

CALIFORNIA COASTAL COMMISSION

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W15d

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COASTAL DEVELOPMENT PERMIT APPLICATION**Application number**3-03-108, Davis Revetment**Applicant**.....Ursula Davis**Project location**.....Bluffs and beach seaward of 1998 Pacific Avenue, Cayucos, San Luis Obispo County (APN 064-241-039).**Project description**.....Recognize emergency rip-rap revetment construction from winter 1998. Approximately 75 linear feet of rock rip-rap revetment to replace failed vertical concrete block wall and stairs.**File documents**.....Geologic Assessment of Bluff Erosion and Sea Cliff Retreat (GeoSolutions, LLC, June, 1998); Compliance Report of Final Construction (GeoSolutions, LLC, November, 4 1998); Notice of Final County Action (Local Permit D980019P); San Luis Obispo County certified Local Coastal Program (LCP); California Coastal Commission Periodic Review of the San Luis Obispo County LCP, 2001.**Staff recommendation** ...Approval with Conditions

Summary: The Applicant proposes to permit an engineered rock rip-rap revetment that was constructed in September 1998 under an emergency permit issued by the County of San Luis Obispo. The work undertaken extends within the Coastal Commission's original permit jurisdiction. At the time of development approval, the County had not coordinated with the Commission on the determination of permit jurisdiction. Instead, the County conditioned its approval to require Coastal Commission authorization for the project. This permit provides the opportunity for the Commission to evaluate the project for Coastal Act consistency.

The project is located on the bluffs on the seaward side of Pacific Avenue in the community of Cayucos. The bluffs on the Applicant's site are within an area of Cayucos already affected by the presence of shoreline structures. Prior to the emergency, the Applicant's property maintained a block masonry seawall and private concrete stairway leading from the top of the bluff to the beach below. The El Niño storms of 1998 left the seawall in a state of total disrepair causing episodes of sudden accelerated bluff loss. Large sections of the concrete wall had buckled and were perched on one another creating extremely unsafe conditions. Exposed rebar, wires, and drainpipes were visible where the seawall had detached from the bluff face.

**California Coastal Commission****May 2004 Meeting in San Rafael**Staff: J. Bishop Approved by: *DSL*

At this time, the Applicant proposes to replace the seawall and stairs with a new rip-rap revetment keyed into bedrock at the base of the bluff. The new keyway and revetment construction is the project currently before the Commission.

Recognition of the emergency permit will allow replacement of a previously existing seawall with an engineered rock rip-rap revetment. The project will construct a new keyway and add approximately 65 linear feet of rock to the back beach environment. Such a project raises Coastal Act issues because: beach area will be lost due to seaward extension of the revetment; additional rock massing will be present in the public viewshed; failure of the revetment could adversely affect recreational resources; and future erosion response could lead to more substantive hard armoring in the future. The project also raises issues regarding the long term loss of beach due to armoring at this location due to the fact that the revetment has fixed the back beach on an actively eroding shoreline, and that beach area will be lost as the shoreline continues to erode and the sea level continues to rise over time.

To address the impacts associated with the project, Special Conditions are attached that:

- Require the property owner to participate in future areawide shoreline planning efforts that may involve this stretch of coastline. Such efforts may involve consideration of a shoreline armoring management entity (meant to cover the larger shoreline that includes the revetment here), and may involve consideration of potential modifications and/or programs designed to reduce public viewshed and beach access impacts due to shoreline armoring;
- Require that there be no further seaward encroachment of the revetment or any other structure beyond the as-built profile established;
- Require native plant screening along the upper portion of the revetment;
- Require long-term inspection, monitoring and maintenance of the structure, including retrieval of any rocks or debris that move seaward of the revetment;
- Require rodent control to ensure the health and safety of the public;
- Require the Applicant to acknowledge the site's coastal hazard risk and agree to waive any claims of liability on the part of the Commission for allowing the development;
- Require an offer-to-dedicate (OTD) an easement or fee-title providing for public recreational access to the beach area seaward of the revetment;
- Require that all the terms of the approval be recorded as restrictions on the affected property.

As conditioned, the Commission finds that the completed project will proportionately offset its impacts to coastal resources, and further finds that the conditioned project is the best possible outcome given the existing shoreline conditions in this area and the history at this site. As so conditioned, Staff recommends approval.



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1. Staff Recommendation on CDP Application

The staff recommends that the Commission, after public hearing, **approve** a coastal development permit for the proposed development subject to the standard and special conditions below.

Motion. I move that the Commission approve Coastal Development Permit Number 3-03-108 pursuant to the staff recommendation.

Staff Recommendation of Approval. Staff recommends a **YES** vote. Passage of this motion will result in approval of the coastal development 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 a Coastal Development Permit. The Commission hereby approves the coastal development permit on the grounds that the development as conditioned, will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the coastal development 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 feasible mitigation measures or alternatives that would substantially lessen any significant adverse effects of the development on the environment.



2. Conditions of Approval

A. Standard Conditions

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the Co-Permittees or their 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 Co-Permittees to bind all future owners and possessors of the subject property to the terms and conditions.

B. Special Conditions

1. **Shoreline Development Stipulations.** By acceptance of this permit, the Permittee acknowledges and agrees, on behalf of itself and all successors and assigns that:
 - (a) **Future Shoreline Planning.** The Permittee agrees, on behalf of itself and all successors and assigns, to participate in future shoreline armoring planning efforts that involve the revetment approved pursuant to coastal development permit 3-03-108. Such planning efforts may involve consideration of a shoreline armoring management entity meant to cover the larger shoreline that includes the revetment here, and may involve consideration of potential modifications and/or programs designed to reduce public viewshed and beach access impacts due to shoreline armoring. Agreeing to participate in no way binds the Permittee (nor any successors and assigns) to any particular outcome of such planning efforts, and in no way limits the ability of the Permittee (nor any successors and assigns) to express his/her viewpoint during the course of such planning efforts.
 - (b) **No Further Seaward Encroachment.** Any future development, as defined in Section 30106 ("Development") of the Coastal Act, including but not limited to modifications to the revetment, shall be constructed inland of, and shall be prohibited seaward of, the seaward plane of the revetment with the following development excepted from this prohibition: (1) appropriately



permitted construction activities associated with construction, maintenance, or repair of the revetment approved by coastal development permit 3-03-108; and (2) standard beach maintenance activities (e.g., those undertaken by the grantee of the fee or easement or of the offer of dedication. The seaward plane of the revetment is defined by the approved (per coastal development permit 3-03-108) revetment footprint and profile as shown on the approved site plan.

- (c) **Plant Screening.** Plant screening shall provide for the removal of all non-native and/or invasive plant species (e.g., iceplant) currently present on, in, and/or immediately inland of the revetment, and the planting of non-invasive native species along the full linear extent of the area above the revetment in a manner designed to provide for a dense cascading screen of vegetation to completely cover the upper third (roughly 8 vertical feet) of the revetment. Soils, soil composites (e.g., a mixture of sandy loam soil and cement), and support for same (such as filter fabric or equivalent), may be placed in and/or on top of the upper portion of the revetment to provide adequate planting pockets as necessary to ensure effective and successful screening. Native plant materials to be used should be chosen from the following native planting palette (substitutions of appropriate native bluff edge plants to complement this planting palette may be allowed upon written consent from the Executive Director):

- *Achillea millefolium* – yarrow
- *Artemisia californica* – California sagebrush
- *Baccharis pilularis* – prostrate greasewood
- *Bromus carinatus* var. *maritimus* – seaside brome
- *Ceanothus griseus* var. *horizontalis* – “Carmel creeper”
- *Ceanothus griseus* var. *horizontalis* – “Yankee Point”
- *Dudleya caespitosa* – live forever
- *Dudleya farinosa* – live forever
- *Elymus glaucus* – blue wild rye
- *Erigeron glaucus* – seaside daisy
- *Eriogonum latifolium* – buckwheat
- *Eriogonum parvifolium* – dune buckwheat
- *Eriophyllum staechadifolium* – lizard tail
- *Fragaria chiloensis* – beach strawberry
- *Grindelia stricta* – gumweed
- *Leymus pacificus* – beach wild rye
- *Mimulus aurantiacus* – sticky monkey flower



- Myrica californica – wax myrtie
- Poa douglasii – maritime bluegrass
- Rhamnus californica – coffeeberry

Plants shall be maintained and monitored. All plants must be replaced as necessary to maintain the vegetative cap and associated dense cascading screen of vegetation to completely cover the upper third (roughly 8 vertical feet) of the revetment over the life of the revetment. To allow for initial growth, screening must be initially achieved within at least two years of initial screening implementation, with an interim standard that at least the top 4 vertical feet of the revetment and the area between the revetment and the edge of the yard be screened within at least one year of implementation.

