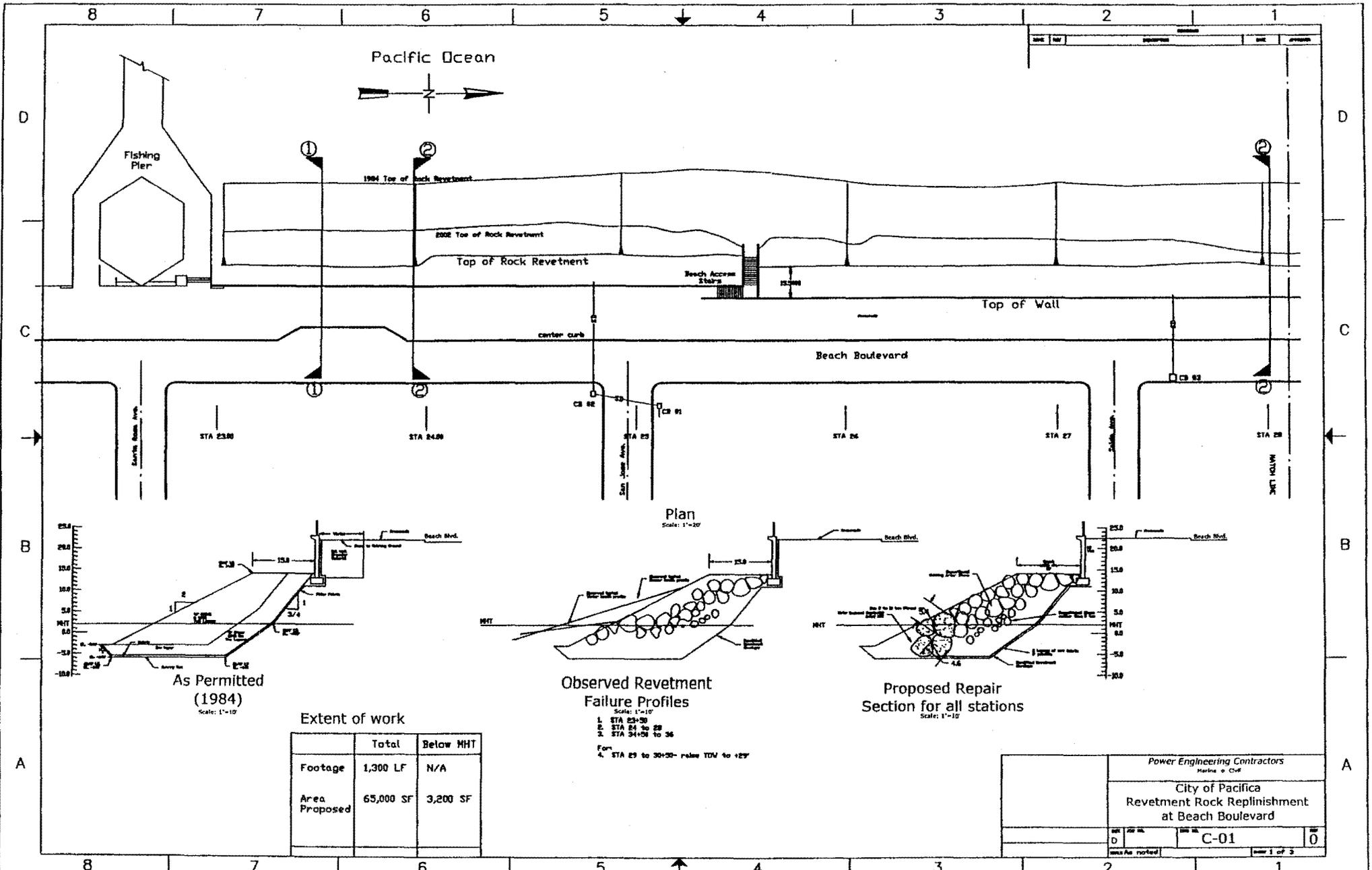
NO.	DATE	REVISION	BY



CITY OF PACIFICA
DEPARTMENT OF PUBLIC WORKS
170 SANTA MARIA BOULEVARD
PACIFICA CALIFORNIA 94044

**BEACH BOULEVARD
HANDRAIL PROJECT**
