ARNOLD SCHWARZENEGGER, Governor

CALIFORNIA COASTAL COMMISSION

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STAFF REPORT: REGULAR CALENDAR

APPLICATION NUMBER:	5-06-405
APPLICANT:	L.C. Smull
AGENT:	Susan Burgess Landreth
PROJECT LOCATION:	90 South La Senda Drive, Laguna Beach, Orange County
PROJECT DESCRIPTION:	After-the-fact approval of a caisson-tieback stabilization system and cement treated soil block and construction of a new structural shotcrete barrier attached to the existing caissons to protect existing single-family residence on a coastal bluff.

SUMMARY OF STAFF RECOMMENDATION:

The major issues with this project include landform alteration, visual impacts, and water quality impacts. The applicant is proposing to construct a new structural shotcrete barrier attached to existing caissons to protect an existing single-family residence on a coastal bluff. The applicant is also seeking after-the-fact approval for un-permitted development on site, which includes a caisson-tieback stabilization system constructed in 1992 and the cement treated soil block constructed in 1993. Commission staff is recommending <u>APPROVAL</u> of the proposed project with **Nine (9) Special Conditions** regarding: **1)** submittal of revised final plans; **2)** assumption of risk; **3)** additional approvals for any future development; **4)** submittal of a final drainage and run-off control plan; **5)** submittal of a revised landscaping plan; **6)** conformance with geotechnical recommendations; **7)** conformance with visual treatment requirements; **8)** condition compliance; **9)** a deed restriction against the property, referencing all of the Special Conditions contained in this staff report.

SUBSTANTIVE FILE DOCUMENTS: Geotechnical Recommendations for Remediation of Developing Sea Cliff Instability Condition for 90 South La Senda, Laguna Beach, California, prepared by GeoFirm, dated April 1, 1992; Geotechnical Recommendations for Supplemental Shotcrete/Rock-Nail Sea Cliff Retention System for 90 South La Senda, Laguna Beach, California, prepared by GeoFirm, dated September 20, 2005; Response to City of Laguna Beach Geotechnical Report Review Checklist for 90 South La Senda, Laguna Beach, California, prepared by GeoFirm, dated April 25, 2006; Response to CCC "Notice of Incomplete Application" dated November 20, 2006 Installation of Shotcrete Wall Sections on Bluff Face for 90 South La Senda, Laguna Beach, California, prepared by GeoFirm, dated December 27, 2006; City of Laguna Beach certified Local Coastal Program (as guidance only); CDP No. 5-86-310.

LOCAL APPROVALS RECEIVED: City of Laguna Beach Approval in Concept, dated 10/18/06.

LIST OF EXHIBITS:

- 1. Location Map
- 2. Assessor's Parcel Map
- 3. Site Plan
- 4. Cross Section
- 5. Site Photos
- 6. Photo depicting type of visual treatment required pursuant to Special Condition #7

STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following resolution to <u>APPROVE</u> the coastal development permit application with special conditions:

<u>MOTION</u>: I move that the Commission approve Coastal Development Permit No. 5-06-405 pursuant to the staff recommendation.

STAFF RECOMMENDATION OF APPROVAL:

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

I. <u>Resolution: Approval with Conditions</u>

The Commission hereby <u>APPROVES</u> a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and 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. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. Standard Conditions

- 1. <u>Notice of Receipt and Acknowledgment</u>. 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. <u>Expiration</u>. If development has not commenced, the permit will expire two years from the date this permit is reported to the Commission. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

- 3. <u>Interpretation</u>. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
- 4. <u>Assignment</u>. 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. <u>Terms and Conditions Run with the Land</u>. 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.

III. SPECIAL CONDITIONS

1. <u>Revised Final Plans</u>

- A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, two (2) sets of final site and building plans that substantially conform with the plans by Harold Larson, dated November 16, 2005, but shall be revised to include the following:
 - 1) The rock-nail/structural shotcrete system shall be removed from all plan sheets.
- B. The permittee shall undertake the development authorized by the approved plans. Any proposed changes to the approved plans shall be reported to the Executive Director. No changes to the plans shall occur without a Coastal Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

2. Assumption of Risk, Waiver of Liability and Indemnity

By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from bluff and slope instability, erosion, landslides and wave uprush; (ii) to assume the risks to the applicants and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

3. <u>Future Maintenance</u>

The permittee shall maintain the permitted bluff protective device in its approved state. Maintenance of all the structures shall include maintaining their color, texture and integrity. Any change in the design of the project or future additions/reinforcement of the approved structures beyond exempt maintenance as defined in Section 13252 of the California Code of Regulations to restore the structure to its original condition as approved herein, will require a coastal development permit. However, if (after inspection) it is apparent that

repair and maintenance is necessary, including maintenance of the color of the structure to ensure a continued match with the surrounding native bluffs, the permittee shall contact the Executive Director to determine whether a coastal development permit or an amendment to this permit is legally required, and, if required, shall subsequently apply for a coastal development permit or permit amendment for the required maintenance.