- (d) **Rock/Debris Retrieval.** Any rocks or debris that move seaward of the as-built revetment shall be retrieved as soon as is feasible and either: (1) restacked within the approved as-built revetment footprint and profile; or (2) removed off the beach to a suitable inland disposal location. Any rock/debris retrieval episode shall be pursuant to a separate coastal development permit, or evidence from the Executive Director that none is necessary.
 - (e) **Rodent Removal.** If, at any time, evidence indicates that rodents are living in the voids within the revetment, then the Permittee shall take responsible action to eliminate such rodent colonization consistent with generally accepted professional pest control methods that also ensure the health and safety of the public.
 - (f) **Assumption of Risk, Waiver of Liability and Indemnity Agreement.** The Permittee acknowledges and agrees, on behalf of itself and all successors and assigns: (i) that the site is subject to hazards from episodic and long-term bluff retreat and coastal erosion; (ii) to assume the risks to the Permittee 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; (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; and (v) that any adverse effects to property caused by the permitted project shall be fully the responsibility of the landowner.
2. **Inspection/Monitoring/Maintenance.** The Permittee shall ensure that the condition and performance of the as-built revetment is inspected and monitored by a licensed civil engineer with experience in coastal structures and processes. Such inspection/monitoring shall at a minimum address whether any significant weathering or damage has occurred that would adversely impact future performance, and identify any structural damage requiring repairs to maintain the as-built revetment profile. At a minimum, the Permittee shall submit to the Executive Director for review and approval inspection/monitoring/maintenance reports consistent with the terms and conditions of



the *Seawall/Blufftop Maintenance and Inspection Plan* approved by the County (see County Conditions 7 and 8 attached as Exhibit D of this report) for as long as the revetment exists at this site. Each such report shall be prepared by a licensed civil engineer with experience in coastal structures and processes and shall cover the monitoring evaluation described in this condition above. Each report shall contain recommendations, if any, for necessary maintenance, repair, changes or modifications to the as-built revetment.

3. **Public Rights.** The Coastal Commission's approval of this permit shall not constitute a waiver of any public rights which may exist on the property. The Permittee shall not use this permit as evidence of a waiver of any public rights which may exist on the property.
4. **Deed Restriction.** PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the Permittee shall submit to the Executive Director for review and approval documentation demonstrating that the Permittee has executed and recorded against the parcel(s) governed by this permit a deed restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property; and (2) imposing the special conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the property. The deed restriction shall include a legal description and site plan of the entire parcel or parcels governed by this permit. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.
5. **Compliance with Local Conditions of Approval.** With the exception of County Condition 4, all 21 conditions of the County of San Luis Obispo Permit # D980019P become conditions of this permit. (See Exhibit D of this report for a copy of the local conditions of approval). Because the County imposed these conditions under legal authority the included but was not limited to the Coastal Act, they remain binding on the applicant as County requirements notwithstanding the Commission's action on this permit.

Findings and Declarations

The Commission finds and declares as follows:

3. Existing Conditions

The proposed project is located on the bluffs at 1998 Pacific Avenue in the community of Cayucos in San Luis Obispo County.



Cayucos Beach Area

Cayucos is well known for excellent public access opportunities for beach area residents and visitors alike. Walking, viewing, swimming, bodysurfing, surfing, fishing, sunbathing, and more are all among the range of recreational activities possible along the Cayucos shoreline. Cayucos also provides a number of different coastal environments including sandy beaches, rocky tidal areas, and blufftop terraces. Cayucos also includes a number of defined neighborhoods and special communities within it. These varied coastal characteristics make the Cayucos shoreline unique in that a relatively small area can provide different recreational users a diverse range of alternatives for enjoying the coast.

Proposed Development Site

The project would take place on the bluffs and back beach area slightly to the north of Morro Strand State Beach, an extremely popular recreational beach. This long stretch of recreational sand area is almost entirely backed by different types of shoreline protective devices, including the Applicant's, extending from Morro Strand State Beach all of the way to the Cayucos Pier over a mile upcoast. Although this beach has been severely impacted over time by shoreline protective devices, it remains a significant public access and recreation area.

The Applicant's site is located on the bluffs fronting Pacific Avenue. A masonry block seawall and stairs existed at the site before being destroyed by the heavy storms in 1998. Due to unsafe conditions and accelerated bluff erosion of up to six feet of the backyard, the County of San Luis Obispo determined that immediate action was necessary to prevent loss or damage to life, health, and property. The seawall destroyed by storms appears to pre-date the coastal permitting requirements of Proposition 20 (the Coastal Initiative) and the Coastal Act, as does the residence at this location.

See exhibit A for a location maps, exhibit B for photos of the project area, exhibit C for proposed project plans.

4. Proposed Project

The Applicant proposes to recognize an emergency permit issued for replacement of a block masonry seawall with a rock rip-rap revetment and a new keyway cut into bedrock. The revetment would be at a 1.5:1(horizontal to vertical) slope extending seaward from the bluff. While it is difficult to determine the precise location of the previous seawall due to its state of disrepair, it appears that the toe of the newly proposed revetment would be extended roughly 8 additional feet seaward.

The project includes stockpiling broken up concrete debris and removing loose soil from the bluff face. For revetment stabilization, one horizontal bench would be cut into the face of the bluff approximately ten feet above the beach area level. A 3-foot deep by 6-foot wide keyway would be excavated across the front of the revetment and Geotextile fabric placed on the bluff face and continued into the keyway to add stability to the structure. Two-ton rocks would be individually placed within the keyway, along with previously removed concrete debris. New drainage devices are to be placed behind the rocks. Soil



removed during excavation of the keyway and from the upper bluff would be placed onto the face of the revetment covering most of the larger stones.

See site photo in exhibit B, and site plan and cross section in exhibit C.

5. Coastal Development Permit Determination

A. Geologic Conditions and Hazards

Coastal Act Section 30235 addresses the use of shoreline protective devices:

Section 30235. Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.

Coastal Act Section 30253 addresses the need to ensure long-term structural integrity, minimize future risk, and avoid additional, more substantial protective measures in the future. Section 30253 provides, in applicable part:

Section 30253. 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.*

1. Shoreline Armoring

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



In this case, a concrete block masonry seawall has existed at this location for some time. The revetment construction proposed here would replace the existing seawall with a rock rip-rap revetment. The project includes constructing a keyway into bedrock and stacking rock to the top of bluff at a 1.5:1 slope. As such, it proposes an area of revetment on the beach in excess of that previously present. This additional area of revetment represents new armoring.

For Coastal Act Section 30235 consistency, the proposed project must satisfy all of the following requirements: (1) there is an existing structure; (2) the existing structure is in danger from erosion; (3) the new shoreline-altering construction is required to protect the existing threatened structure; and (4) the required protection is designed to eliminate or mitigate its adverse impacts on shoreline sand supply. The first three questions relate to whether the proposed armoring is necessary, while the fourth question applies to mitigating some of the impacts from it.

A. Existing Structures to be Protected

For the purposes of shoreline protective structures, the Coastal Act distinguishes between development that is allowed shoreline armoring, and development that is not. Under Section 30253, new development is to be designed, sited, and built to allow the natural process of erosion to occur without creating a need for a shoreline protective device. Coastal development permittees for new shorefront development are thus making a commitment to the public (through the approved action of the Commission, and its local government counterparts) that, in return for building their project, the public will not lose public beach access, offshore recreational access, sand supply, visual resources, and natural landforms, and that the public will not be held responsible for any future stability problems. In other words, coastal zone development approved and constructed since the Coastal Act should generally not require shoreline protection in order to "assure stability and structural integrity" because it was constructed with adequate setbacks and/or other measures in order to negate the need for future armoring.

Coastal Act 30235 allows for shoreline protection in certain circumstances (if warranted and otherwise consistent with Coastal Act policies) for "existing" structures. One class of "existing structures" refers to those structures in place prior to the effective date of the Coastal Act. Coastal zone development approved and constructed prior to the Coastal Act went into effect was not subject to Section 30253 requirements. Although some local hazard policies may have been in effect prior to the Coastal Act, these pre-Coastal Act structures have not necessarily been built in such a way as to avoid the future need for shoreline protection (in contrast to those evaluated pursuant to Section 30253). Accordingly, Coastal Act 30235 allows for shoreline protection to be considered for these types of existing structures, where "existing" means it was permitted development prior to the Coastal Act.

The structure protected by the reconstructed revetment would be the "existing" residence. A 1953 aerial photo reveals a house on the property and the bluff maintaining stairs leading to the beach. The residence (and likely the existing masonry block seawall) pre-dates the coastal permitting requirements of both Proposition 20 and the Coastal Act, and thus qualifies as an existing structure for purposes of Section 30235.



