CALIFORNIA COASTAL COMMISSION

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STAFF REPORT: REGULAR CALENDAR

APPLICATION NUMBER: 5-00-034

APPLICANT: Mike McKinley and John Bass **AGENT:** Alan Block

PROJECT LOCATION: 327 and 327½ Paseo de Cristobal, City of San Clemente, Orange County

PROJECT DESCRIPTION: To permanently authorize the construction allowed under Emergency Permit 5-98-273-G for a new 110 foot long by twenty foot tall retaining wall with sixteen caissons on a coastal bluff and backfilling the area between the retaining wall and the landslide scarp with approximately 1600 cubic yards of material on two lots totaling 26,481 square feet. Re-landscaping the bluff below the retaining wall with native vegetation and the construction of new backyard hardscape on both lots.

SUMMARY OF STAFF RECOMMENDATION:

This permit application is the follow-up permit application for an emergency permit (5-98-273-G) to construct a 110 foot long by 20 foot high retaining wall with sixteen caisson soldier piles and backfilling the area between the new retaining wall and the landslide scarp. Additional development that was not part of the emergency permit, but is now before the Commission, includes landscaping to minimize the visual impact of the retaining wall and installing new hardscape in the backyard of both lots.

The major Coastal Act issue raised by the retaining wall is its consistency with Sections 30240 and 30251 of the Coastal Act in terms of: minimizing natural land form alteration, protecting the visual qualities of coastal bluffs, and enhancing the habitat values of the coastal bluff. Commission staff recommends that the Commission approve the proposed project with six special conditions. These special conditions include: a future improvements deed restriction, an assumption of risk deed restriction, and requirements to conform to the geotechnical recommendations; and to submit and implement a landscaping plan and a drainage plan, and a design for the retaining wall.

The applicants are not in full agreement with the landscaping (#4) and retaining wall design (#6) special conditions. The landscaping special condition mandates that water infiltration into the slope be minimized. The applicants contend that a minimal amount of moisture must be present to maintain bluff stability. In terms of the retaining wall design special condition, the applicants believe that texturizing the retaining wall to match the texture of the bluff could adversely affect the structural integrity of the retaining wall and that texturizing and colorizing is a significant maintenance problem and is also too expensive.

LOCAL APPROVALS RECEIVED: City of San Clemente Rough Grading Permit issued August 28, 1998 and Construction Inspection Permit issued August 28, 1998.

SUBSTANTIVE FILE DOCUMENTS: Geotechnical Investigation for Slope Repair at 327 and 327 ½ Paseo de Cristobal, San Clemente, California (PN 11575-00) by Stoney-Miller Consultants, Inc. dated May 21, 1998. Coastal development permits: 5-93-243 (City of Dana Point), A5-DPT-93-275 (City of Dana Point), 5-94-256 (City of San Clemente), 5-98-210 (Nelson), 5-98-493 (Vaughn), 5-98-469 (Ferber), 5-98-524 (Penfil), 5-99-332-A1 (Frahm), 5-99-351 (McMurray), 5-99-380 (Beck), 5-99-385 (Reddington), and 5-99-432 (Nichols); 5-00-172 (Stewart), and City of San Clemente Certified Land Use Plan.

EXHIBIT LIST:

1. Location Map
2. Assessor's Map
3. As Built Site Plan
4. Proposed Wall
5. Sectional View
6. Section at Caisson
7. Bass Residence Hardscape
8. McKinley Hardscape
9. Lynne Deane Barbaro and Associates Memorandum of December 23, 1998
10. Emergency Permit
11. City of San Clemente Letter of September 20, 1999
12. Bill Hart letter of October 8, 1999
13. McKinley and Bass letter of December 17, 1999
14. Commission Arial Photograph
15. Commission Memo of June 19, 2000
16. Harold Larson Letter of October 8, 1999
17. Harold Larson Letter of May 17, 2000

STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following resolution:

I. APPROVAL WITH CONDITIONS

The Commission hereby **GRANTS** a permit, subject to the conditions below, for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, is between the first public road and the sea and is consistent with the access and recreation policies of the Coastal Act, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse effects on the environment within the meaning of the California Environmental Quality Act.

