

CALIFORNIA COASTAL COMMISSION

SAN DIEGO AREA
3111 CAMINO DEL RIO NORTH, SUITE 200
SAN DIEGO, CA 92108-1725
(619) 521-8036



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Staff Report: December 19, 1997
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STAFF REPORT: CONSENT CALENDAR

Application No.: 6-97-149

Applicants: Robert and Ann Baker Agent: C. J. Randle

Description: Temporary placement and removal of 4-5 ton size rip-rap along 70 linear feet at the base of a coastal bluff below a single-family residence. The rip-rap would be approximately 10 feet high (5 feet above current sand level, 5 feet below), and would encroach a maximum of 12 feet onto the beach. All rip-rap is proposed to be removed by April 15, 1998.

Site: 219 Pacific Avenue, Solana Beach, San Diego County. APN #263-312-16.

Substantive File Documents: Certified County of San Diego Local Coastal Program (LCP); City of Solana Beach General Plan and Zoning Ordinance; Charles J. Randle, P.E., "California Coastal Commission Application Process; Preliminary Report," November 10, 1997; Charles J. Randle, P.E., "Letter re: Application for Baker Property," December 18, 1997.

STAFF NOTES:

The proposed project is identical in design and purpose to the project approved by the Commission in December 1997, for placement and removal of rip-rap in front of 14 separate parcels in Solana Beach. The current applicants did not apply for the temporary protection until several weeks after the first group of applicants, and thus could not be included in the previous approval.

STAFF RECOMMENDATION:

The staff recommends the Commission adopt the following resolution:

I. Approval with Conditions.

The Commission hereby grants a permit for the proposed development, subject to the conditions below, on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions.

See attached page.

III. Special Conditions.

The permit is subject to the following conditions:

1. Revised Final Plans. Prior to the issuance of the coastal development permit, the applicant shall submit to the Executive Director for review and written approval, the following items:

a. Final plans for the rip-rap. The applicant shall implement the rip-rap placement and removal in accordance with the approved plans. Said plans shall specifically indicate the following:

- 1) The rip-rap is placed at a 1.5 : 1 (run/rise) steepness, and does not encroach more than 12 feet beyond the toe of the bluff at elevation zero;
- 2) The lean concrete mixture to be placed up to the limit of the rip-rap height, is a minimum of 8-inches thick, and is colored and textured to match the surrounding bluffs;
- 3) The filter gravel blanket is a minimum of 12 inches thick;
- 4) All structures and materials, including the mirafi cloth, will be removed from the beach no later than April 15, 1998.

2. Bond for Removal. Prior the issuance of the coastal development permit, the applicant shall submit for the review and approval of the Executive Director, evidence that a performance bond, in a form and content acceptable to the Executive Director, has been accepted by the City of Solana Beach for an amount of not less than \$12,000 for the specific purpose of removal of rip-rap from Fletcher Cove placed pursuant to Coastal Development Permit #6-97-149.

3. Assumption of Risk. By acceptance of this permit, the applicant (a) understands that the site may be subject to extraordinary hazard from wave action and erosion and the applicant assumes the liability from such hazards; and (b) the applicant unconditionally waives any claim of liability on the part of the Commission and agrees to indemnify and hold harmless the Commission, its officers, agents, and employees relative to the Commission's approval of the project for any damage due to natural hazards.

4. State Lands Commission Review. Prior to the issuance of the coastal development permit, the applicant shall submit a letter from the State Lands Commission that concludes either:

- 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 final 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.

5. Staging Areas. Prior to the issuance of the coastal development permit, the applicant shall submit to the Executive Director for review and written approval, final plans indicating the location of the construction staging areas. The final plans shall indicate that for both the placement and removal stages of the project:

- a) All equipment shall be removed from the sandy beach on weekends;
- b) A minimum of 50 parking spaces in the Fletcher Cove parking lot shall be maintained for public use.
- c) No public parking areas, including street parking, other than Fletcher Cove, shall be used for staging and construction storage.

The applicant shall submit evidence that the approved plans/notes have been incorporated into construction bid documents. The staging site shall be removed and/or restored immediately following completion of the development.

6. Construction Materials. During construction and removal of the approved development, disturbance to sand and intertidal areas shall be minimized to the maximum extent feasible. All excavated beach sand shall be redeposited on the beach. Local sand, cobbles or shoreline rocks shall not be used for backfill or for any other purpose as construction material.