B. Danger from Erosion

The Coastal Act allows shoreline armoring to protect existing structures in danger from erosion, but it does not define the term "in danger." There is a certain amount of risk in maintaining development along a California coastline that is actively eroding and can be directly subject to violent storms, large waves, flooding, earthquakes, and other hazards. These risks can be exacerbated by such factors as sea level rise and localized geography that can focus storm energy at particular stretches of coastline. As a result, some would say that all development along the immediate California coastline is in a certain amount of "danger." It is a matter of the degree of threat that distinguishes between danger that represents an ordinary and acceptable risk, and danger that requires shoreline armoring pursuant to Coastal Act Section 30235. Lacking Coastal Act definition, the Commission's long practice has been to evaluate the immediacy of any threat in order to make determinations as to whether an existing structure is "in danger." While each case is evaluated based upon its own particular set of facts, the Commission has generally interpreted "in danger" to mean that an existing structure would be unsafe to use or otherwise occupy within the next two or three storm season cycles (generally, the next few years) if nothing were to be done (i.e., in the no project alternative).

The Applicant has submitted the following geotechnical analysis to support the contention that the existing structures are in danger from erosion, and that the proposed project is appropriate:

- *Geologic Assessment of Bluff Erosion and Sea Cliff Retreat* by GeoSolutions, LLC, dated June 1998.

Cayucos has bluffs fronting beaches and is an area where development is threatened by erosion. The waterfront area of Cayucos is built upon unconsolidated sediment of an ancient stream valley and is thus particularly vulnerable to shoreline erosion.¹ Along Morro Strand State Beach (a continuous stretch of beach at the location of the subject property) the bluff is actively eroding and is expected to continue. Over 20 feet of bluff was lost in some spots during storms in 1983 and homes that had been 30 to 40 feet from the previous bluff edge were threatened.²

The existing single-family residence is currently 14 feet from the top of bluff. The top of the bluff was actively eroding at the site and along adjacent properties at a rate of 2 inches per year (GeoSolutions, LLC, 1998). Without any bluff protection, it is estimated that in 75 years the bluff will retreat nearly 12.5 feet from its current location. While a rip-rap revetment is normally not allowed when the residence is located beyond the estimated 75-year retreat, episodic and irregular erosion events must also be considered. Section 1.1 of the Geologic Assessment describes the pre-existing block masonry wall and stairway as completely destroyed. Large sections of the wall had buckled and perched upon one another creating extremely unsafe conditions. Exposed electrical wires and drain-pipes were present in the cliff face where the block wall detached from the cliff. In addition to causing failure of the seawall, storms caused the loss up to six feet of the bluff area in a single storm event. Based on ongoing erosion

¹ Parsons, Jeff, "The Outer Coast: Point Pinos to Point Buchon" in *Living with the California Coast*, Gary Griggs and Lauren Savoy, eds. Duke University Press, 1995, p. 224.

² Parsons, p. 227



in Cayucos coupled with episodes of accelerated bluff loss, it can be concluded that the existing structure is in danger from erosion.

C. Feasible Protection Alternatives to a Shoreline Structure

The next Section 30235 test that must be met before a shoreline protective device must be approved is that the proposed armoring must be "required" to protect the existing threatened structure. In other words, shoreline armoring may be permitted if it is the only feasible³ alternative capable of protecting the endangered structure. Other non-armoring alternatives typically considered include: the "no project" alternative; abandonment of threatened structures; relocation of the threatened structures; sand replenishment programs; drainage and vegetation measures on the blufftop itself; and combinations of each. In some cases, different types of armoring alternatives than that proposed (where the alternatives may have lesser impacts) are also considered.

One feasible alternative project in this case would be to approve replacement of the damaged seawall in-kind or within its existing profile. Such an option would result in similar long-term protection with a lesser beach area footprint. Provided the wall was made to mimic natural bluff forms (i.e., colored, contoured, sculpted, etc.), it could also improve aesthetics at the site (over the proposed revetment). It would also be expected to have much less maintenance requirements over its design lifetime (and thus less impacts associated with maintenance). This option is feasible. However, the project site is between a rock slurry revetment to the north and an angled vertical seawall to the south. According to the Geologic Assessment, a new vertical wall would have significant beach disturbance during foundation excavation and could threaten the structural integrity of shoreline protective devices on neighboring properties. It would also cost substantially more to reconstruct.

Another option would be to reconstruct the entire revetment at a steeper slope with a new keyway. The seaward toe of the keyway in this steeper slope option would have the same footprint as the previous seawall, negating the need for additional seaward expansion to accommodate a 1.5:1 slope as proposed. However, this option would not provide as much stability as a gentler sloped revetment would be expected to provide, and is inconsistent with general engineering practices imposed by the Commission on other such projects along the coast. In addition, the 1.5:1 slope proposed here will readily match the toe of the up coast permitted revetment (approved by the Commission in February 23, 1989; CDP 5-SLO-89-52) leading to greater structural stability, as well as uniformity with adjacent revetments.

Yet another alternative would be the true "no project" alternative. In other words, allowing the existing seawall structure to continue to deteriorate. This deterioration would result in a dangerous beach situation and higher levels of the types of public recreational access impacts identified for the repair option above. This alternative would ultimately lead to the loss of the residence at this location. This option is not feasible because it doesn't recognize any status of the existing seawall, and would result in loss of existing structures in a relatively short time period.

³ Note that Coastal Act Section 30108 defines feasibility as follows: "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.



Other non-structural options (sand nourishment or relocation of the existing structures) were determined to infeasible at this time. Relocating existing structures is infeasible because there is a lack of available space within which to relocate. Due to the sudden failure and dramatic bluff loss at this site, beach nourishment is not a feasible option in the short term. It would take an areawide sand nourishment program for this alternative to be feasible. Currently there is no sand nourishment or planned retreat program in this area. Drainage and vegetation alone would not be expected to significantly alter erosion patterns, although it would be expected to provide added stability in any alternative.

Thus, the Commission can concur that at this time, the proposed revetment is the preferred alternative to protect the existing structure, particularly given current site conditions and the history of the project.

D. Sand Supply Impacts

The last test of Section 30235 (previously cited) that must be met in order to require Commission approval is that shoreline structures must be designed to eliminate or mitigate adverse impacts to local shoreline sand supply.

Beach sand material comes to the shoreline from inland areas, carried by rivers and streams; from offshore deposits, carried by waves; and from coastal dunes and bluffs, becoming beach material when the bluffs or dunes lose material due to wave attack, landslides, surface erosion, gullyng, et cetera. Many coastal bluffs contain marine terrace deposits that may consist, in part, of ancient beach deposits that formed when land and sea levels differed from current conditions. Since some marine terrace deposits consist of ancient beach material, a large proportion of the material in the terraces is often beach quality sand or cobble, and a valuable contribution to the littoral system when it is added to the beach. While beaches can be preserved as marine terrace deposits over geologic time, the normal exchange of material between beaches and bluffs is for bluff erosion to provide material to the beach. Bluff retreat and erosion is a natural process resulting from many different factors such as erosion by wave action that may cause cave formation, enlargement and eventual collapse, saturation of the bluff soil from ground water causing the bluff to slough off and natural bluff deterioration. When a shoreline protective device covers the back-beach or bluff, the natural exchange of material either between the beach and dune or from the bluff to the beach will be interrupted and, if the shoreline is eroding, there will be a measurable loss of material to the beach.

These natural shoreline processes affecting the formation and retention of sandy beaches can be significantly altered by the construction of shoreline armoring structures since bluff retreat is one of several ways that beach quality sand is added to the shoreline. Bluff retreat and erosion is a natural process resulting from many different factors; shoreline armoring directly impedes these natural processes.

Some of the effects of engineered armoring structures on the beach (such as scour, end effects and modification to the beach profile) are temporary and/or are difficult to distinguish from all the other actions that modify the shoreline. Others are more qualitative (e.g., impacts to the character of the shoreline and visual quality). Some of the effects that a shoreline structure may have on local shoreline sand supply shoreline processes can be quantified, however, including: (1) the loss of the beach area on



which the structure is located; (2) the long-term loss of beach which will result when the back beach location is fixed on an eroding shoreline (also known as "passive erosion"); and (3) the amount of material which would have been supplied to the beach if the back beach or bluff were to erode naturally.

In this case, the back-beach is already armored by the existing seawall, and thus the sand supply impact is limited to the loss of the sand-generating area on which the expanded portion of the structure would be located (its encroachment on the beach). The revetment development would extend the revetment seaward and key it into the underlying bedrock. While there are access and recreational issues associated with the loss of any useable recreational sandy beach space (as discussed in the public access finding of this report), and because the sand would be scraped away and the structures placed onto bedrock (and the displaced sand and sandstone materials pushed back over the structures), the sand supply impact in this case concerns the potential loss of bedrock area for generating sand.