II. STANDARD CONDITIONS:

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration.** If development has not commenced, the permit will expire two years from the date 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. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. Future Development Deed Restriction

A. This permit is only for the development described in coastal development permit No. 5-00-034. Pursuant to Title 14 California Code of Regulations Section 13253(b)(6), the exemptions otherwise provided in Public Resources Code Section 30610 (b) shall not apply to the subject parcels. Accordingly, any future improvements to the structure authorized by this permit, including but not limited to, repair and maintenance identified as requiring a permit in Public Resources Section 30610(d) and Title 14 California Code of Regulations Sections 13252(a)-(b), shall require an amendment to Permit No. 5-00-034 from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.

B. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT,** each applicant shall execute and record a deed restriction in a form and content acceptable to the Executive Director, reflecting the above restrictions on development within the subject parcels. Each deed restriction shall include a legal description of the applicant's entire parcel. Each deed restriction shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. The deed restrictions shall not be removed or changed without a Commission amendment to this coastal development permit.

2. ASSUMPTION OF RISK, WAIVER OF LIABILITY, AND INDEMNITY

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

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

3. **CONFORMANCE OF DESIGN AND CONSTRUCTION PLANS WITH GEOTECHNICAL RECOMMENDATIONS**

A. All final design and construction plans, including foundations, grading and drainage plans, shall be consistent with all recommendations contained in the *"Geotechnical Investigation for Slope Repair"* by Stoney-Miller Consultants, Inc. (PN 11575-00) dated May 21, 1998 except any requirement for an in-ground irrigation system. Additionally, any revisions to the final plans resulting from the Landscaping Special Condition (#4), the Drainage and Runoff Special Condition (#5), and the Retaining Wall Design Special Condition (#6) shall be reviewed and certified by a civil/structural engineering consultant verifying that the structural integrity of the retaining wall has not been compromised. **PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT,** the applicants shall submit, for the Executive Director's review and approval, evidence that an appropriate licensed professional has reviewed and approved all final design and construction plans and certified that each of those final plans is consistent with all of the recommendations specified in the above-referenced geologic evaluation approved by the California Coastal Commission for the project site.

B. The permittees shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

4. LANDSCAPE PLAN

A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT,** the applicants shall submit, for the review and written approval of the Executive Director, a landscaping plan to minimize the visual impact of the retaining wall and to enhance the habitat values of the coastal bluff fronting 327 and 327½ Paseo de Cristobal. The plan shall be prepared by a licensed landscape architect.

1. The plan shall demonstrate that:

   a. all vegetation planted on the bluff face shall consist of native, drought-tolerant plants commonly found on the coastal bluffs in the proximity of the project site. All non-native plants on the bluff face within the applicants property lines shall be eradicated.

   b. Landscaped areas in the front and side yards can include non-native potted ornamental plants provided that they are non-invasive, are placed on drained hardscape, and do not allow water to percolate into the soil. Vegetation installed in the ground shall consist of native drought tolerant plants.

   c. No permanent irrigation system shall be allowed within either property. Temporary above ground irrigation to allow the establishment of the plantings is allowed.

   d. Plantings shall be undertaken using accepted planting procedures, consistent with fire safety requirements. Such planting shall be adequate to provide ninety (90%) percent coverage within ninety (90) days and shall be repeated, if necessary, to provide such coverage.

   e. To minimize the visual impact of the retaining wall, two planting strategies using native plants shall be used. First, plantings at the base of the retaining wall shall consist of plants which will grow to a height which helps conceal the retaining wall. Third, plants, which will cascade down the wall shall be planted at the top of the wall.

   f. All required plantings will be maintained in good growing conditions through-out the life of the project, and whenever

necessary, shall be replaced with new plant materials to ensure continued compliance with the landscape plan, and

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, topography of the developed site, and all other landscape features, and,

   (b) A schedule for installation of plants.