7. Construction Responsibilities and Debris Removal. During both the construction and the removal stages of the project, the permittee shall not store any construction materials or waste where it will be or could potentially be subject to wave erosion and dispersion. In addition, no machinery shall be placed, stored or otherwise located in the intertidal zone at any time. Within 5 days of completion of construction, the permittee shall remove from the bluff face and beach area any and all debris that results from construction of the approved development.

8. Future Development. This permit is for construction of temporary rip-rap shoreline protection. All other development proposals for the site shall require review and approval by the Coastal Commission, or its successor in interest, under a separate coastal development permit or an amendment to this permit.

IV. Findings and Declarations.

The Commission finds and declares as follows:

1. Detailed Project Description. Proposed is the temporary placement and removal of approximately 4-5 ton size rip-rap boulders, along 70 linear feet at the base of a coastal bluff below an existing single-family residence. The rip-rap would be approximately 10 feet high and would encroach approximately 12 feet onto the beach, or up to 15 feet if sand levels drop beyond current levels. The rip-rap will be curved out approximately 10 feet on the north and south ends of the site to reduce "edge" effects on the adjacent, non-protected properties. The proposed project design is identical to the temporary rip-rap placement approved by the Commission on December 10, 1997, for 14 different sites in Solana Beach.

The applicants are proposing to remove the protection by April 15, 1998. The applicants have received a Temporary Emergency Special Use Permit from the City of Solana Beach which requires that prior to construction, the applicant must post a bond with the City of Solana Beach for the amount of \$12,000 to ensure that money will be available to remove all of the rip-rap.

The site is located on Pacific Avenue, just north of the intersection of Hill Street. The site is two lots north of one of the sites previously approved for rip-rap, and approximately 300 feet south of a 4-lot stretch approved for protection.

The bluff below the site is approximately 80 feet high, consisting of terrace deposits over torrey sandstone. The bluff face below most the site is owned by the City of Solana Beach. The beach is publicly owned.

2. Consistency with Chapter 3 of the Coastal Act:

Geologic Conditions and Hazards: Section 30235 of the Coastal Act 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 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.

Additionally, Section 30253 of the Act states, in part:

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.

Public Access/Recreation: Pursuant to Section 30604 (c), the Coastal Act emphasizes the need to protect public recreational opportunities and to provide public access to and along the coast. Section 30210 of the Coastal Act is applicable to the proposed development and 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.

In addition, Section 30212 of the Act is applicable and states, in part:

- (a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:
 - (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources,
 - (2) adequate access exists nearby....

Additionally, Section 30220 of the Coastal Act provides:

Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Visual Quality: Section 30251 of the Coastal Act states, in 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.

The project site consists of approximately 70 linear feet of beach at the base of approximately 80-foot high bluffs. The bluff-top lot above the project site is developed with a single-family residence. It is not known at this time how close the existing house is from the bluff edge. The applicants are proposing to install temporary shoreline protection consisting of 10-foot high rip-rap across the length of the subject site to be removed by April 15, 1998. At the current sand profile, the rip-rap would only be visible for 5 feet above the sand, and would encroach onto the beach 12 feet. However, if storms reduce the level of beach sand, more rip-rap would become visible, and as much as 15 feet of beach could be covered.

The rip-rap would be engineered with smaller rocks below the larger rip-rap, and a gravel blanket with filter fabric at the bottom of the structure. A plastic sheet would be placed against the bluff face, which would then be overlaid with a pneumatically placed lean concrete cover. This design is similar to the temporary rip-rap approved by the Commission in November 1997 at Fletcher Cove (CDP #6-97-106), except for the proposed concrete cover. The concrete cover is designed to secure the rip-rap into place along the bluff face and reduce movement of the rock against the natural bluff surface. This cover was not part of the Fletcher Cove proposal because the bluff material in that location consists of soft sand which itself acts as a cushion and reduces the potential that rip-rap will migrate. The concrete material itself is not a permanent substance and is designed to gradually erode into the sand. The plastic sheet would be removed with the rock.