Typical mitigations required by the Commission for such direct sand supply impacts have been in-lieu fees and/or beach nourishment program. With regards to beach nourishment, a formal sand replenishment strategy can introduce an equivalent amount of sandy material back into the system to mitigate the loss of sand that would be caused by a protective device. In-lieu fee programs are used as an alternative mitigation mechanism.

Given the fact that there is an existing seawall in place, the degree of sand supply impact as a result of the project is relatively slight. Moreover, there are no currently existing beach nourishment or in-lieu fee programs directed at this beach area. Absent a comprehensive program that provides a means to coordinate and maximize the benefits of mitigation efforts in the area now and in the future, the success of such piecemeal mitigation efforts is questionable. Thus, the Commission is not specifying a direct in-kind placement of sandy material or in-lieu fee as mitigation.

E. Shoreline Armoring Conclusion

In sum, there are alternatives to the project proposed, but there don't appear to be non-armoring alternatives. In areas such as Cayucos, which are substantially built out and already armored with a mix of shoreline protection devices (some permitted and some not), questions arise about the most effective means to carry out Coastal Act objectives. As discussed in the findings of this report, there are special circumstances applicable to the project site and surrounding area that must be considered when applying these Coastal Act provisions. The presence of seawalls/revetments adjacent to both sides of the project, as well as along most of the developed private property on the seaward side of Pacific Avenue calls into question whether the strict application of the requirements is, in this area, the most effective means of carrying out Coastal Act objectives of preventing the adverse environmental impacts associated with shoreline protection devices. Requiring the Applicant to remove the revetment and construct some other form of "hard" alternative may avoid additional encroachments onto the beach, but would not address the larger, and arguably more significant, coastal resource issues associated with the numerous existing seawalls that surround the project along this section of the coast.

At a minimum, additional regional planning (e.g., a specific plan for addressing armoring needs and impacts along this stretch of coastline), regional planning mechanisms (e.g., a shoreline armoring



management entity meant to cover the larger shoreline that includes the revetment here), and/or implementation tools (e.g., a systematic approach for identifying and addressing specific armoring impacts, like boulders migrating from revetments) may be necessary. In recognition of these circumstances, the approval of this permit is accompanied by a condition that requires the Applicant to be a part of a future comprehensive project that addresses the design issues and impacts associated with shoreline protective devices along the entire stretch of Pacific Avenue (Special Condition 1(a)).

2. Monitoring, Maintenance, and Long-Term Stability

A. Shoreline Dynamics

Coastal Act Section 30253 requires the project to assure long-term stability and structural integrity, minimize future risk, and avoid additional, more substantial protective measures in the future. This is particularly critical given the dynamic shoreline environment within which the proposed project would be placed. Moreover, with global warming and sea level rise,⁴ increased wave heights and wave energy are likewise expected. Along much of the California coast, the bottom depth controls the nearshore wave heights, with bigger waves occurring in deeper water. Since wave energy increases with the square of the wave height, a small increase in water depth and wave height can cause a significant increase in wave energy and wave damage. So, combined with the physical increase in water elevation, a small rise in sea level can expose previously protected backshore development to both inundation and wave attack, and those areas that are already exposed to wave attack will be exposed to more frequent wave attack with higher wave forces. Structures that are adequate for current storm conditions may not provide as much protection in the future.

A second concern with global warming and sea level rise is that the climatic changes could cause changes to the storm patterns and wave climate for the entire coast. As water elevations change, the transformation of waves from deep water will be altered and points of energy convergence and divergence could shift. The new locations of energy convergence would become the new erosion "hot spots" while the divergence points may experience accretion or stability. It is highly likely that portions of the coast will experience more frequent storms and the historic "100-year storm" may occur more often

In an attempt to ensure stability under such conditions, the Commission has typically required that new shoreline structures be designed to withstand either a 100-year storm event, or a storm event comparable to the 1982/83 El Niño event. Also, since it is possible that storm conditions may worsen in the future, the Commission has required that structures be inspected and maintained on a regular basis. The coast

⁴ There is a growing body of evidence that there has been a slight increase in global temperature and that an acceleration in the rate of sea level can be expected to accompany this increase in temperature. According to the *Third Assessment Report - Climate Change 2001*, by the International Panel on Climate Change (IPCC) global sea level is predicted to rise by 0.09 to 0.88 meters (0.3 to 2.88 feet) from the 1990 level by 2100, with significant regional variability. Estero Bay was not included in the estimates of sea level rise through the year 2100. The closest tidal stations with an adequate record to use for a 100-year projection were San Francisco and Santa Monica. Both those locations could, by the year 2100, have a rise in sea level approaching 3 feet, with a 10% probability that it would be higher than that, based on estimates of historic and future sea level change provided by the U.S. Environmental Protection Agency in Titus and Narayanan (1995) "The Probability of Sea Level Rise" (EPA 230-R-95-008).



can be altered significantly during a major storm and coastal structures need to be inspected on a regular basis to make sure they continue to function as designed. If storm conditions worsen in future years, the structures may require changes or modifications to remain effective. In some rare situations, storm conditions may change so dramatically that existing protective structures may no longer be able to provide any significant protection, even with routine maintenance.

B. Revetment Stability

For revetments, an important component of long-term stability is the function of a keyway to "lock" the revetment into place. The existing revetment is keyed into bedrock. A revetment that is over-steep (such as a revetment at a 1:1 slope) only exacerbates stability problems, as the rocks themselves are less secure. In this case, the project proposes to use a 1.5:1 slope (a gentler slope) to ensure revetment stability. The primary reason for the proposed revetment reconstruction is to install a keyway and to promote long-term stability at this site. This project is more consistent with the Coastal Act in this regard than the existing masonry block seawall currently at the site.

C. Monitoring and Maintenance

Critical to the task of ensuring long-term stability as required by Section 30253 is a formal long-term monitoring and maintenance program. If the revetment were damaged in the future (e.g. as a result of flooding, landsliding, wave action, storms, etc.) it could lead to a degraded public access condition, and it could lead to the need for more bluff alteration and/or more substantial armoring. In addition, such damages could adversely affect the beach by resulting in debris on the beach and/or creating a hazard to the public using the beach.

Therefore, in order to find the revised project consistent with Coastal Act Section 30253, the proposed project must be maintained in its approved state. Further, in order to ensure that the property owner and the Commission know when repairs or maintenance are required, the Applicant must regularly monitor the condition of the subject armoring, particularly after major storm events. Such monitoring will ensure that the Applicant and the Commission are aware of any damage to or weathering of the armoring and can determine whether repairs or other actions are necessary to maintain the structures in their approved state before such repairs or actions are undertaken. Further seaward encroachment (and more substantial armoring) must be prohibited, and drainage controlled (see Special Conditions 1(b), 1(d), and 2).

D. Assumption of Risk

The Commission's experience in evaluating the consistency of proposed developments with Coastal Act policies regarding development in areas subject to problems associated with geologic instability, flood, wave, or erosion hazard, has been that development has continued to occur despite periodic episodes of heavy storm damage, erosion, landslides, or other such occurrences. Shoreline development is susceptible to bluff retreat and erosion damage due to storm waves and storm surge conditions. Past occurrences statewide have resulted in public costs (through low interest loans and grants) in the millions of dollars. As a means of allowing continued development in areas subject to these hazards while avoiding placing the economic burden on the people of the state for damages, the Commission has



regularly required that Applicants acknowledge site geologic risks and agree to waive any claims of liability on the part of the Commission for allowing the development to proceed.

The risks of the project include that the revetment and/or inland residential structure will be damaged by bluff failure, erosion, and wave action. Although the Commission has tried to minimize these risks, the risks cannot be eliminated entirely. Given that the Applicant has chosen to construct the project despite these risks, the Applicant must assume these risks. Accordingly, this approval is conditioned for the Applicant to assume all risks for developing at this location (see Special Condition 1(f)).

E. Long Term Structural Stability Conclusion

The revised revetment (at a 1.5:1 slope and keyed) can be found consistent with Coastal Act Section 30253 because it would result in better long-term stability at the site than exists now, would avoid the above-described types of problems from deteriorating structures over time, and because of other elements of the project and the special conditions designed to protect and enhance recreational and visual access to the degree feasible (as discussed above and in the findings that follow).

3. Geologic Conditions and Hazards Conclusion

Because stability issues can be addressed (i.e., no future expansion, monitoring, maintenance, assumption of risk, etc.) and because other project alternatives are not feasible at this time, the revetment construction meets the tests of Coastal Act Section 30235. Special Condition 1(a) requires that Applicant participate in a comprehensive project approved by the Commission that addresses the full range of coastal issues currently presented by the numerous existing seawalls that surround the project along Pacific Avenue. This approach provides the most effective means of carrying out Coastal Act objectives to avoid and minimize adverse impacts associated with shoreline protection devices. Thus, the project can be approved.