B. The permittees 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. DRAINAGE AND RUNOFF CONTROL

A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for review and approval of the Executive Director, a drainage and runoff control plan. The drainage and runoff control plan shall show that all roof drainage, including roof gutters, collection drains, and sub-drain systems for all landscape and hardscape improvements for the residence and all yard areas, shall be collected on site for discharge to the street through piping without allowing water to percolate into the ground. If such a system for conveying site drainage to the street currently does not exist, the applicant shall be responsible for installing a drainage and runoff control system which conforms to the plan as approved by the Executive Director within ninety (90) days of issuance of this permit. The applicant shall maintain the functionality of the approved drainage and runoff control plan to assure that water is collected and discharged to the street without percolating into the ground.

B. The permittees 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.

6. RETAINING WALL DESIGN

A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit, for the review and approval of the Executive Director, final plans for the retaining wall. To minimize the visual impact of manmade structures on the natural bluff, the retaining wall shall blend in with the color and texture of the surrounding terrain. The retaining wall shall also be screened through the placement of native plants at the base of the retaining wall which can grow to a height of at least twenty feet and the use of native vegetation at the top of the retaining wall that can cascade down the face of the wall.

B. The permittees 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.

IV. FINDINGS AND DECLARATIONS:

The Commission hereby finds and declares:

A. PROJECT DESCRIPTION AND LOCATION

The project site is located at 327 and 327½ Paseo de Cristobal in the City of San Clemente, which is in Orange County (Exhibits 1, 2 and 3). The project site consists of two legal parcels each developed with a single-family residence. Paseo de Cristobal is the first public road inland of the Pacific Ocean. The project site is on the seaward side of Paseo de Cristobal; consequently, the proposed project is between the first public road and the sea. Moreover, the project site is located at the top of a one hundred-foot high coastal bluff overlooking the Pacific Ocean.

According to the applicants, a landslide occurred on March 1, 1998. The applicants received on July 22, 1998 an emergency permit (Exhibit 10) to construct a 110-foot long by 20-foot high concrete retaining wall to protect their residences. The slide area came to the edge of the McKinley residence (Exhibit 4). The area between the retaining wall and the landslide scarp was then backfilled with approximately 1600 cubic yards of fill. According to the geotechnical consultants, the purpose of the backfill was to restore the back yards to pre-slide ground levels. No landscaping or concrete wall face treatments were proposed or authorized under the emergency permit. The emergency permit was reported to the Commission on

August 13, 1998. Condition #7 stipulated that *"The final visual treatment of the facing of the retaining wall and any proposed bluff top landscaping are not included in this emergency permit but will be analyzed with the follow-up coastal development permit."* Following the issuance of the emergency permit the retaining wall was constructed.

On March 24, 1999, the applicants submitted an application for a follow-up coastal development permit to the emergency permit. This application was placed on the Commission's October 1999 agenda. The applicants, however, were in disagreement with the staff recommendation. The applicants contended that the special conditions concerning no irrigation, colororization and texturizing of the retaining wall was onerous and they requested additional time to respond to the staff recommendation. Since the October 1999 Commission meeting was the last possible meeting for hearing, the applicants agreed to submit a new application following their withdrawal on October 14, 1999. A new application (this permit action) was received on January 24, 2000. This permit application (5-00-034) requests that work approved under the emergency permit (5-98-273-G) be permanently authorized. This permit application had been scheduled for the Commission's October 2000 meeting. The applicants, however, requested a postponement on October 10th. Consequently this application has been rescheduled for the Commission's November 2000 meeting.

Besides the retaining wall, this permit application proposes new hardscape to replace damaged hardscape and landscaping to mitigate the visual impacts of the new retaining wall.

Section 13052 of Title 14 of the of the California Code of Regulations requires that an application for a regular coastal development permit receive preliminary approvals from the local government. The retaining wall was initially authorized under an emergency permit issued on July 22, 1998. Following the issuance of the emergency permit, the applicants submitted two permits from the Engineering Division of the Community Development Department of the City of San Clemente. Both permits were issued on August 28, 1998. The first permit is titled *"Construction Inspection Permit"* for the retaining wall. The second permit is titled *"Rough Grading Permit"* for the import of 1611 cubic yards of fill. Through these permits, the City of San Clemente has validated the construction of the retaining wall as authorized by the Commission issued emergency permit.