NEW STAINLESS STEEL HANDRAIL DETAILS

SHEET 3
OF 3 SHEETS



Extent of work

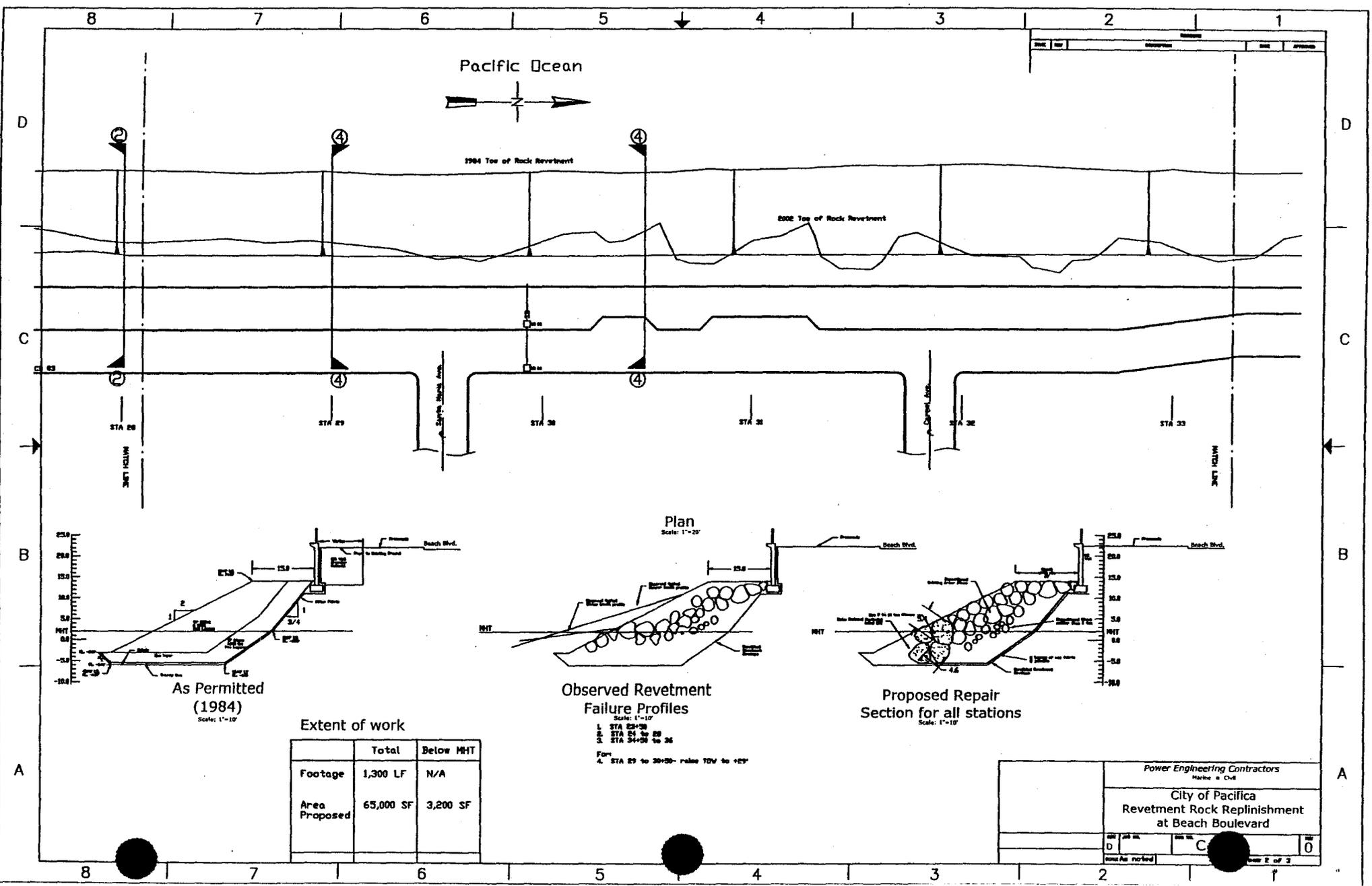
	Total	Below MHT
Footage	1,300 LF	N/A
Area Proposed	65,000 SF	3,200 SF