4. Drainage and Runoff Control Plan

- A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for review and approval of the Executive Director, two (2) full size sets of final drainage and run-off control plans. The drainage and runoff control plan shall show that all drainage collection lines in the rear yard shall be located behind the shotcrete wall before exiting at the base of the wall and proceeding down the slope within the existing vegetation for discharge to the base of the bluff, without allowing water to percolate into the bluff. The plans shall provide for visual treatment of any exposed collection/discharge lines including coloring to match the color of the adjacent bluff soils and, where feasible, screening with native vegetation. The proposed color shall be verified through submittal of a color board and that color shall be maintained through-out the life of the collection/discharge lines.
- B. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

5. <u>Revised Landscaping Plan</u>

- A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, in a form and content acceptable to the Executive Director, two (2) sets of a revised landscaping plan prepared by an appropriately licensed professional that satisfies the following requirements:
 - (1) The plan shall demonstrate that:
 - a. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be identified from time to time by the State of California shall be utilized on the property. No plant species listed as a 'noxious weed' by the State of California or the U.S. Federal Government shall be utilized within the property. Any existing landscaping within the limits of the proposed project that doesn't meet the above requirements in this paragraph and those requirements listed in subsection b below shall be removed;
 - b. All plants employed on the site shall consist of plant species native to coastal Orange County and appropriate to the habitat type and be drought tolerant, (low water use) plants identified by U. C. Davis

and/or the Water Resources Board. Native plants shall be from local stock wherever possible;

- c. All planting will be completed within 60 days after completion of construction;
- d. All vegetation shall be maintained in good growing condition throughout the life of the project, and whenever necessary, shall be replaced with new plant materials to ensure continued compliance with the landscaping plan.
- e. No irrigation systems shall be installed on site.
- (2) The plan shall include, at a minimum, the following components:
 - a. A map showing the type, size, and location of all plant materials that will be on the developed site, the temporary irrigation system, topography of the developed site, and all other landscape features;
 - b. A schedule for installation of plants.
- B. The permittee shall undertake development in accordance with the approved plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

6. <u>Conformance with Geotechnical Recommendations</u>

- Α. All final design and construction plans, including foundations, grading and drainage plans, shall be consistent with all recommendations contained in the following geologic engineering investigations (except for those recommendations related to the rock-nail/structural shotcrete system required to be deleted from the project plans pursuant to Special Condition #1 (Revised Plans)): Geotechnical Recommendations for Remediation of Developing Sea Cliff Instability Condition for 90 South La Senda, Laguna Beach, California, prepared by GeoFirm, dated April 1, 1992; Geotechnical Recommendations for Supplemental Shotcrete/Rock-Nail Sea Cliff Retention System for 90 South La Senda, Laguna Beach, California, prepared by GeoFirm, dated September 20, 2005; Response to City of Laguna Beach Geotechnical Report Review Checklist for 90 South La Senda, Laguna Beach, California, prepared by GeoFirm, dated April 25, 2006; Response to CCC "Notice of Incomplete Application" dated November 20, 2006 Installation of Shotcrete Wall Sections on Bluff Face for 90 South La Senda, Laguna Beach, California, prepared by GeoFirm, dated December 27, 2006.
- B. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the Executive Director's review and approval, evidence that an appropriately licensed professional has reviewed and approved all final design and construction plans and certified that each of those final plans is

consistent with all the recommendations specified in the above-referenced geologic engineering report.

- C. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment unless the Executive Director determines that no amendment is required.
- D. Within 60 days following completion of the project, the permittee shall submit certification by a registered civil engineer, acceptable to the Executive Director, verifying the structures have been constructed in conformance with the final plans approved by the Executive Director.