Section 30235 of the Coastal Act states that the Commission is required to approve the construction of shoreline protection that alters natural shoreline processes when necessary to protect existing structures in danger from bluff erosion/failure, when the construction has been designed to eliminate or mitigate adverse impacts on local shoreline sand supply, and if there are no less environmentally damaging feasible alternatives. In addition, Section 30253 of the Coastal Act requires that new development assure structural stability and neither create nor contribute to erosion or geologic instability on the site or surrounding area.

At this time, the applicants have not submitted any information demonstrating that the existing bluff-top structure is currently in danger from erosion. However, there is evidence that the 1997-1998 winter storms are likely to be more severe due to the presence of an El Niño condition with higher amounts of rainfall and coastal wave surge. These conditions present an increased likelihood of bluff failure and block falls, which would potentially result in the need for permanent shoreline protective devices. Thus, the rip-rap is being proposed as a temporary, preventative measure to reduce the potential for extraordinary damage to property during an unusually harsh rainy season. Therefore, although the existing

blufftop structure is not being threatened at this time, the Commission must weigh the temporary adverse impacts to public resources associated with construction of temporary shore/bluff protection against the advantages of avoiding substantial bluff failures which may lead to greater impacts in the future.

There are a number of adverse impacts to public resources associated with the construction of either temporary or permanent shoreline structures. These include the loss to the public of the sandy beach area that is displaced by the structure, "permanently" fixing the back of the beach, which leads to the narrowing and eventual disappearance of the beach in front of the structure, a reduction/elimination of sand contribution to the beach, sand loss from the beach due to wave reflection and scour, accelerated erosion on adjacent unprotected properties and the adverse visual impacts associated with construction of a shore/bluff protective device on the natural bluffs. As such, the construction of bluff and shoreline development raises consistency concerns with a number of Coastal Act policies, including Sections 30210, 30211, 30212, 30235, 30240, 30251, and 30253.

Even on a short-term basis, the impacts from the proposed shoreline protection would not be inconsequential. The rip-rap would effectively prevent shoreline access along the base of the bluff even at lower tides for the entire winter season. However, the impacts to the public from the beach encroachment would be the least during this time of year, when beach use is typically at its lowest level. Compared to a permanent seawall, the impacts to shoreline processes and sand supply from the project would likely be minimal, as the protection would only be in place for less than four months. Given the predictions of an extraordinarily severe storm season, there is a potential that without some kind of short-term protection, the Commission may be faced, possibly under emergency conditions, with proposals for permanent shoreline protective devices with far more significant and longer-lasting impacts to visual quality, public access and sand supply than the proposed project. Thus, in this particular case, the Commission can find temporary shoreline protection a preventative measure, which, in the long run, reduces the potential impacts to the public.

However, the Commission must still be assured that the proposed protection is the least environmentally damaging feasible alternative. The Commission assessed the potential to place large sandfilled bags known as geotubes in place of rip-rap for the recently approved 14-lot temporary rip-rap application (CDP #6-97-125 - 6-97-138). The geotube process involves layering large tubes filled with sand material at the base of the bluff. This system would require approximately the same amount of encroachment on the beach, but it would have less of a visual impact, and would result in the placement of the sand fill material on the beach after the rainy season. However, it would also require finding suitable material for beach placement, and involves a highly specialized installation/filling process which is estimated to cost approximately \$532 per linear foot. At least two layers of geotubes would be necessary in front of each site to achieve the necessary height, with approximately 5 feet of tubing curving inward on the north and south side of each separate lot in order to reduce the potential for "edge" effects such as increased scour on adjacent properties. The geotubes also may be somewhat vulnerable to vandalism, which could result in additional replacement costs. In addition, although the geotubes would act as a barrier to wave action,

they would not provide the same degree of wave energy dissipation that the rip-rap will provide.

As an alternative, placing and removing the proposed rip-rap would cost approximately \$424 per linear foot. The rip-rap would have a greater potential for permanent impacts to the bluff, from the rock abrading the bluff face and foundation; however, the rock would extend approximately 10 feet to the northern and southern ends of the rip-rap, and curved gradually inward to reduce edge effects.