- Scale: 1"=10'
1. STA 23+00
 2. STA 24+00
 3. STA 24+00 TO 26
 4. STA 26 TO 28+00 - raise TDV to +12'

Power Engineering Contractors
Marine & Civil

City of Pacifica
Revetment Rock Replenishment
at Beach Boulevard

DATE FOR FILE	DATE FOR	NO.
0	C-01	0
SCALE AS NOTED	PAGE 1 OF 3	

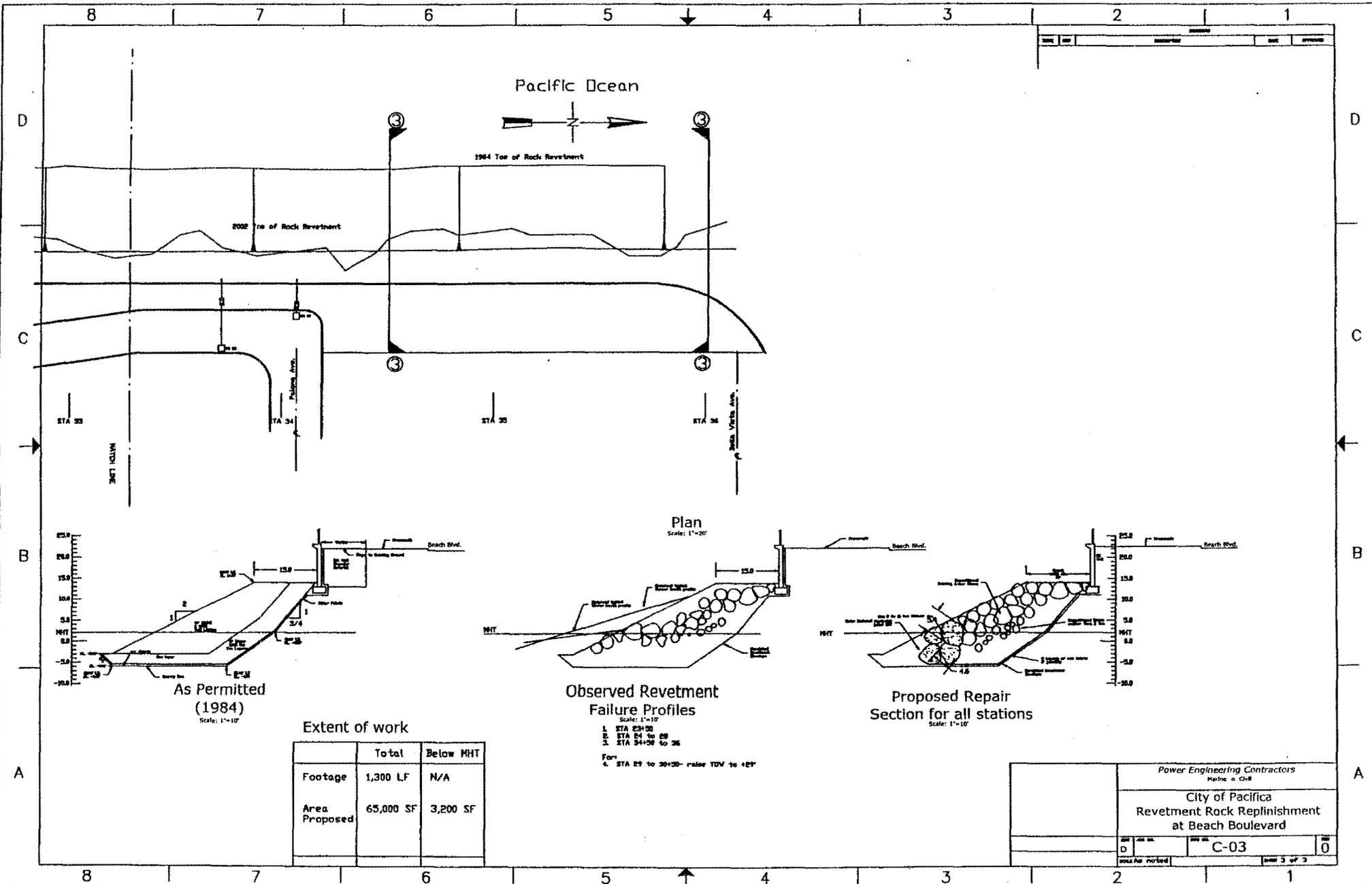


Extent of work

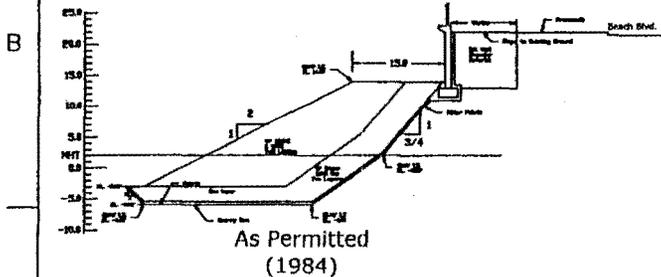
	Total	Below MHT
Footage	1,300 LF	N/A
Area Proposed	65,000 SF	3,200 SF

1. STA 28+30
 2. STA 29 to 28
 3. STA 31+28 to 30
- Form
 4. STA 29 to 30+30 - raise TDV to +12"

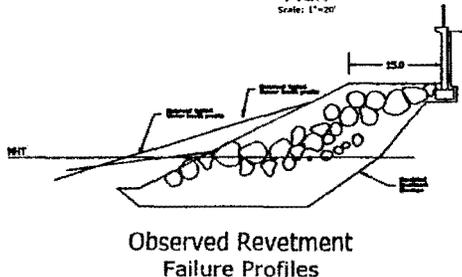
Power Engineering Contractors Marine & Civil			
City of Pacifica Revetment Rock Replenishment at Beach Boulevard			