7. <u>Visual Treatment Requirements</u>

- A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the review and approval of the Executive Director, a plan demonstrating that the color and texture of the bluff protective structure will be compatible with the adjacent bluff face. The plan shall demonstrate that:
 - (1) The bluff protective structure shall be constructed with shotcrete that has been colored to minimize the project's contrast with and be compatible in color to the adjacent natural bluff's earth tones.
 - (2) The proposed color shall be verified through submittal of a color board.
 - (3) The proposed bluff protective structure shall also be designed to incorporate surface treatments (e.g., sculpted shotcrete) that resemble the surface texture and undulation of the adjacent natural bluffs. Final plans shall include a materials palette and/or brochures and photo examples describing the visual treatment facing techniques that will be applied to achieve this objective, and shall include color elevation drawings that accurately depict the anticipated appearance of the bluff protective structure.
 - (4) The visual treatment shall be maintained through-out the life of the structure.
- B. The permittee shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.
- C. Photographs. Within 60 days following completion of the project, the permittee shall submit color photographs documenting the appearance of the structures as seen from the beach below.
- D. Future Caisson Tie Back Exposure Plans. In the event any project features initially proposed to be subsurface but which subsequently become exposed to view from the beach below the site, the permittee shall, through the coastal development

permit process, seek to remedy the visual impact of the exposed structure(s) through, among other possible means, aesthetic treatment of the exposed structures such that they match the appearance of surrounding terrain to the extent feasible and minimize visual impact of the exposed structures.

8. <u>Condition Compliance</u>

Within 180-days of Commission action on this coastal development permit application or within such additional time as the Executive Director may grant in writing for good cause, the applicant shall satisfy all requirements specified in the conditions hereto that the applicant is required to satisfy prior to issuance of this permit. Failure to comply with this requirement may result in the institution of enforcement action under the provisions of Chapter 9 of the Coastal Act.

9. <u>Deed Restriction</u>

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and approval documentation demonstrating that the landowner 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 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.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. <u>PROJECT DESCRIPTION</u>

The subject site is at the rear of two oceanfront bluff top lots which are spanned by a two-story single-family residence, located at 90 South La Senda, Laguna Beach (Three Arch Bay), Orange County. The bluff at this location is approximately 70 feet high, extremely steep (near vertical at some locations) with a sandy beach below (see Exhibit #5). The subject site is located within the locked gate community of Three Arch Bay in the City of Laguna Beach (see Exhibits #1 & #2). Laguna Beach has a certified Local Coastal Program (LCP) except for the four areas of deferred certification: Irvine Cove, Blue Lagoon, Hobo Canyon, and Three Arch Bay. Certification of the Three Arch Bay area was deferred due to access issues arising from the locked gate nature of the community. The proposed development needs a coastal development permit from the Coastal Coastal Coastal Program is a coastal development permit from the Coastal Coastal Coastal Program to permit from the Coastal Coastal Coastal Program to a coastal development permit from the Coastal Commission because it is located in the Three Arch Bay area of deferred certification. Because the site is located within a locked gate community, no public access exists in the immediate

vicinity. The nearest public access exists at 1000 Steps County Beach approximately one half mile upcoast of the site.

In 1986, the Commission issued Coastal Development Permit No. 5-86-310 for the demolition of an existing single-family residence on one lot and the addition of 3,000 square feet to an existing single-family residence on the adjacent lot, resulting in one structure spanning both lots. In 1992, the applicant constructed a caisson-tieback stabilization system in response to limit onsite slope failure of a portion of the subject property. In 1993, the applicant treated the soil behind this system with cement grout to re-establish slope contours in response to slumping and erosion of marine terrace deposits west of the caisson-tieback stabilization system. The applicant did not obtain coastal development permits from the Commission for either the caisson-tieback stabilization system or the cement treated soil. According to the applicant's geotechnical consultants, approximately 3.5 to 10 feet of bedrock and previously placed cement treated soils have failed west of the existing caisson-tieback stabilization structure and the steep failure scar exposes between 7 and 16 feet of the upper caissons as well as inter-caisson terrace and bedrock deposits.

Therefore, the applicant is seeking after-the-fact approval of a caisson-tieback stabilization system and cement treated soil block and construction of a new structural shotcrete barrier attached to the existing caissons to protect existing single-family residence on a coastal bluff (see Exhibits #3 & #4). In the initial application, the applicant also proposed construction of a new, approximately 22 foot-long, rock-nail/structural shotcrete system, but after consulting with the Commission's staff geologist, the applicant removed this feature from the application. The proposed structural shotcrete barrier near the top of the bluff will be located between the existing 6 caissons and will be approximately 30 feet long. The existing caissons are located near the edge of the bluff, west of the existing single-family residence at an angle, with the closest caisson being approximately 10 feet from the residence and the farthest caisson being approximately 30 feet from the residence. The exposed portion of the structural shotcrete barrier will range in height from approximately 14 to 20 feet, but once the proposed vegetation fills in, the exposed sections of the shotcrete barrier will be mostly covered and not visible. Construction access will be from the bluff top and not from the beach below.