The applicant also examined alternatives to the lean concrete associated with both the proposed rip-rap. The lean concrete would be applied over the face of the bluff to secure the rip-rap and provide a buffer between the rock and the bluff face. There are other substances such as cement gel or fly ash which might be considered less durable, or more temporary in nature than the proposed concrete; however, these substances have not been tested for impacts to marine life when dissolved, and could potentially have significant environmental impacts. As noted previously, when the rip-rap and plastic sheeting are removed, the concrete facing will crumble and dissolve into the sand. Special Condition #1 requires the applicant to color the lean concrete consistent with the natural bluffs so that the concrete material will blend in with the natural sand. In order to provide an extra degree of protection for the natural bluffs, the condition requires that the amount of concrete buffer be a minimum of 8 inches thick, and that the foundation buffer (sand or gravel) be at least 12 inches deep. In addition, the condition requires the rip-rap to be placed at a 1 1/2 feet to 1 steepness, which will provide for sufficient stability while reducing the amount of beach encroachment to the maximum extent feasible. Thus, the condition requires that the rip-rap not encroach more than 12 feet from the toe of the bluff at elevation zero.

The impacts to public recreation and visual quality from the protection would be short-term (during one winter season), and would be temporary, only if the Commission can be assured that the protection would be removed. As noted above, the City of Solana Beach has issued Temporary Emergency Special Use Permits for the proposed project which includes the condition that prior to the commencement of construction, the applicant must provide a security in the form of a faithful performance bond in the amount of \$12,000 to secure removal of the temporary protection. The applicant's engineer has estimated this amount as sufficient to cover the cost of removal of all materials from the beach. The permit requires that the protection be removed within 180 days after construction, although the applicant has proposed removing the structures by April 15, 1998. In order to assure that the structures will be removed, Special Condition #2 requires the applicant to provide evidence that the bond has been posted. The condition also requires the structures to be removed by April 15, 1998. Only as conditioned to be a short-term, temporary impact can the project be found consistent with the geologic hazard, visual quality, and public access and recreation policies of the Coastal Act.

Due to the inherent risk of shoreline development and the Commission's mandate to minimize risks (Section 30253), the standard waiver of liability condition has been attached through Special Condition #3. By this means, the applicant is notified of the risks and the

Commission is relieved of liability in permitting the development. Should the rip-rap cause some damage to the property or turn out to be insufficient protection, the applicant assumes this risk and the Commission cannot be held liable. In this particular case, the condition is not required to be recorded as a deed restriction because the development is temporary and will be completely removed by April 15, 1998. Special Condition #4 requires State Lands review and determination whether the proposed seawall involves public trust lands and requires issuance of a State Lands permit, if needed, prior to the issuance of the coastal development permit.

Use of the beach or public parking areas for staging of construction materials and equipment would further impact the public's ability to gain access to the beach. There is only one vehicle access ramp in the project area, the Plaza Street access ramp at Fletcher Cove. The applicant's agent has indicated that this project will be constructed in conjunction with the rip-rap placement at the other 14 site previously approved by the Commission. Staging for the subject project and the other projects will occur at the Fletcher Cove parking lot. Thus, in order to minimize construction impacts to the public, Special Conditions #5 prohibits use of the beach storage of materials and equipment requires the applicant to maintain a minimum of 50 parking spaces for public use during construction. Special Condition #6 requires that disturbance to sand and intertidal areas been minimized, and prohibits the use of local sand for backfill or construction to ensure that the existing beach is impacted as little as possible, while Special Condition #7 prohibits the storage of construction materials in the intertidal zone. These conditions also apply to the removal stage of the project. Special Condition #8 informs the applicants that any additional construction beyond the rip-rap approved herein will require further review and approval by the Commission.

In summary, although there will be some adverse impacts to the public associated with the development, the impacts will be less than those associated with permanent shoreline protection, since, as conditioned, the rip-rap will be removed promptly after the threat is gone and no long-term impacts will occur. As conditioned, the project will have the least environmentally damaging design, and incorporate all feasible mitigation measures necessary to offset impacts on coastal resources. Therefore, in this particular case, the public benefits of the project sufficiently mitigate for the impacts to coastal resources and sand supply, and the project can be found consistent with the geologic conditions and hazards policies, the public access and recreation policies, and the visual quality policies of the Coastal Act.

5. Local Coastal Planning. Section 30604 (a) also requires that a coastal development permit shall be issued only if the Commission finds that the permitted development will not prejudice the ability of the local government to prepare a Local Coastal Program (LCP) in conformity with the provisions of Chapter 3 of the Coastal Act. In this case, such a finding can be made.