DATE	JOB NO.	REV. NO.	0
DESIGNED BY	CHECKED BY	DATE	2 OF 3



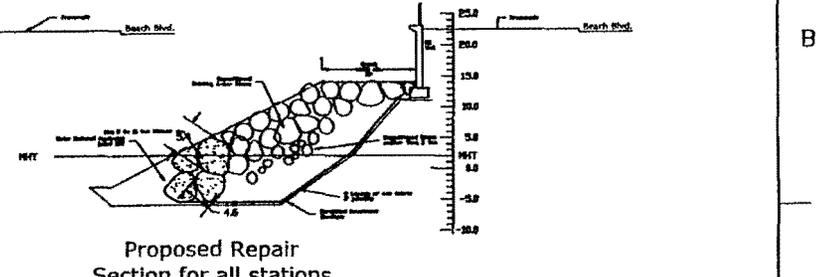
Plan
Scale: 1"=20'



As Permitted
(1984)
Scale: 1"=10'



Observed Revetment
Failure Profiles
Scale: 1"=10'



Proposed Repair
Section for all stations
Scale: 1"=10'

Extent of work

	Total	Below MHT
Footage	1,300 LF	N/A
Area Proposed	65,000 SF	3,200 SF

- 1. STA 29+00
 - 2. STA 29+00 to 30
 - 3. STA 34+00 to 36
- For:
4. STA 29 to 30+00 - raise TDV to +10'

Power Engineering Contractors Marine & Civil	
City of Pacifica Revetment Rock Replenishment at Beach Boulevard	
DATE: 08/01/00	REV: 0
BY: D	C-03
SCALE: AS NOTED	SHEET: 3 OF 3