B. GEOLOGIC HAZARDS

The subject site consists of two legal parcels, which are each developed with single-family residences. The project site is located on a coastal bluff overlooking the Pacific Ocean. The bluff at the subject site is one-hundred feet high. Though the subject site is on a coastal bluff, the base of the bluff is not directly subject to wave attack due to the presence of railroad tracks at the base of the bluff. The base of the bluff is also protected through a wood debris wall immediately inland of the railroad tracks (Exhibit 3).

Though the base of the bluff is not subject to direct wave attack, the coastal bluff at the project site is nevertheless still subject to other processes (manmade and natural) which can induce the bluff to slide, including surficial water-induced erosion, groundwater sapping, seismic shaking, and wind-induced erosion. These process are exacerbated by the weak earth materials and over-steepened bluff face at the site, and can be further exacerbated by poor drainage, percolation of rainwater (especially through rodent burrows) or irrigation into the bluff. Evidence that bluff instability is a problem in the vicinity includes two major coastal bluff stabilization projects in the City of San Clemente (La Ventana and Colony Cove) where residences on coastal bluffs have either been destroyed or endangered by bluff failure [5-93-243 (City of Dana Point), A5-DPT-93-275, 5-DPT-93-275A (City of Dana Point)].

Landsliding of coastal bluffs in the City of Dana Point on its border with the City of San Clemente in January and February 1993 resulted in the destruction of five homes along La Ventana Street (which is in the City of San Clemente), the closure of Pacific Coast Highway and the temporary closure of the railroad tracks at the base of the bluff. Landsliding of the bluffs below Colony Cove resulted in the undermining of terrace walls and patio structures. The primary cause of the La Ventana landslide was water infiltration into the bluff along a deep-seated slope failure line. The geotechnical report stated that water seepage onto the bluff face was longstanding and that landscaping on the rear yards of some bluff top homes may have contributed to the accumulation of water in the slopes.

The Colony Cove, La Ventana, and Marblehead bluff stabilization projects demonstrate that bluff stability is an issue along the entire stretch of San Clemente's coastal bluffs. Besides these large scale bluff restoration projects, the Commission has received many individual application requests to protect single family residences (5-99-351-G (McMurray) was received in September 1999) on coastal bluffs and coastal canyons in San Clemente. Many of the requests to protect the homes and to conduct slope repairs were due to inadequate drainage systems, i.e., broken irrigation lines, over-watering, directing uncontrolled runoff to the bluff slopes, and differential settling due to improper compaction of fill.

Additionally, much of the development on coastal bluffs prior to the Coastal Act was constructed too close to the bluff top edge and later required support systems for failing patios, decks and other improvements.

According to the applicant's geologic consultant, Stoney-Miller Consultants, Inc. (Stoney Miller), the subject site experienced a slide on March 1, 1998. The slide was triggered by temporary oversaturation of the bluff. Consistent with this observation Stoney-Miller (Letter of October 1, 1999) made the following general observation: *"The failure was the result of seepage flows along the lithologic contact between the Terrace Deposit and Bedrock. This contact is a geologic feature that underlies the majority of the City of San Clemente east of the shoreline bluff to the Interstate 5 Freeway. Irrigation and rainfall throughout this area provides recharge to the perched water at this contact."* The bluff slide resulted in the loss of significant portion of the rear yard at 327 Paseo de Cristobal which is the McKinley residence. As a result of this failure, rear yard improvements such as the patio slab and deck were lost, and the foundation of the McKinley residence was exposed. The rear yard of 327½ Paseo de Cristobal, which is the Bass residence, was not as adversely impacted (Exhibit 4). Due to this slide, both residences were in jeopardy of being destroyed if the slide event continued.