The subject site was previously in the County of San Diego Local Coastal Program (LCP) jurisdiction, but is now within the boundaries of the City of Solana Beach. The City will, in

all likelihood, prepare and submit for the Commission's review a new LCP for the area. Because of the incorporation of the City, the certified County of San Diego Local Coastal Program no longer applies to the area. However, the issues regarding protection of coastal resources in the area have been addressed by the Commission in its review of the San Diego County LUP and Implementing Ordinances. As such, the Commission will continue to utilize the San Diego County LCP documents for guidance in its review of development proposals in the City of Solana Beach until such time as the Commission certifies an LCP for the City.

In preparation of an LCP, the City of Solana Beach is faced with many of the same issues as the City of Encinitas, located immediately north of Solana Beach, whose LCP was certified by the Commission in March 1995. The City of Encinitas' LCP includes the intent to prepare a comprehensive plan to address the coastal bluff recession and shoreline erosion problems in the City. The plan will include at a minimum, bluff top setback requirements for new development and redevelopment; alternatives to shore/bluff protection such as beach sand replenishment; removal of threatened portions of structures or underpinning existing structures; addressing bluff stability and the need for protective measures over the entire bluff (lower, mid and upper); impacts of shoreline structures on beach and sand area as well as mitigation for such impacts; impacts for groundwater and irrigation on bluff stability and visual impacts of necessary/required protective structures.

The City of Solana Beach should also address these items in the context of a comprehensive approach to management of shoreline resources. The project site was previously designated for public park uses under the County LCP and is currently designated for park uses in the City of Solana Beach Zoning Ordinance and General Plan. The subject development adheres to these requirements. Within the limits of the proposed project development, as conditioned, the project can be found consistent with the regulations of the County, the applicable Chapter 3 policies of the Coastal Act, and will not prejudice the ability of the City of Solana Beach to complete a certifiable local coastal program. However, these issues of shoreline planning will need to be addressed comprehensively in the future through the City's LCP certification process.