B. <u>BLUFFTOP DEVELOPMENT</u>

Section 30235 of the Coastal Act states that:

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 fishkills should be phased out or upgraded where feasible.

Section 30251 of the Coastal Act states that:

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.

Section 30253 of the Coastal Act states:

New development shall:

(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

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, Section 30235 limits the construction of shoreline protective works to those required to serve coastal-dependant uses, or to protect existing structures or public beaches in danger from erosion, provided they are designed to eliminate or mitigate adverse impacts on shoreline sand supply. 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, adjacent properties, and overall shoreline dynamics. The Commission must always consider the specifics of each individual project, but under the standards established by Section 30235, prefers alternatives that avoid the needs for shoreline armoring. In addition, the Commission has generally interpreted Section 30235 to require the Commission to approve protective devices for residential development only for existing principal structures.

Existing Structure / Danger from Erosion

A geotechnical recommendation was prepared to remediate developing sea cliff instability at the project site, influenced by a sewer line break, by GeoFirm, dated April 1, 1992. In this report, the applicant's geologic consultant determined that failures involving rock falls and block toppling of bedrock strata backing the sea cliff at the rear of the three contiguous lots south of the subject property had occurred in the last several months and continued to occur as of the date of the report. Based upon previous offsite slope failure character and history as well as the location of the surface soil cracks directly above the northerly projection of the joint onsite, it was concluded that this joint was controlling the developing onsite failure. Based upon the topographic conditions in the vicinity of developing onsite slope failure, specifically the southwesterly-facing portion of the sea cliff, and the trend of the controlling joint, it was concluded that the most likely style of onsite failure was a wedge-type bedrock failure which moves southwesterly. Onsite surface cracks substantially confirmed this conclusion. Continued progression of the failure would threaten the existing residence on the subject site. In order to limit future sea cliff retreat in the critical area, the applicant's geologic consultant recommended installation of a tied-back caisson stabilization system, which currently exists on site.

A preliminary geotechnical investigation was prepared for the currently proposed development by GeoFirm, dated September 20, 2005 as well as supplemental reports, dated April 25, 2006 and November 20, 2006. The geotechnical investigation prepared by GeoFirm, dated September 20,

2005 concluded that approximately 3.5 to 10 feet of bedrock and previously placed cement treated soils had at the time failed west of the existing caisson-tieback stabilization structure. The steep failure scar exposed between 7 and 16 feet of the upper caissons, and inter-caisson terrace and bedrock deposits. Northwesterly of the existing caisson retention system, similar steep topography existed within the upper sea cliff. Significant surface water flow and/or groundwater seepage was noted within this area, which increased the potential for erosion and weathering. Subsequently, the applicant's geologic consultant recommended installation of a new structural shotcrete barrier to be attached to the existing tied-back caisson stabilization system. In general, the proposed upper bluff protective device is intended to protect the existing residence, and incidentally will also protect existing patio and deck area.

The above mentioned geologic reports present results and recommendations from preliminary planning and preparation, review of geotechnical reports and maps pertaining to the site, and field explorations. Except for those recommendations related to a rock-nail retaining system north of the existing tied-back caisson stabilization system (see discussion below), the Commission's staff geologist concurs with the findings of these reports.

Feasible Alternatives

The preceding discussion concludes that there are principal structures in immediate danger from erosion and slope failure. The next Section 30235 "test" that must be met before a shoreline protective device can be approved is that the proposed armoring is "required" to serve coastal-dependant uses or to protect existing threatened structures. In other words, shoreline armoring shall be permitted if it is the only feasible alternative capable of protecting the structure. Other alternatives typically considered include: the "no project" alternative; drainage and vegetation measures on the blufftop itself; abandonment or relocation of the threatened structures; sand replenishment programs; other less damaging structural alternatives; and combinations of some or all of these options.

1. No Project Alternative

Based on current conditions, the no-project option would result in continued erosion of the bluff top and additional exposure of the existing caissons. Such retreat would eventually undermine the existing single-family residence.