The number of permit applications for bluff stabilization and bluff repair in San Clemente demonstrates that the bluffs are geotechnically active. Development on coastal bluffs is inherently risky, Section 30253 of the Coastal Act states, in relevant part:

New development shall:

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

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

To evaluate the site's stability and to recommend a solution for repairing the rear yards Stoney-Miller Consultants, Inc. conducted a geotechnical evaluation. The report included subsurface exploration, logging, soil sampling, and laboratory testing to determine the existing soil conditions at the site and to provide data and specific recommendations relative to the design for the proposed development. As previously summarized, the geotechnical report attributed the rear yard slope failure to temporary oversaturation. The boring logs, however, indicate that groundwater was not present. To assure bluff stability on the subject property and to protect the subject property from further bluff failure, Stoney-Miller Consultants, Inc.

recommended the installation of a retaining wall system founded on caisson soldier piles embedded into underlying bedrock. Though the geotechnical evaluation by Stoney-Miller Consultants, Inc. concluded that the project can be undertaken, the geotechnical consultant has made recommendations which must be complied with by the applicant to assure that the project will minimize risks to life and property, and will assure structural integrity. Specific recommendations made by the geotechnical consultant include: 1) that the caissons system should be imbedded by at least fifteen feet into bedrock; 2) surface drainage should be conveyed to the street or the toe of the bluff; and 3) that a subdrain system be installed at the base of the retaining wall to prevent the accumulation of water behind the new retaining wall.

Though the geotechnical report did not mention landscaping, landscaping can also promote bluff stability by withdrawing water from bluffs through evapotranspiration and a root system, which holds the soil in place. To provide plantings, which promote bluff stability, the applicant proposes to install native plants on the bluff slope. A proposed landscaping plan was submitted for the bluff face. The submitted landscaping plan specifically identifies those native plants that are to be placed on the bluff face. The plan does not, however, show landscaping on the remainder of the lot, and identifies the installation of a drip irrigation system for the bluff face. To assure that a landscaping is undertaken which promotes native vegetation and bluff stability, the Commission finds it necessary to impose a special condition to require that a final landscaping plan be prepared which minimizes the potential of water infiltrating into the ground.

The slide of March 1, 1998 was caused, in part, by the presence of water in the slope and the applicant's geotechnical firm has made recommendations that the infiltration of water shall be minimized. Therefore, the applicant shall submit for the review and approval of the Executive Director a revised landscaping plan. The Commission imposed a similar requirement for a landscaping plan under Coastal Development Permit 5-98-493 (Vaughn) for the construction of a new home at 2815 La Ventana. The landscaping plan for 5-98-493 (Vaughn) required primarily native plants though drought tolerant non-native plants were allowed in the front and sideyards if they were noninvasive.

To minimize the potential for a future slide a landscaping plan, shall be prepared by a licensed landscape architect and shall incorporate the following criteria: 1) to minimize the introduction of water into the ground, no permanent in-ground irrigation shall be permitted on either property (temporary above ground irrigation to establish the plantings is permitted); 2) landscaping installed in the ground shall consist of native plants. The side yards and front yards can contain non-native drought tolerant plants provided that the plants are in pots and are placed on drained hardscape which does not allow water to percolate into the soil, and 3)

Invasive, non-indigenous plant species which tend to supplant native species shall not be used. Additionally, the landscaping plan shall show the existing plants and irrigation system. Any existing irrigation shall be capped and disconnected. Through this special condition, one of the contributing factors to bluff failure, the introduction of water into the ground, will be minimized.