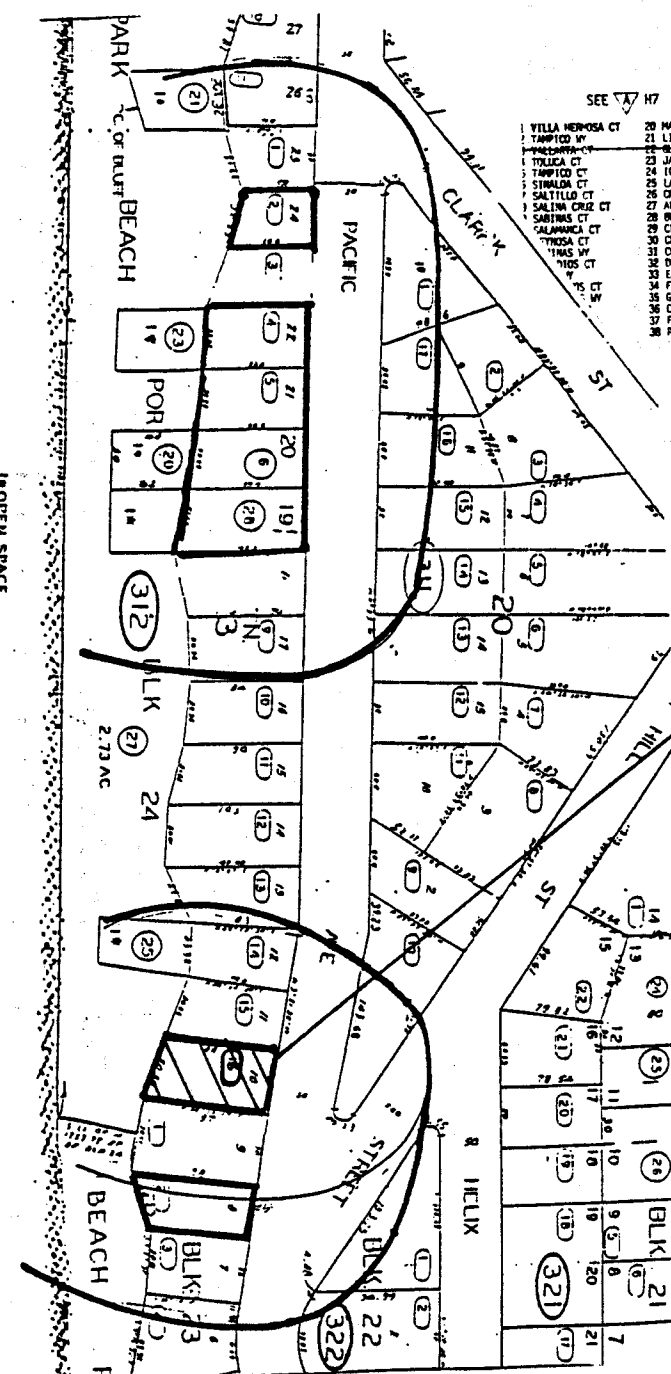
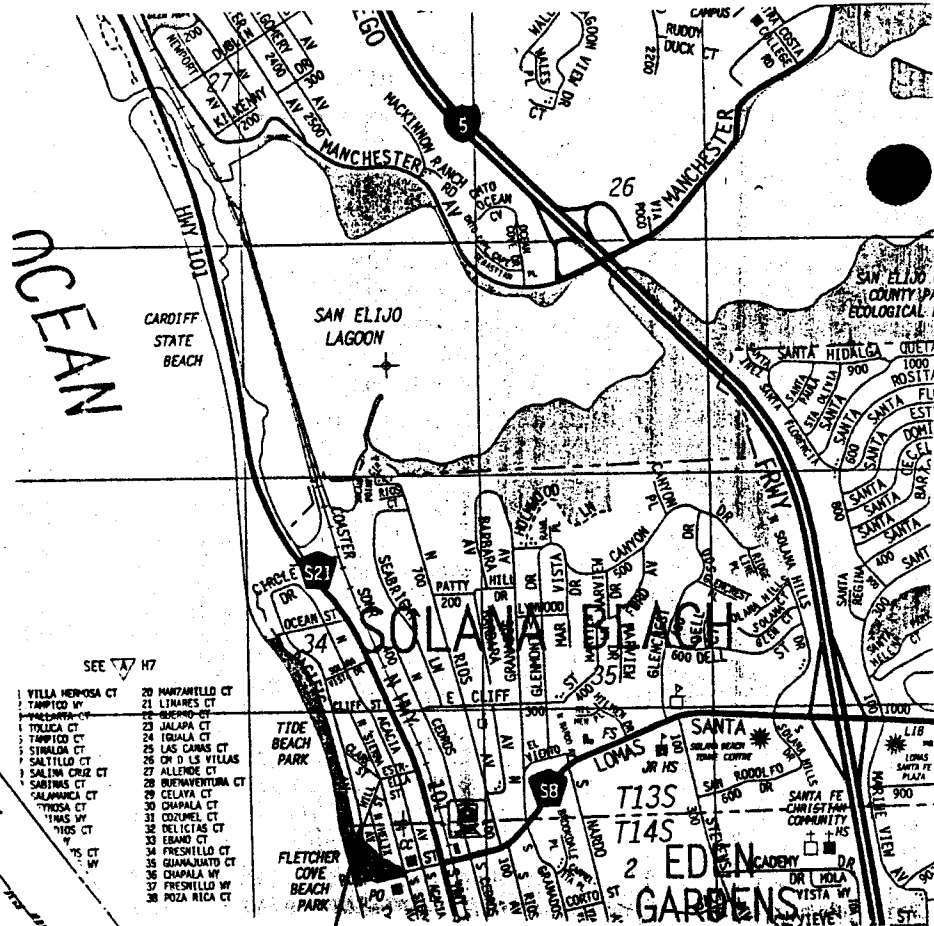
5. Consistency with the California Environmental Quality Act (CEQA). Section 13096 of the Commission's administrative regulations requires Commission approval of a coastal development permit application to be supported by a finding showing the application, as conditioned, to be consistent with any applicable 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 proposed project has been conditioned in order to be found consistent with the geologic stability, visual resource and public access policies of the Coastal Act. Mitigation measures, including restrictions on the timing of the project, maintenance requirements and coloring requirements, will minimize all adverse environmental impacts. As conditioned, there are

no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, is the least environmentally damaging feasible alternative and can be found consistent with the requirements of the Coastal Act to conform to CEQA.