2. Drainage and Landscaping

Non-structural alternatives to the proposed upper bluff protective device include the use of landscaping and improved blufftop drainage controls to reduce erosion. While improved drainage controls and modifications to existing landscaping could slow coastal erosion, they would not, by themselves, be sufficient to protect the existing residence from being undermined by coastal erosion. Plantings and bluff drainage controls will not be adequate to address the erosion problem. Nevertheless, the use of drainage controls and native landscaping appropriate to the site should be pursued in conjunction with the proposed project, in order to minimize the need for future repairs and supplemental armoring. Requirements related to landscaping and drainage control are discussed below.

3. Relocation of Threatened Structures/Removal of Existing Caissons

Another alternative to protection devices is to relocate the threatened structures outside of harm's way. However, in this case, there is no available land inland of the existing residence in order to relocate it. Another alternative, the removal of the existing improvements, including caissons, would result in rapid and widespread bluff erosion and failure, which would impact the existing residence as well as neighboring residences.

4. Least Damaging Structural Alternatives

Because there are no feasible non-structural alternatives, protection is needed along the upper bluff in order to protect the existing principal structure. The applicant's geologic consultant analyzed different potential structural solutions including underpinning the existing site improvements, and the proposed system that includes a caisson-tieback stabilization system and cement treated soil block (existing/ATF) and construction of a new structural shotcrete barrier attached to the caissons. Underpinning the existing deck, patio and residence would also require replacement of the slabs-on-grade with a structural slab system. This construction would be highly disruptive and would not address the current erosion of the bluff. In time, the new underpinning would likely become exposed and the existing condition would be repeated under the existing residence. Therefore, the applicant contends that the proposed project represents the least damaging alternative.

The applicant has provided evidence that the existing caisson-tieback stabilization system that was constructed in 1992 is providing protection to the residence against joint failure. However, at the time the Commission may have requested review of other options to address the threat, such as installing the caissons closer to the residence, using the terrace support as a deeper caisson foundation, etc. One of these options may have been found both feasible and less environmentally damaging at the time. However, removal of the existing caissons and installation of some more landward protective option now could have potentially significant impacts to the bluff, including visual impacts, increased erosion, etc.

The existing residence has conventional spread footings with caisson supports at the westernmost corners of the house. Those caissons are embedded approximately 3' into bedrock. The applicant installed the un-permitted caisson-tieback system in 1992 to mitigate for the joint failure observed on adjacent properties that began to extend to this property. This type of failure would have reduced the structural support for the house, and the caissons that were embedded 3' into bedrock would not have provided protection from this type of threat because the caissons were not deep enough to be effective.

Regarding the existing cement treated soil block that was constructed in 1993, the geometry of this area might have been such that the Commission would have approved this treatment in this case because the space between the bluff face and the caissons was relatively small, thus the Commission might have agreed that some kind of reinforcement was necessary at the time. Removing such a structure now could lead to increased instability of the site. Therefore, The Commission is recommending that the cement treated soil block remain in place in conjunction with proposed structural shotcrete barrier attached to the existing caissons.

In the initial application, the applicant also proposed construction of a new, approximately 22 footlong, rock-nail/structural shotcrete system, but after consulting with the Commission's staff geologist, the applicant removed this feature from the application. The rock-nail/structural

shotcrete system would have presented visual impacts due to coastal bluff landform alteration and there is no existing development that is being threatened at the location where that system was proposed. The rock-nail/structural shotcrete system is not therefore an upper bluff erosion protection effort that would have been required through Section 30235 of the Coastal Act. Therefore, the Commission imposes Special Condition #1, which requires the applicant to submit final revised plans that remove the rock-nail/structural shotcrete system from all plan sheets.

Alternatives Conclusion

Compared to the other structural options, and as conditioned to address impacts of the project on coastal resources, the proposed project is the least environmentally damaging structural alternative. With conditions, the project is consistent with Section 30235, provided that the design of the structure eliminates or mitigates adverse impacts on local shoreline sand supply.

Sand Supply Impacts

Coastal Act Section 30235 requires that, where permitted, shoreline structures must be designed to eliminate or mitigate adverse impacts to local shoreline sand supply. Beach sand material generally 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, gullying, et cetera. For most sandy beaches, sand is supplied from the littoral drift of materials from upcoast and downcoast sources miles away. In contrast, Three Arch Bay is bounded by rock outcrops and headlands that substantially limit the migration of beach sand up and down the coast. Accordingly, most of the sand in and around the project site is probably derived locally from erosion of terrace deposits and bedrock. Thus, the potential impact to sand supply associated with the proposed project includes loss of material that would have been supplied to the beach if the bluffs were allowed to erode naturally.