M. Longman Beach Blvd Drawing 1



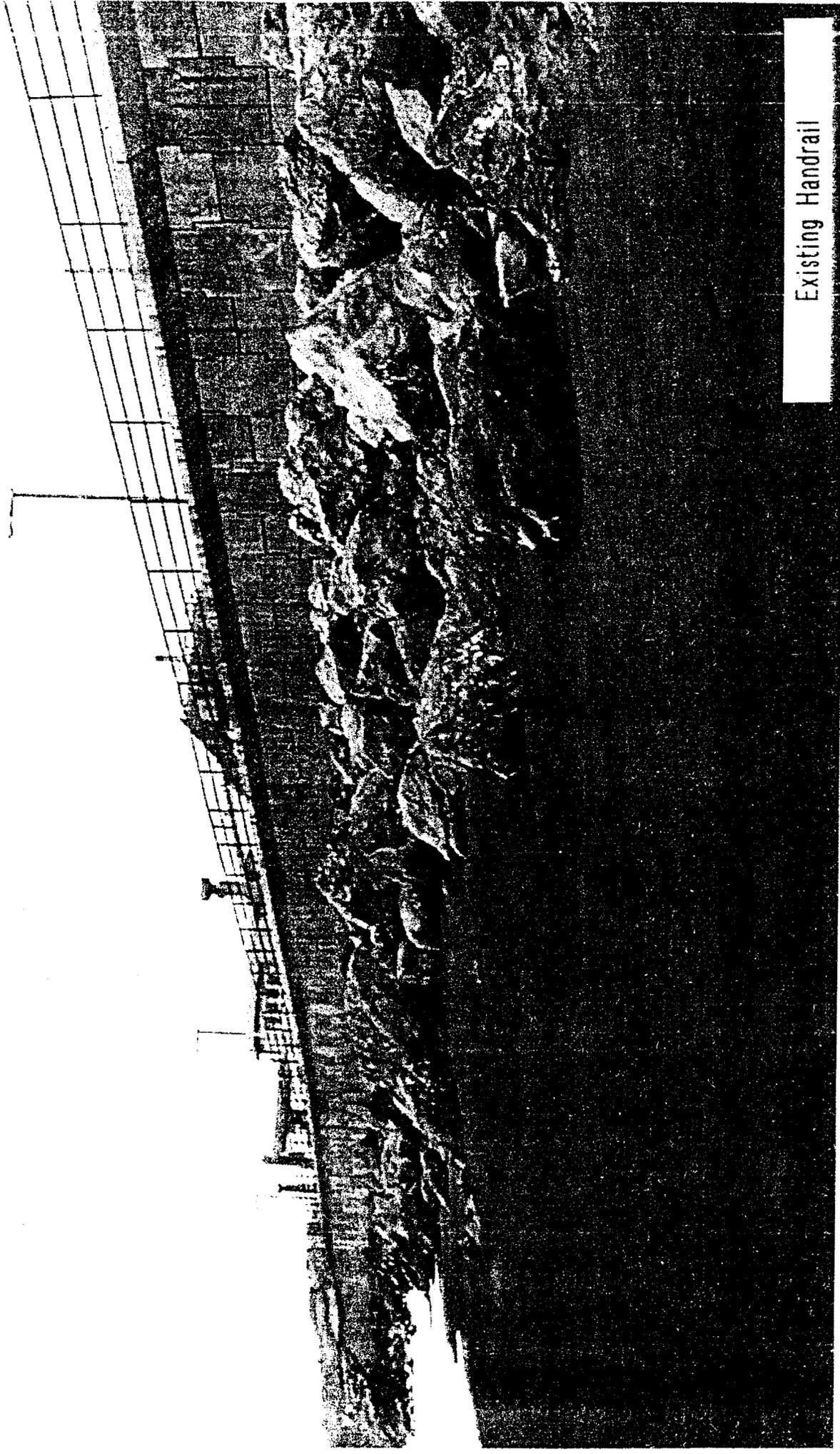
EXHIBIT NO. 6
APPLICATION NO.
2-01-026
CITY OF PACIFICA