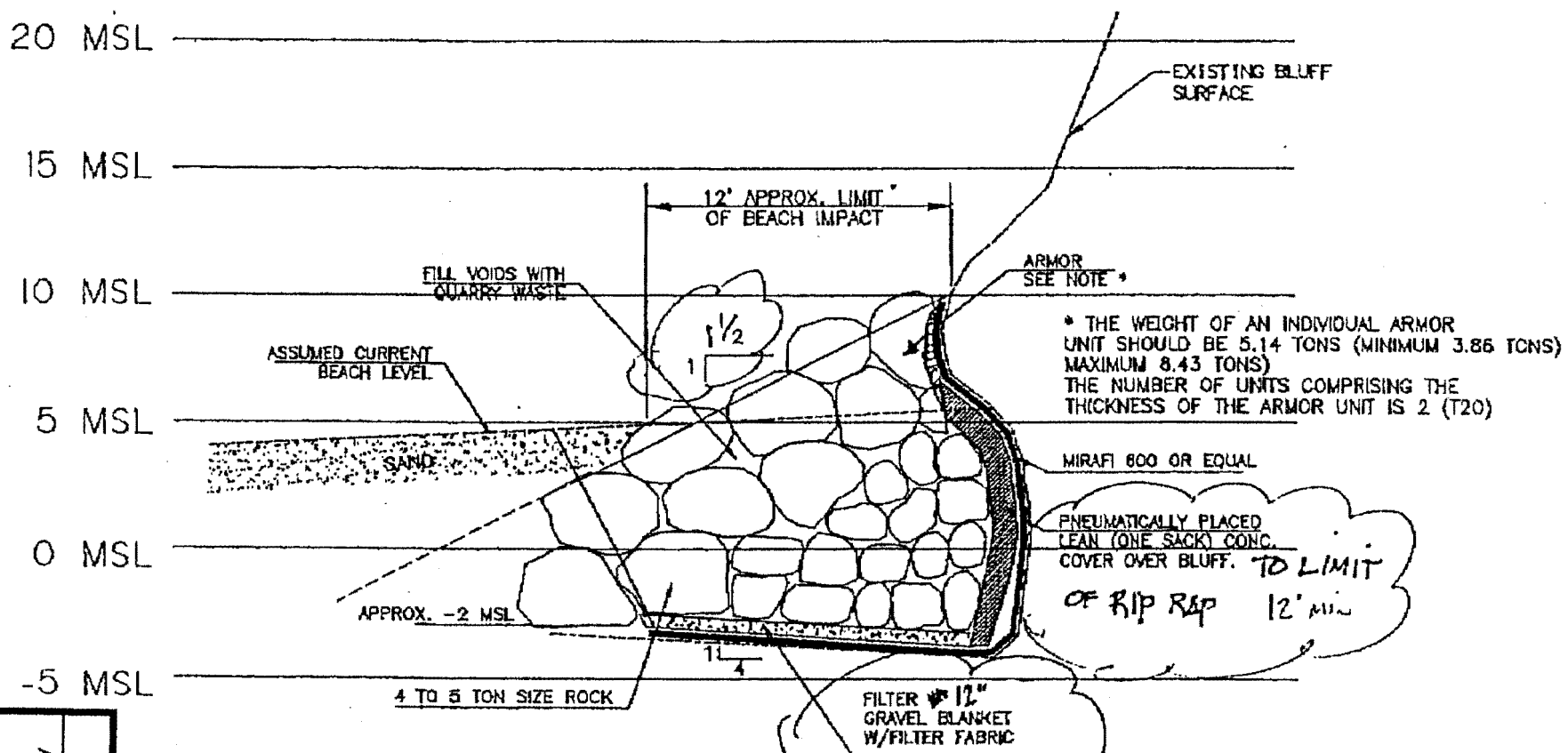
STANDARD CONDITIONS:

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. Compliance. All development must occur in strict compliance with the proposal as 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 development during construction, 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.