Shoreline retreat and erosion is a natural process that can result from many different factors such as wind, wave and tidal erosion, sea cave formation and collapse, saturation due to high ground water, and bank sloughing. Erosion of the shoreline materials serves as inputs back into the system, where it may be deposited further downstream or downcoast. Since most coastal bluffs in California are made of sandy marine terrace deposits, or sandy alluvial and fluvial sediment, bluff retreat is one of several ways that beach quality sand is added to the shoreline. Thus the natural coastal processes that work to form and retain material on sandy beaches can be significantly altered by the construction of shoreline armoring structures because they remove sediment that would otherwise be supplied to the littoral system.

The proposed project will result in armoring of the upper bluff face. As mentioned previously, in the initial application, the applicant also proposed construction of a new, approximately 22 foot-long, rock-nail/structural shotcrete system, but after consulting with the Commission's staff geologist, the applicant removed this feature from the application. The rock-nail/structural shotcrete system combined with the proposed structural shotcrete barrier attached to the existing caissons would have the greatest potential impact to sand supply. However, since the rock-nail/structural shotcrete system was removed from the proposed project, the potential impact to sand supply has been greatly reduced.

Finally, sand supply losses could affect public access and recreation by removing sand from the system that might otherwise replenish sandy beaches. However, since the dry beach, above the mean high tide line, is privately owned by residents of Three Arch Bay, and there is no public vertical access to this beach which is isolated by headlands at each end, such public access and recreation impacts are much less pronounced than other less isolated and more publicly accessible beaches.

Sand Supply Impacts Conclusion

As detailed above, the proposed project involves installation of a retaining structure on the upper bluff face. This project will not occupy any existing beach space. However, some amount of coastal bluff material that would otherwise nourish the sand supply system will be trapped behind the new upper bluff armoring.

Loss of sand supply to the beach, could lead to a narrowing of the pocket beach in the project area, and consequently loss of the public recreational opportunities provided by these sandy beach areas. However, since the dry beach, above the mean high tide line, is privately owned by residents of Three Arch Bay, and there is no public vertical access to this beach which is isolated by headlands at each end, such public access and recreation impacts are much less pronounced than other less isolated and more publicly accessible beaches.

Thus only as conditioned to mitigate for impacts of the project, can the proposed project be found consistent with Section 30235 of the Coastal Act.

Conformance with Geotechnical Recommendations

The geologic consultant has found that the subject site is suitable for the proposed development provided the recommendations contained in the geotechnical investigation prepared by the consultant are implemented in design and construction of the project. Adherence to the recommendations contained in the above-mentioned geotechnical investigations is necessary to ensure that the proposed project assures stability and structural integrity, and neither creates nor contributes significantly to erosion, geologic instability, or destruction of the site or surrounding area. Therefore, Special Condition #6 requires that the applicant conform to the geotechnical recommendations in the above mentioned geotechnical investigation.

Assumption of Risk

Although adherence to the geotechnical consultant's recommendations will minimize the risk of damage from erosion, the risk is not eliminated entirely. The site is an oceanfront, bluff top lot, which is inherently hazardous. Given that the applicant has chosen to implement the project despite potential risks from bluff erosion and landslides, the applicant must assume the risks. Therefore, the Commission imposes Special Condition #2, requiring the applicant to assume the risk of the development. In this way, the applicant is notified that the Commission is not liable for damage as a result of approving the permit for development. The condition also requires the applicant to indemnify the Commission in the event that third parties bring an action against the Commission as a result of the failure of the development to withstand the hazards. In addition, the condition ensures that future owners of the property will be informed of the risks and the

Commission's immunity from liability. As conditioned, the Commission finds the proposed project is consistent with Section 30253 of the Coastal Act.

Landscaping

Because of the fragile nature of coastal bluffs and their susceptibility to erosion, the Commission requires a special condition regarding the types of vegetation to be planted. The installation of inground irrigation systems, inadequate drainage, and landscaping that requires intensive watering are potential contributors to accelerated weakening of some geologic formations; increasing the lubrication along geologic contacts and increasing the possibility of failure, landslides, and sloughing. Use of non-native vegetation that is invasive can have an adverse impact on the existence of native vegetation. Invasive plants are generally those identified by the California Invasive Plant Council (www.cal-ipc.org) and California Native Plant Society (www.CNPS.org) in their publications. Commission staff reviewed the submitted landscape plan and determined that the plan does not contain invasive species.