B. Public Access and Recreation

Coastal Act Section 30604(c) requires that every coastal development permit issued for any development between the nearest public road and the sea "shall include a specific finding that the development is in conformity with the public access and public recreation policies of [Coastal Act] Chapter 3." The proposed project is located seaward of the first through public road (Pacific Avenue). Coastal Act Sections 30210 through 30214 and 30220 through 30224 specifically protect public access and recreation. In particular:

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.

30211. 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.

30212(a). Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects ...

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

30220. Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

30221. Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

30223. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

Coastal Act Section 30240(b) also protects parks and recreation areas such as the Morro Strand State Beach adjacent to the site, and the beach and offshore recreation area seaward of the site. Section 30240(b) states:

30240(b). Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Finally, Section 30253 protects special recreational destination points such as the beach fronting the revetment and its relation to up and downcoast beaches. Section 30253 states, in part:

30253(5). New development shall: where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses.

As previously detailed, the project site fronts the extremely popular beach that is highly used, and a prime coastal access and recreation destination (see also Existing Conditions section of this report preceding).

Permanent Beach Access Loss

The proposed reconstructed revetment would extend the base of the existing seawall slightly seaward in order to construct a new keyway and assure structural stability. This extension would cover roughly 520 square feet (i.e., 8 feet seaward along 65 feet of project frontage – see project plans in exhibit C).



Although this area of coverage would be relatively small during peak use times (as it would be expected to be covered with sand in a typical summer beach profile), it would represent a new impediment to beach use- particularly during the wintertime months. The ability of the public to use that portion of the beach for lateral access, passive access (e.g., sitting and enjoying the beach), and recreational access would be reduced and diminished. The beach area in question is heavily used for the public recreational activities and this impact is inconsistent with the Coastal Act policies listed above that protect these public use areas.

As detailed in the preceding finding, the project cannot be modified so that the revetment is installed at a steeper slope. While doing this may reduce additional beach encroachment and permanent loss of back beach area, concerns about long-term structural integrity come into play. Such impacts could only be eliminated by requiring a very different project, like removing the keyway and rocks and installing a vertical wall. As discussed previously, these alternatives are not feasible (see Feasible Alternatives to a Shoreline Structure on page 12).

Other Beach Facility Impacts

That said, rocks and/or debris still might come off of this site and negatively impact beach recreational use and facilities. This impact can be due to displacement (where rocks occupy beach space), or increased danger to recreation (such as a rock submerged just below the surface or in the recreational surf zone). Individual rocks that migrate can sometimes be retrieved, and other times cannot be located. In both cases, the rock leads to negative impacts depending on its location relative to beach uses areas, the length of time it is located in areas that detract from recreational use, and its potential for causing damage in a storm event (particularly given that such storms typically scour away beach sand and expose strewn rocks otherwise hidden). These impacts need to be mitigated if the revised project is to be found consistent with the above-listed policies.

One way of reducing such impacts is to require that all dislodged rock and debris be retrieved immediately. This is appropriate and required in this case (Special Condition 1(d)). However, while this can reduce these impacts, it does not eliminate them (as the impact will be present from the time the rock and/or debris migrates into the public recreational beach area until it is removed). To avoid the possibility that additional armoring is installed seaward of the revetment and to mitigate for the impacts on beach recreational use, development shall be prohibited seaward of the existing permitted footprint and profile of the permitted revetment (see Special Condition 1(b)). This applies to the wedge of rock in a 1.5:1 slope making up the revetment profile (in cross-section) as well as the seaward toe itself (in site plan). In other words, at no time shall additional rock and/or other development be allowed seaward of any point on the revetment profile.⁵

⁵ This point is made so as to avoid any future confusion should it be argued that the toe of the revetment in site plan view by itself defines the line past which rock cannot be placed. Using this incorrect interpretation, an applicant could argue that additional armoring and/or other development could be placed on top of the approved revetment slope so long as it didn't go seaward of the toe. Such placement would lead to even more substantive armoring and/or other development in the back beach placed at a steep and unstable slope (i.e., in



The Applicant owns in fee-title the area of beach extending seaward from the revetment. To protect the public's ability to use the beach in this area, the County required the Applicant to record an offer to dedicate this area for public access. This condition is incorporated by reference into this permit approval (Special Condition 5).

Public Access and Recreation Conclusion

By allowing for a project that extends the footprint of the revetment seaward, impacts to public recreational access are incurred. In addition, the beach experience is negatively impacted during the time that rocks and/or debris enter into the beach access area. That said, these impacts can be mitigated by an OTD for the beach area seaward of the revetment (County Condition #9), combined with a requirement to participate in future areawide planning efforts to address public access and recreation issues along this beach area (Special Condition 1(a)). Thus, the project can be found consistent with the Coastal Act sections discussed in this finding because these access impacts can be mitigated by the OTD, and because the project, including the other project modifications, can protect and enhance beach recreational access and views.

C. Visual Resources

Coastal Act Section 30251 protects coastal viewsheds. Section 30251 states:

Section 30251. 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.

Coastal Act Section 30240(b) also protects parks and recreation areas such as the Morro Strand State Beach, and the beach and offshore recreation area seaward of the site. Section 30240(b) states:

30240(b). Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Finally, Section 30253 protects special recreational destination points such as the beach fronting the revetment and its relation to up and downcoast beaches. Section 30253 states, in part:

excess of the 1.5:1 slope approved). Such incorrect interpretation could also lead to a scenario where a vertical seawall is proposed at the toe, with the area inland of the wall (i.e., the existing revetment area) backfilled for private use. Neither is allowed here.



30253(5). New development shall: where appropriate, protect special communities and neighborhoods which, because of their unique characteristics, are popular visitor destination points for recreational uses.

Again, as previously detailed, the project site fronts the extremely popular beach recreation area. These areas are important coastal access destinations for residents and visitors to the area alike. Although the back beach bluffs have been degraded visually by the placement of large revetments, it remains a valuable view area and should be protected.

Additional Rock Massing in the Public Viewshed

The proposed project would adversely affect the overall public viewshed and aesthetic over the long term by introducing large rocks into the back beach area. Photographic evidence of the completed emergency repair shows an imposing and unnatural (compared to the natural bluff landforms in this area) rock boulder facade in the back beach area. Absent some form of effective camouflaging, this would be a significant long-term impact. The Commission has gone to great efforts in recent years to ensure that permitted revetments are adequately camouflaged by requiring the removal of non-native invasive plant species (like iceplant) and requiring the planting of dense screens of native bluff species (like the "Carmel creeper" ceanothus proposed here) capable of covering the upper portions of the revetments. Over time, it is expected that the back beach aesthetic along Pacific Avenue and elsewhere will be enhanced by virtue of these efforts, as individual revetments are replaced/maintained through the Commission's regulatory process.

In this case, soil was removed during excavation of the keyway and from the upper slope and placed onto the face of the revetment, covering many of the large stones. While this may help to mitigate some immediate visual impacts, it is not clear how effective this will be over the longer term. Loose soil placed on the face of the bluff can be easily blown off by high winds and be eroded away by rain and surface drainage. Although the existing soil cover provides some visual relief, additional vegetative screening can be implemented to reduce adverse visual impacts. Long-rooted non-invasive native plant species should be used for this purpose, and mimic the County's requirements for the landscaped backyard area (County condition #4). In a bluff setting, these species can help to stabilize bluff soils, minimize irrigation of the bluff (again helping to stabilize the bluff), and can help to avoid failure and sloughing in some cases. These native species also help to create a more natural back beach vegetation aesthetic because the species are natural to the bluffs in this area and can be coordinated between individual property owners along the revetment (and thus leading to a more coherent visual pattern as seen from the beach below).

To mitigate for the beach viewshed degradation due to any rock/soil migration (before it is retrieved), and to mitigate for the long-term impact of additional rock massing in the viewshed, and to enhance the natural landform (for scenic value and stability), the Applicants must replant with appropriate native species, and achieve and maintain vegetation performance standards for a long-term cascading planting screen to cover the upper third (roughly 8 vertical feet) of the revetment for the life of the project (see Special Condition 1(c)). Given the height of the revetment, such screening should provide effective revetment camouflaging during most times of the year. Extending the screening further down slope does



not appear feasible at this time due to the lack of available soil areas for plantings, and the increased potential for the loss of materials in the lower revetment area during winter storm events.

Visual Resource Conclusion

As conditioned, the project is consistent with Coastal Act Sections 30251, 30240(b), and 30253(5), regarding visual and scenic resources.

D. Other

Rodents

Revetments are known to harbor rodents; particularly revetments fronting popular beach areas (due to visitors' food and garbage). Such rodent infestations in revetments are common in the Cayucos beach area. Rodents living in revetment voids can negatively impact the beach recreational experience, and can lead to serious public health problems. In this case, neither the Applicant nor the Commission is aware of any evidence indicating that there is any rodent infestation within the subject revetment. However, this approval requires the Applicant to promptly respond to eradicate such an infestation so as to protect beach recreational users in this regard should a problem occur in the future. See Special Condition 1(e).