As indicated in the Summary of the Staff Recommendation, the applicant is in disagreement with the no-irrigation special condition recommended by staff. In a letter dated October 1, 1999, the applicants geotechnical consultant, Stoney-Miller Consultants, Inc. state: *"The proper irrigation of the property is beneficial {to} the surficial stability of the site. Providing a uniform moisture content in the near surface soils prevents the cyclic shrinking and swelling of the ground with the seasons. If allowed to occur, this shallow earth movement (creep) can damage hardscape and wall improvement, form dessication cracks which promote movements at depth, and cause heaving in the residence foundations. Over time this damage can be pronounced and lead to difficult expensive repairs."* The irrigation plan proposed by the engineering geologist is that *"a homeowner should on average irrigate a lawn in San Clemente annually 32.6 inches without recharging groundwater."* The volume of water is derived by subtracting the mean annual rainfall reported by the National Atmospheric and Oceanic Administration for Camp Pendleton (11.8 inches) from the estimated annual potential evapotranspiration provided by the Department of Water Resources (44.4 inches).

The Commission's coastal engineer (Exhibit 15) has reviewed the irrigation plan and found that it does not provide site-specific information nor will it provide any site specific feedback between evapotranspiration and irrigation water applied. While the Commission has approved irrigation plans for areas with an identified potential for landslides, such as at the Ocean Trails Golf Course and Pepperdine University, these plans have incorporated moisture sensors and feedback mechanisms that are continuously monitored by computer and ensure that the irrigation volumes carefully match evapotranspiration rates and soil saturation. The only feedback mechanism proposed for this property is *"during periods of intense or prolonged rainfall, irrigation should be curtailed until the vegetation begins to show signs of distress."*

The Commission's coastal engineer concluded that the soil cap which is near the surface should prevent percolation of surface water into the backfill material. The current plan to provide general site irrigation of 32.6 inches annually could over-irrigate the site whenever the yearly rainfall exceeds 11.8 inches. In addition to potential saturation from irrigation, the backfill material would still be subject to potential saturation through the infiltration of groundwater traveling under the soil cap. While a detailed monitoring and irrigation plan may be beneficial in maintaining the long-term integrity of the soil cap, the proposed plan neither demonstrates that

it can provide these benefits, nor demonstrates that it will not, during times of high rainfall, result in greater infiltration of the backfill material.

The soil cap is just one element of the project. Additionally, to avoid the potential for adversely affecting the structural integrity of a retaining wall, any backfill material chosen behind a retaining wall should not be susceptible to expansion/contraction resulting from the introduction of water. According to a Stoney-Miller letter (April 12, 2000) *"The wall was backfilled with imported granular, non-expansive material to within two feet of the ground surface and then capped with onsite fine-grained soils."* In keeping with this approach, the appropriate way to address water in the backfill is through proper drainage. Proper drainage systems will not only protect the integrity of the retaining wall, but also will minimize infiltration into the native soils and rock beneath the retaining wall, minimizing the potential for the initiation of new slope failures.

As previously examined, the slide was caused, in part, due to the presence of water and the applicant's geotechnical firm has made recommendations that the infiltration of water shall be minimized. To minimize the infiltration of water into the bluff the Commission has imposed a special condition to minimize the introduction of water by restricting irrigation. Restricting irrigation by itself is not enough as rainwater can infiltrate into the bluff. The infiltration of water into the bluff, however, can be further minimized through a drainage system, which collects water and conveys it to the street. Therefore, the Commission is imposing a special condition to require that a drainage and runoff control plan be submitted for the review and approval of the Executive Director prior to issuance of this coastal development permit. The drainage and runoff control plan shall depict that all drainage from roofs will be collected and discharged into pipes which convey it to the street and that area drains be placed to collect water and convey the water through pipes to the street. The drainage and runoff control plan shall also evaluate the effectiveness of the existing on site drainage. If the existing on-site drainage is not consistent with the requirements of this condition, the applicant shall be responsible for installing a drainage and runoff control system, which conforms to this condition, within ninety days of issuance of this permit.

Although adherence to the geological consultant's recommendations will minimize the risk of damage, the risk is not eliminated entirely. The coastal bluffs in San Clemente have been prone to bluff failures on a consistent basis. Therefore, the standard waiver of liability condition has also been attached as a special condition. By this means, each applicant is notified that the lot is in an area that is potentially subject to bluff failure, which could damage the applicant's property. Each applicant is also notified that the Commission is not liable for such damage as a result of approving the permit for development. In addition, the condition ensures

that future owners of each property will be informed of the risks and the Commission's immunity of liability.