All plants in the landscaping plan should be drought tolerant to minimize the use of water. The term "drought tolerant" is equivalent to the terms 'low water use' and 'ultra low water use' as defined and used by "A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California" prepared by University of California Cooperative Extension and the California Department of Water Resources dated August 2000 available at http://www.owue.water.ca.gov/landscape/pubs/pubs.cfm. Commission staff reviewed the submitted landscaping plan for drought tolerant vegetation and determined that all of the plants proposed were drought tolerant.

Low water use, drought tolerant, native plants require less water than other types of vegetation, thereby minimizing the amount of water introduced into the bluff top. Drought resistant plantings encourage root penetration which increases bluff stability. Therefore, the Commission imposes Special Condition #5, which requires that prior to the issuance of this permit, the applicant shall prepare a revised landscape plan, which shall be submitted for the review and approval of the Executive Director. To minimize the potential for the introduction of non-native invasive species and to minimize the potential for future bluff failure, a revised landscaping plan consistent with the requirements in the special condition shall be prepared by a licensed landscape architect. As conditioned, to minimize infiltration of water, the development will be consistent with section 30253 of the Coastal Act.

Visual Resources

As mentioned previously, the shotcrete wall would be located on a coastal bluff face. Any construction on the bluffs alters the natural appearance of the landscape, and has some impact on the scenic quality of the beach and bluff environment. Therefore, construction on the bluffs can be permitted only under limited circumstances, and when mitigation for the visual impact of the project is provided. Even though this coastal bluff face is within a gated community and not visible to the public by land, it is still visible to the public from public tidelands and the ocean. The Coastal Act requires that 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, and to be visually compatible with the character of surrounding areas.

The applicant's submitted plans indicate that the shotcrete wall will be colored/stained to simulate the natural bluff's color. In addition, the Commission imposes Special Condition #7, which ensures that the structure will minimize the project's contrast with and be compatible in color to the adjacent natural bluff's earth tones and will be designed to incorporate surface treatments (e.g., sculpted shotcrete) that resemble the surface texture and undulation of the adjacent natural bluffs (see Exhibit #6 for visual treatment examples). The applicant is required to maintain the visual treatment throughout the life of the development. The applicant is also proposing to plant non-invasive, drought-tolerant landscaping adjacent to the shotcrete wall. In addition, the Commission is requiring the applicant, through Special Condition #5, to plant non-invasive, drought-tolerant nature landscaping.

The project plans submitted by the applicant show that all drainage collection lines in the rear yard shall be located behind the shotcrete wall before exiting at the base of the wall and proceeding down the slope within the existing vegetation for discharge to the base of the bluff. In addition, the Commission imposes Special Condition #4, which requires the applicant to submit a final drainage and runoff control plan that shall provide for visual treatment of any exposed collection/discharge lines including coloring to match the color of the adjacent bluff soils and, where feasible, screening with native vegetation.

Furthermore, efforts to color and add texture the structural shotcrete barrier attached to the existing caissons, improve the drainage system and installing native vegetation are mitigating for the coastal resource impacts that have resulted from the construction of the caisson-tieback stabilization system.

Conclusion

The Commission finds that only as conditioned as described above, can the proposed development be found consistent with Sections 30235, 30251 and 30253 of the Coastal Act which require that landform alteration be minimized, scenic coastal views be protected, and geologic stability be assured.

C. <u>DEVELOPMENT</u>

The development is located within an existing developed area and is compatible with the character and scale of the surrounding area. However, the proposed project raises concerns that future development of the project site potentially may result in a development which is not consistent with the Chapter 3 policies of the Coastal Act. To assure that the structure is maintained, including the coloring/texturing, and to require a permit for future maintenance, the Commission imposes Special Condition #3. Only as conditioned can the proposed development be found to be consistent with Chapter 3 policies of the Coastal Act.

D. <u>PUBLIC ACCESS</u>

Section 30604(c) of the Coastal Act requires that every coastal development permit issued for any development between the nearest public road and the sea include a specific finding that the development is in conformity with the public access and public recreation policies of Chapter 3. The proposed project is located within an existing locked gate community located between the sea and the first public road paralleling the sea. Public access through this community does not currently exist. The proposed development on an existing residential lot will not affect the existing

public access conditions. It is the locked gate community, not the proposed project that impedes public access. The proposed bluff protective structure would be located upon the upper bluff face and not on the sandy beach, thus, the proposed project will not displace sandy beach area. As conditioned, the proposed development will not have any new adverse impact on public access to the coast or to nearby recreational facilities. Thus, as conditioned, the proposed development conforms with Sections 30210 through 30214, Sections 30220 through 30224, and 30252 of the Coastal Act.