Other Beach Area Development and Public Rights

There has been a long and steady history of public use of the beach area fronting this site. So as not to prejudice any future evaluations on this topic, and so as to avoid a situation where this approval were described as resolving any ownership/public use issues, a condition is attached stating that the Commission's approval of this project does not constitute a waiver of any public rights which may exist on the property, and that the Applicant cannot use this approval as evidence of a waiver of same. See Special Condition 3.

Future Notice

The terms and conditions of this approval are meant to be perpetual. In order to inform future owners of the requirements of the permit, and add a level of legal implementation of this fact, this approval is conditioned for a deed restriction designed to record the project conditions against the affected property. See Special Condition 4.

6. California Environmental Quality Act (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.



The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of Resources as being the functional equivalent of environmental review under CEQA. This staff report has discussed the relevant coastal resource issues with the proposal, and has recommended appropriate suggested modifications to avoid and/or lessen any potential for adverse impacts to said resources. No public comments have been received to date. All above Coastal Act findings are incorporated herein in their entirety by reference.

As such, there are no additional feasible alternatives nor feasible mitigation measures available which would substantially lessen any significant adverse environmental effects which approval of the proposed project, as modified, would have on the environment within the meaning of CEQA. Thus, if so modified, the proposed project will not result in any significant environmental effects for which feasible mitigation measures have not been employed consistent with CEQA Section 21080.5(d)(2)(A).



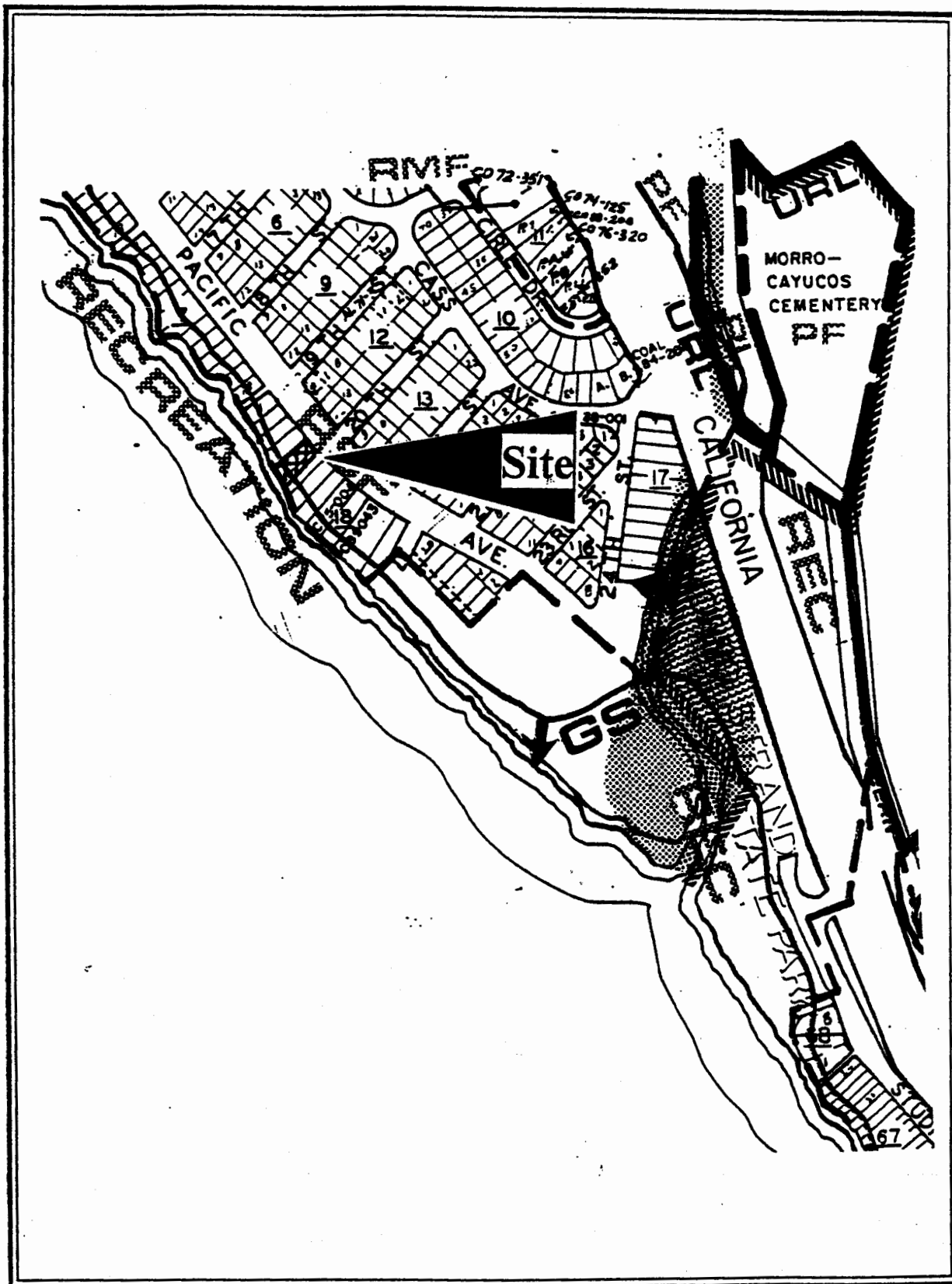
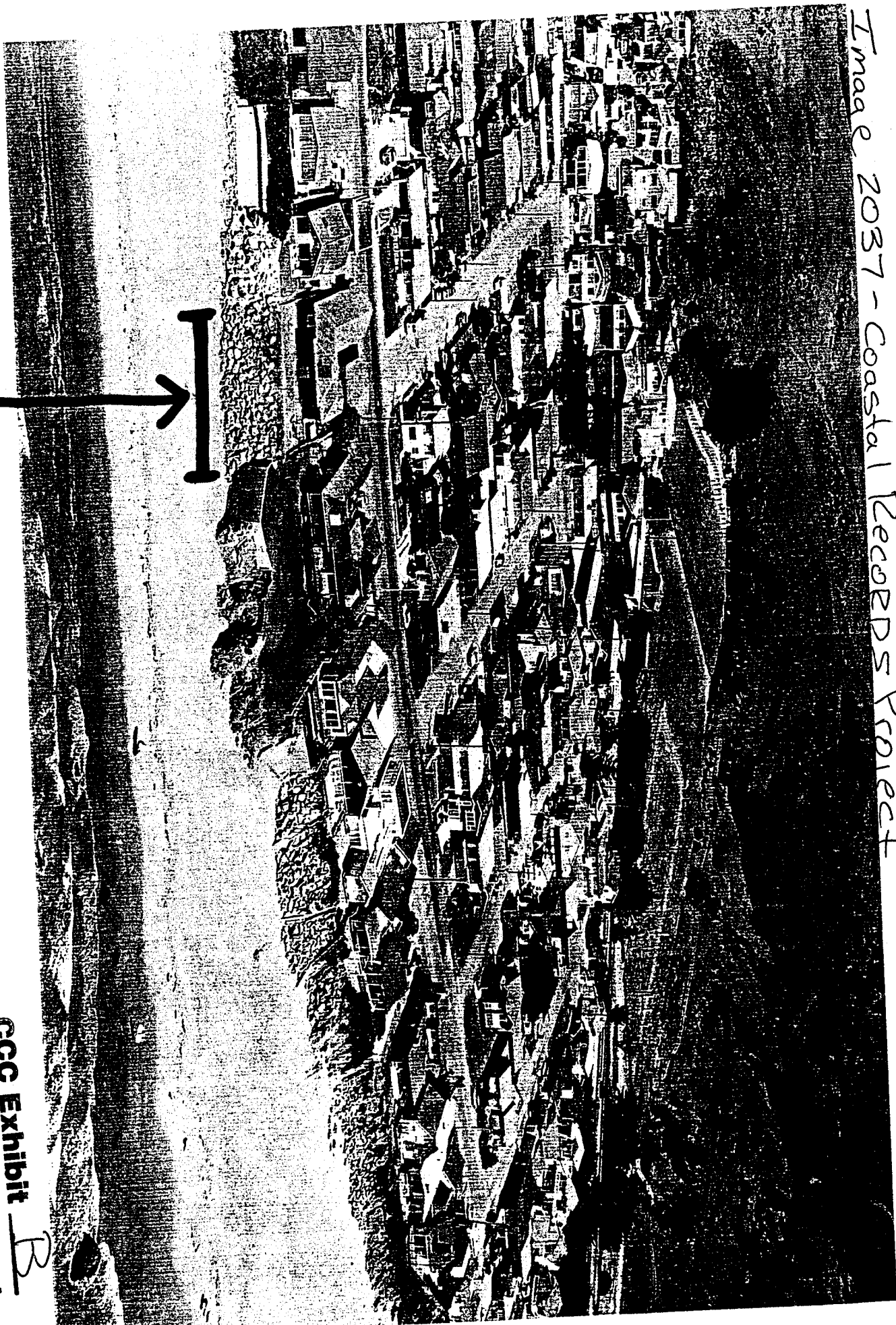
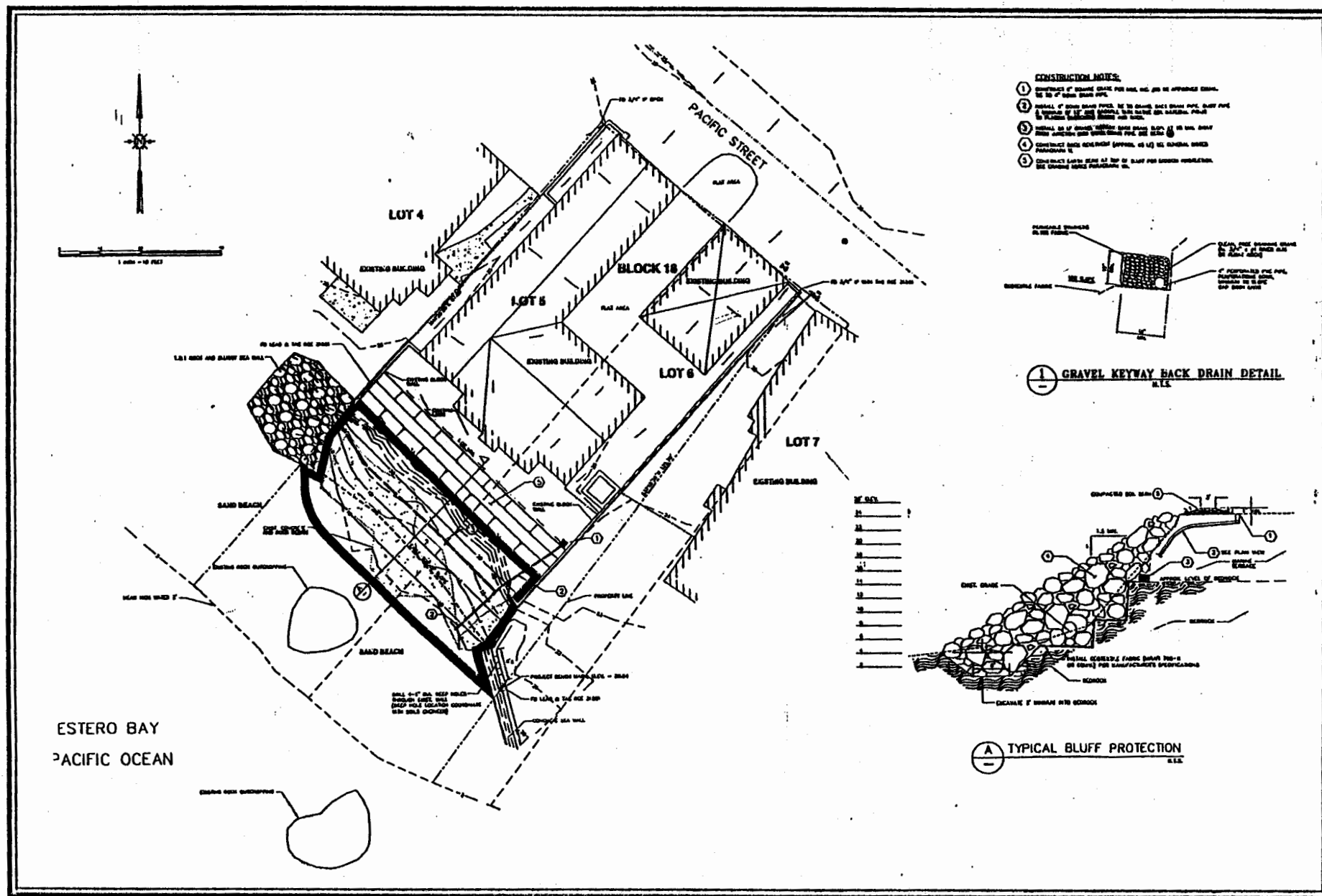