Since the bluffs adjacent to Paseo de Cristobal are active, future development adjacent to the bluffs could have an adverse impact on bluff stability if not properly evaluated. For this reason, the Commission is imposing a special condition for a deed restriction which states that any future development or additions on either of the parcels, including but not limited to, hardscape improvements, grading, landscaping, vegetation removal and structural improvements, requires a coastal development permit from the Commission or its successor agency. This condition ensures that any future development on coastal bluffs, which may affect the stability of the bluff and residential structures, receives review by the Commission. The Commission imposed a similar future improvements deed restriction as a special condition for development occurring at 2815 La Ventana under Coastal Development Permit 5-98-493 (Vaughn).

The plans submitted with the application in July 1998 have not been certified as incorporating the recommendations of the geotechnical reports prepared by Stoney-Miller Consultants, Inc. To ensure that the geotechnical consultant's recommendations are instituted, it is necessary to impose a special condition requiring verification that the project plans are in compliance with the recommendations of Stoney-Miller Consultants, Inc. The special condition regarding the incorporation of the recommendation of Stoney-Miller Consultants, Inc., however, must be modified. The follow-up letter from Stoney-Miller (October 1, 1999) stated that *"The proper irrigation of the property is beneficial {to} the surficial stability of the site"*. As discussed above, the Commission has not approved this irrigation plan and has required that there be no permanent irrigation on the restored bluff. Accordingly, the applicant must submit prior to issuance of the permit, for the review and approval of the Executive Director, plans (drainage, retaining wall, and caisson plans) signed by a certified geotechnical engineer which incorporate the recommendations made by Stoney-Miller Consultants, Inc. in their geotechnical investigation (PN 11575-00) of May 21, 1998 except for the necessity of an in-ground irrigation system. Additionally the Commission has required other special conditions which can result in changes to the plans submitted. Consequently, the geotechnical consultant must verify that these changes have been done in a manner which maintains the projects structural integrity.

Therefore, the Commission finds that the project conforms with the requirements of Section 30253 of the Coastal Act as conditioned for: an assumption of risk deed restriction, future improvements deed restriction, the implementation of a landscaping plan, conformance with the modified geotechnical recommendations, and the submission and implementation of a drainage and runoff control plan.

C. RETAINING WALL LOCATION

According to the applicants, a landslide occurred on the subject lots on March 1, 1998. The applicants received on July 22, 1998 an emergency permit (Exhibit 10) to construct a 110-foot long by 20-foot high concrete retaining wall to protect their residences. The area between the retaining wall and the landslide scarp was then backfilled with approximately 1600 cubic yards of fill. According to the geotechnical consultants, the purpose of the backfill was to restore the back yards to pre-slide ground levels. No landscaping or concrete wall face treatments were proposed or authorized under the emergency permit.

On October 13, 1999, Commission staff received a letter (Exhibit 12) asserting that the retaining wall approved under the emergency permit appears to extend beyond the original contour of the bluff. The applicants acknowledge (Exhibit 13) in a letter dated December 13, 1999 that the wall can not exactly follow the prior bluff line. Though the location of the wall starts and ends at the previous locations of the cliff face, the applicants assert that it follows *"an average through its former placement"*.

In an attempt to resolve this issue, Commission staff in February 2000 requested additional topographic data from the applicants. In May 2000, the applicants responded that pre-slide topographic data which would allow a post-slide comparison were not available. The applicants did provide a pre-slide aerial photograph with the top-of-bluff drawn in and the same photograph depicting the new retaining wall. Because of the scale of the photographs and the need to *"blow-up"* the pictures and the resulting image degradation, the quality of the photograph was not sufficient to resolve this issue.

The Commission's mapping unit, using on-file aerial photographs (taken in1993, Exhibit 14), attempted to measure the distance from the building foundations to the assumed bluff edge. According to the Mapping Unit's measurements, the distance from the buildings to the bluff edge at several points approximated thirty (30) feet. The distance of the residences from the bluff edge can only be approximated due to image fall-off as the photographs are enlarged and the difficulty in determining the building footprints and the bluff edge (Exhibit 14).