E. <u>WATER QUALITY</u>

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

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

The proposed development has a potential for a discharge of polluted runoff from the project site into coastal waters. Due to the potential for increased hazards in blufftop areas, which could be caused by encouraging water infiltration for water quality purposes, maximizing on site retention of drainage is not required. The project plans submitted by the applicant show that all drainage collection lines in the rear yard shall be located behind the shotcrete wall before exiting at the base of the wall and proceeding down the slope within the existing vegetation for discharge to the base of the bluff, without allowing water to percolate into the bluff. The ensure that conforms to Sections 30230 and 30231 of the Coastal Act, the Commission imposes Special Condition #4, which requires the applicant to submit a final drainage and run-off control plan. Therefore, the Commission finds that the proposed development, as conditioned, conforms to Sections 30230 and 30231 of the Coastal Act regarding the protection of water quality to promote the biological productivity of coastal waters and to protect human health.

F. <u>DEED RESTRICTION</u>

To ensure that any prospective future owners of the property are made aware of the applicability of the conditions of this permit, the Commission imposes Special Condition #9, which requires that the property owner record a deed restriction against the property, referencing all of the above Special Conditions of this permit and imposing them as covenants, conditions and restrictions on the use and enjoyment of the Property. Thus, as conditioned, this permit ensures that any

prospective future owner will receive actual notice of the restrictions and/or obligations imposed on the use and enjoyment of the land in connection with the authorized development, including the risks of the development and/or hazards to which the site is subject, and the Commission's immunity from liability.

G. <u>UNPERMITTED DEVELOPMENT</u>

As mentioned previously, according to the applicant, they constructed the caisson-tieback stabilization system in 1992 and the cement treated soil block in 1993 without benefit of the required coastal development permits. Although construction has taken place prior to submission of this permit application, consideration of the permit application by the Commission has been based solely on the consistency of the proposed development with the policies of Chapter 3 of the Coastal Act. Commission action on this permit does not constitute a waiver of any legal action with regard to the alleged un-permitted development, nor does it constitute admission as to the legality of any development undertaken on the subject site without a coastal development permit. However, the applicant has proposed to retain both of these existing un-permitted structures (caisson-tieback stabilization system and the cement treated soil block) and staff is recommending approval of both of these structures with this application.

Since development occurred on site without the benefit of the required coastal development permit, the Commission imposes Special Condition #8, which requires the applicant to satisfy all requirements within a timely manner specified in the conditions hereto that the applicant is required to satisfy prior to issuance of this permit. Failure to comply with this requirement may result in the institution of enforcement action under the provisions of Chapter 9 of the Coastal Act.

H. LOCAL COASTAL PROGRAM

Section 30604 (a) of the Coastal Act states:

Prior to certification of the Local Coastal Program, a Coastal Development Permit shall be issued if the issuing agency, or the Commission on appeal, finds that the proposed development is in conformity with the provisions of Chapter 3 (commencing with Section 30200) of this division and that the permitted development will not prejudice the ability of the local government to prepare a local coastal program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200).

The City of Laguna Beach Local Coastal Program was certified with suggested modifications, except for the areas of deferred certification, in July 1992. In February 1993 the Commission concurred with the Executive Director's determination that the suggested modification had been properly accepted and the City assumed permit issuing authority at that time.

The subject site is located within the Three Arch Bay area of deferred certification. Certification in this area was deferred due to issues of public access arising from the locked gate nature of the community. However, as discussed above, the proposed development will not further decrease or impact public access within the existing locked gate community. Therefore the Commission finds that approval of this project, as conditioned, will not prevent the City of Laguna Beach from preparing a total Local Coastal Program for the areas of deferred certification that conforms with and is adequate to carry out the Chapter 3 policies of the Coastal Act.

I. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 of the Commission's regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect which the activity may have on the environment.

The applicant investigated potential alternatives including no-project, underpinning existing site improvements, and/or removal of existing development and determined that the proposed alternative was the least environmentally damaging feasible alternative.

As conditioned, there are no feasible alternatives or additional feasible mitigation measures available that would substantially lessen any significant adverse effect that 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.