Image 2037 - Coastal Records Project



Completed Project



SITE PLAN



RECEIVED

JUL 25 2001

CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

URSULA TRUESDELL DAVIS
PO BOX 258
CAYUCOS CA 93430

FINAL LOCAL
ACTION NOTICE

REFERENCE # 3-SLO-01-354
APPEAL PERIOD 7/26-8/5/01

SAN LUIS OBISPO COUNTY
DEPARTMENT OF PLANNING AND BUILDING

VICTOR HOLANDA, AICP
DIRECTOR

BRYCE TINGLE, AICP
ASSISTANT DIRECTOR

ELLEN CARROLL
ENVIRONMENTAL COORDINATOR

FORREST WERMUTH
CHIEF BUILDING OFFICIAL

NOTICE OF FINAL COUNTY ACTION

HEARING DATE: JULY 6, 2001

SUBJECT: ZA2001-116

URSULA DAVIS - D980019P Minor Use Permit/Coastal Development Permit to permit an engineered rip-rap revetment which was constructed in September 1998 under an emergency permit (P980171E), in the Residential Single Family Land Use Category. The property is located in the county at 1998 Pacific Avenue, at the intersection of Pacific and 20th Street, in the community of Cayucos; APN: 064-241-040, in the Estero Planning Area.

LOCATED WITHIN COASTAL ZONE: YES

The above-referenced application was approved on JULY 6, 2001 by the Zoning Administrator. Copies of the Final *Findings and Conditions* are attached. The conditions of approval must be completed as set forth in this document.

If the use authorized by this Permit approval has not been established or if substantial work on the property towards the establishment of the use is not in progress after a period of twenty-four (24) months from the date of this approval or such other time period as may be designated through conditions of approval of this Permit, this approval shall expire and become void unless an extension of time has been granted pursuant to the provisions of Section 23.02.050 of the Land Use Ordinance.

If the use authorized by this Permit approval, once established, is or has been unused, abandoned, discontinued, or has ceased for a period of six (6) months or conditions have not been complied with, such Permit approval shall become void.

This action is appealable to the Board of Supervisors within 14 days of this action. If there are Coastal grounds for the appeal there will be no fee. If an appeal is filed with non coastal issues there is a fee of \$474.00. This action may also be appealable to the California Coastal Commission pursuant to Coastal Act Section 30603 and the County Coastal Zone Land Use Ordinance 23.01.043. These regulations contain specific time limits to appeal, criteria, and procedures that must be followed to appeal

CCC Exhibit D
(page 1 of 8 pages)

this action. The regulations provide the California Coastal Commission 10 working days following the expiration of the County appeal period to appeal the decision. This means that no construction permits can be issued until both the County appeal period and the additional Coastal Commission appeal period have expired without an appeal being filed.

Exhaustion of appeals at the county is required prior to appealing the matter to the California Coastal Commission. This appeal must be made directly to the California Coastal Commission Office. Contact the Commission's Santa Cruz Office at (831) 427-4863 for further information on appeal procedures. If you have questions regarding your project, please contact your planner TERRY WAHLER, at (805) 781-5600. If you have any questions regarding these procedures, please contact me at (805) 781-5718

Sincerely,

Chris Macek

Chris Macek, Secretary
MINOR USE PERMITS

(Planning Department Use Only)

Date NOFA original to applicant JULY 11, 2001

Mailed Hand-delivered

Date NOFA copy mailed to Coastal Commission: JULY 20, 2001

Enclosed: x Staff Report
 Resolution
 x Findings and Conditions

CCC Exhibit D
(page 2 of 8 pages)

Findings (Exhibit A)

- A. As conditioned, the proposed project or use is consistent with the Local Coastal Program and the Land Use Element of the San Luis Obispo County General Plan because rip-rap revetments are structures only used to stabilize the bluff and are allowed by the Local Coastal Program provided they are needed to protect existing development.
- B. As conditioned, the proposed project or use satisfies all applicable provisions of Title 23 of the County Code.
- C. As conditioned, the establishment and subsequent operation or conduct of the use will not, because of the circumstances and conditions applied to this particular case, be detrimental to the health, safety or welfare of the general public or persons residing or working in the neighborhood of the use, or be detrimental or injurious to properties in the vicinity because the installation and operation of such a facility does not generate activity that presents a potential threat to the surrounding property and buildings. This project is subject to Ordinance and Building Code requirements designed to address health, safety and welfare concerns.
- D. As conditioned, the proposed project or use will not be inconsistent with the character of the immediate area or contrary to the orderly development because the rip-rap revetment ties in with the existing rip-rap revetment structures on the neighboring properties.
- E. The proposed project or use will not generate a volume of traffic beyond the safe capacity of all roads providing access to the project, either existing or to be improved with the project because the project is located on Pacific, a local road constructed to a level able to handle any additional traffic associated with the project.
- F. Natural features and topography have been considered in the design and siting of all proposed physical improvements because as designed, the rip-rap revetment will protect the entire sea cliff from erosion, be able to protect the cliff during periods of high surge associated with high tides, and be least intrusive to beach access.
- G. The soil and subsoil conditions are suitable for any proposed excavation, site preparation and drainage improvements have been designed to prevent soil erosion, and sedimentation of streams through undue surface runoff, because improvements will be installed in accordance with GeoSolutions Geologic Assessment dated June 26, 1998.
- H. On the basis that there is no substantial evidence in the record that the project will have a significant effect on the environment, a Negative Declaration (ED98-394) has been prepared for the project.
- I. The structure is designed and sited to eliminate or mitigate adverse impacts on the local shoreline sand supply as reviewed by the certified engineering geologist. The beach consists of exposed bedrock and very little sand.