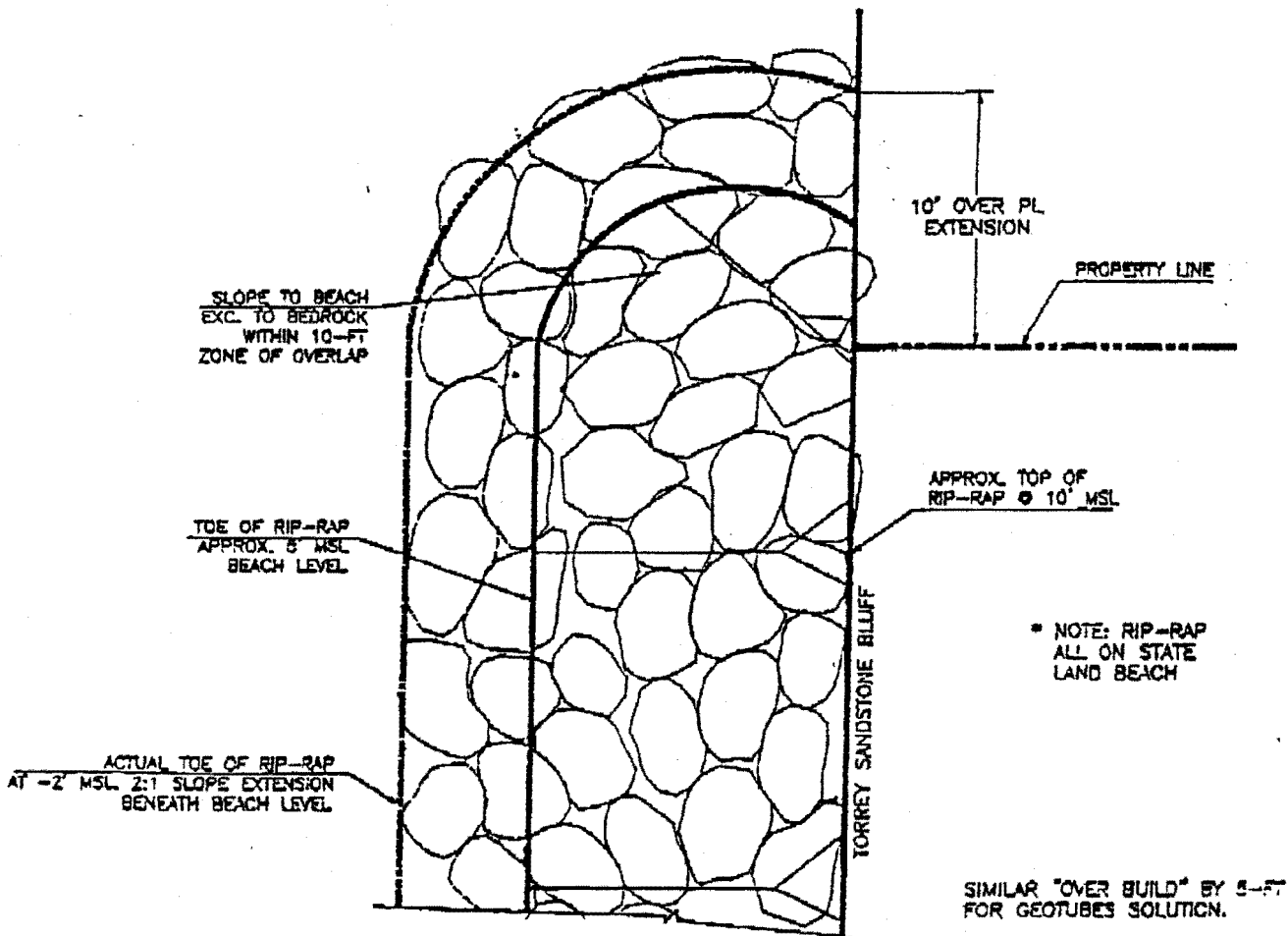
PACIFIC OCEAN

EXHIBIT NO. 1
 APPLICATION NO.
 6-97-149
 Location Map
 California Coastal Commission



RIP-RAP OPTION
N.T.S.

<p>California Coastal Commission</p>	EXHIBIT NO. 2
	APPLICATION NO. 6-97-149
	Rip-Rap Plan



PLAN VIEW AT END OF RIP-RAP
(i.e. UNPROTECTED BLUFF)

N.T.S.

EXHIBIT NO. 3
APPLICATION NO.
6-97-149
Edge Treatment
California Coastal Commission