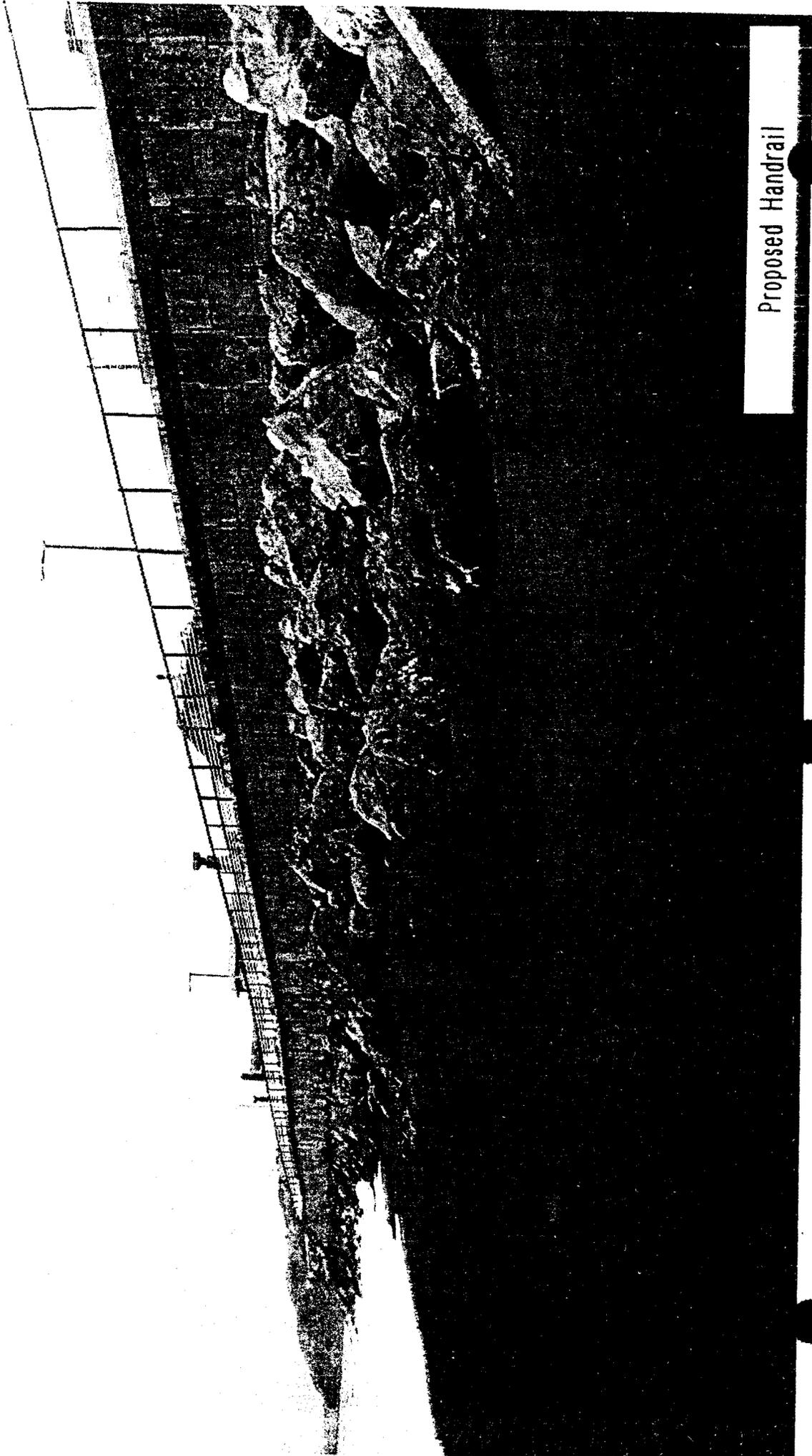
Existing Handrail



Proposed Handrail



Existing Handrail



Proposed Handrail