CCC Exhibit D
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- J. The proposed use is in conformity with the public access and recreation policies of Chapter 3 of the California Coastal Act and structure will not preclude public access to and along the coast where an accessway is consistent with the provisions of Section 23.04.420 (Coastal Access Required) because as conditioned the applicant will provide a lateral access dedication of 25 feet of beach available at all times during the year. Where topography limits the beach to less than 25 feet, lateral access shall extend from the mean high tide to the toe of the bluff and the existing coastal access ways nearest to the site are currently located approximately 1,000 feet southeast at Morro Strand State Beach.
- K. The structure is designed and sited to be visually compatible with adjacent structures and natural features to the maximum extent feasible because the rock material used for bluff protection are of similar geologic type and appearance as the existing rocks within the bluff face and in the immediate area.
- L. The structure is designed and sited to minimize erosion impacts on adjacent properties that may be caused by the structure.
- M. The structure will not adversely impact fish and wildlife because the project will not directly impact sensitive species or habitats and the footprint of the rip-rap revetment was limited to highly disturbed areas with no species of special concern. Though subtidal and intertidal zones could be indirectly affected, the affects are limited to periodic mineral increase from increased wave refraction. These zones are highly resistant to disturbance and wave refraction.
- N. Non-structural methods of protection (artificial sand nourishment or replacement) have been proven to be impractical or infeasible because the beach consists of exposed bedrock and very little sand. Also, there is no comprehensive sand nourishment program in this area. Given current beach conditions and the small number of applications for bluff protection devices in the area, it is neither necessary nor feasible to initiate a sand renourishment program at this time.
- O. Significant archeological resources will not be affected by the project because the project has been designed and adequate measures have been taken to ensure protection of these resources, if any exist.
- P. The revetment is necessary to prevent loss or damage to the principal structure on the property due to unexpected bluff erosion

Staff report prepared by Martha Neder
and reviewed by Matt Janssen

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Exhibit B- Conditions

Approved Development

1. This approval authorizes the installation of a engineered riprap bluff protection structure and minor grading.
 - A. Site development shall be consistent with the approved site plan and elevations. All work shall be done consistent with the GeoSolutions Geologic Assessment dated June 26, 1998, as well as specific conditions of this permit approval.
 - B. The project shall be designed and constructed in order to ensure that the proposed improvements will not accelerate the erosion of the bluff and beach on properties in the vicinity.
2. **Prior to the issuance of a construction permit**, the applicant shall submit a sample of rock material to be used for bluff protection or a letter from a geologist verifying the similarity of rocks to be used with the existing rocks. If possible, rocks used for bluff protection shall be of similar geologic type and appearance as the existing rocks within the bluff face and in the immediate area.

Grading

3. All excess excavated material, if any, other than clean beach sand shall be removed from the beach prior to the next high tide following excavation. Such material shall be disposed of in either an approved fill location or a permitted landfill.

Bluff Setback Landscaping Material

4. Any landscaping material placed within the 25 foot bluff top setback shall be drought tolerant and not require the use of irrigation or watering with the exception of natural rainfall.

Road Repair Work

5. **Prior to the issuance of construction permits**, the applicant shall submit a plan to County Engineering detailing how boulders will be transported onto the beach without damaging public roads or bluffs.
6. **Prior to final inspection of the seawall**, all heavy equipment access-ways onto the beach, if any, shall be restored to pre-construction conditions. The applicant is aware that construction of new or temporary equipment access-ways onto the beach may require additional review and permits.

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Geology/Drainage

7. Prior to final approval of construction permits, the applicant shall submit for the review and approval by the Environmental Coordinator, a Seawall/Blufftop Maintenance and Inspection Plan. The purpose of the Plan is to ensure that drainage structures to prevent surface runoff from flowing over the bluff face in an erosive manner are maintained and functioning as originally intended. The Plan shall include:
1. An annual inspection schedule
 2. Maintenance recommendations and timeline
 3. Items to be inspected include:
 - Rain gutters installed on all rooflines. All gutters should have downspouts that connect to a drainage system that diverts water to the base of the bluff onto non-erosive rip-rap or bedrock;
 - Run-off collected from hardscape and vegetated areas should be collected in drains and plumbed into the central drain;
 - A drainage system installed and functioning to collect surface or subsurface drainage near the top of the bluff.
 - Bluff area between house and bluff edge shall not be landscaped with lawn or other water intensive landscaping. No vegetation shall use water other than drip irrigation.
 - Seawall conditions including dislodged rocks or stones, excessive scour in front of revetment following significant storm events, gaps or exposed underlayer material, apparent slumping or rotation of revetment, settlement of rock into underlying sand, or erosion that would undermine or jeopardize the seawall integrity.
8. The inspection report shall include recommended actions necessary to prevent further erosion of the bluff and to maintain proper drainage control. The applicant agrees to abide by and implement future drainage and maintenance recommendations necessary to ensure that the existing plan and structures function as intended.

Coastal Access

9. Prior to issuance of construction permits, in a form acceptable to County Counsel, the applicant shall provide a lateral access dedication of 25 feet of beach available at all times during the year. Where topography limits the beach to less than 25 feet, lateral access shall extend from the mean high tide to the toe of the bluff.

Archaeology

10. Prior to issuance of construction permit, the exposed bluff surrounding the shoreline structure shall be examined by an archaeologist familiar with the area and an evaluation of the exposed soil and review of the potential for buried deposits be conducted. In the event archaeological resources are unearthed or discovered during any construction activities, the

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following standards apply:

- Construction activities shall cease, and the Environmental Coordinator and the Planning Department shall be notified so that the extent and location of discovered material may be recorded by a qualified archaeologist, and disposition of artifacts may be accomplished in accordance with state and federal law.
- In the event archaeological resources are found to include human remains, or in any other case when human remains are discovered during construction, the County Coroner is to be notified in addition to the Planning Department and the Environmental Coordinator so the proper disposition may be accomplished.

Miscellaneous

11. All equipment used for seawall construction shall be removed from the beach at the end of the working day. If high tides encroach into the construction area, such equipment shall also be removed from the wetted beach area during each tidal cycle.
12. No equipment used for seawall construction shall be parked or staged on Pacific Avenue, unless an encroachment permit is first issued.
13. No rocks to be used for the construction of the seawall shall be dropped on County roads of left within County right-of-ways.
14. No fueling or scheduled maintenance of equipment shall occur on the beach. Equipment shall be removed from the sandy beach for such activities.
15. All equipment shall be inspected for leakage of petroleum products (e.g. gasoline, diesel fuel, hydraulic oil) or antifreeze on a daily basis. Equipment showing obvious signs of such leakage shall not be used on the beach.
16. The applicant is aware that spillage of any petroleum product on the beach requires immediate notification of the proper authorities. In the event of a spill, notification shall be accomplished as follows:
 1. During normal business hours, notify the County Division of Environmental Health at (805) 781-5544. During "off" hours, contact the San Luis Obispo County Sheriff at (805) 781-4550 and request to be connected with the on duty Hazardous Materials Coordinator at County Environmental Health.
 2. Contact the State Department of Fish and Game, Office of Oil Spill Prevention and Response at (805) 772-1756 (24 hours).
17. Applicant agrees not to oppose formation of a beach renourishment program if such program is developed in the future.
18. Prior to issuance of construction permits, the applicant shall provide to the California

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State Lands Commission necessary information to make a jurisdiction determination.

19. **Prior to issuance of construction permits**, the applicant shall provide evidence of a valid California State Lands Commission lease or evidence that California State Lands Commission has determined the project is outside state jurisdiction.
20. **Prior to issuance of construction permits**, the applicant shall provide to the California Coastal Commission necessary information to make a jurisdiction determination.
21. **Prior to issuance of construction permits**, the applicant shall provide evidence of a valid California Coastal Commission permit or evidence that California Coastal Commission has determined the project is outside state jurisdiction.

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