Though a definitive statement can not be made about the pre-slide distance between the bluff top and the building footprints, an observation can still be made concerning the retaining wall's distance form the pre-slide bluff top. First, the Commission's pre-bluff failure arial photograph (Exhibit 14) clearly depicts the bluff as "U" shaped bowed inland with the most inland extent near the south corner of

the Bass residence. The estimated pre-slide distance from this corner to the bluff edge appears to be about thirty (30) feet. Second, the retaining wall (Exhibit 3) is bowed seaward rather than landward. With the seaward bow, the retaining wall (Exhibit 3, based on the site plans) is approximately forty (40) feet seaward of the south corner of the Bass residence. Third, the former cliff, at its farthest seaward point, appears to be approximately thirty (30) feet from the McKinley residence (Exhibit 14). The post slide retaining wall (based on the site plan, Exhibit 3) is approximately twenty-feet (20) from the McKinley residence. Consequently it appears that portions of the retaining wall are seaward of the former top-of-bluff and portions are landward of the former top-of-bluff. Though the retaining wall was not sited in a manner which exactly duplicates the prior top-of-bluff, it does, approximate the prior top-of-bluff. Therefore, the Commission finds that it would be impractical to relocate the retaining wall due to its size and the adverse impact it would have on the remaining bluff.

Though it would be impractical to relocate the retaining wall, the Commission notes that the retaining wall constitutes an adverse visual impact which must be mitigated. The Commission notes that when viewed from the beach, this new man-made vertical retaining wall appears visually *"closer"* than a natural bluff would appear. The retaining wall is visually closer for two reasons. First, because the retaining wall is a vertical structure the top of the retaining wall is closer to the observer than a natural bluff would be due to the receding nature of the former bluff slope. Second, the prior bluff, as previously described, was bowed landward and was thus further away from the observer. The new retaining wall, however, is bowed seaward and presents a larger *"bulk"* since it is pointed towards the observer and when compared the previous bluff also lacks topographic relief. Because of this adverse visual impact, the retaining wall must be conditioned to incorporate features which will mitigate its visual impact.

Emergency permits are granted when immediate action is necessary to protect structures. The emergency permit was granted to protect the applicants residences which were in danger of being destroyed. A side effect of allowing the retaining wall was that it also allowed the applicants to restore their back yards. In one case, a backyard was apparently enlarged; in the other case, some of a backyard was lost. In this case, adequate topographic data did not exist, at the time the emergency permit was issued to evaluate the issue of seaward encroachment. However, in proposing the retaining wall approved under the emergency permit, the applicants did evaluate four alternatives. One alternative was for a retaining wall that curved inland. This alternative was rejected by the applicants' geotechnical consultants on the grounds that it would have required the partial destruction of one of the homes while still resulting in a twenty-foot high retaining wall. The emergency permit was consequently issued for the retaining wall, bowed seaward

with the understanding that the wall's adverse visual impact on public views would be addressed through this follow-up permit.

The emergency permit (Exhibit 10) anticipated the requirement to address the visual impact of the retaining wall by stating that *"The final visual treatment of the facing of the retaining wall and any proposed bluff top landscaping are not included in this emergency permit, but will be analyzed with the follow-up coastal development permit."* Consistent with Section 30251 of the Coastal Act, the Commission reiterates the findings of the Geologic and Visual Resource Sections of this staff report to require that the retaining wall be textured and colored to match the bluff plus use screening vegetation to minimize the visual impact as a means of mitigating the adverse impact of the wall. Only as conditioned does the Commission find that the retaining wall is consistent with Section 30251 of the Coastal Act.

D. ENVIRONMENTALLY SENSITIVE HABITAT

The proposed development is located at the top of a coastal bluff. Coastal bluffs are considered environmentally sensitive habitat areas (ESHA) in the certified LUP for the City of San Clemente. The site of the retaining wall, however, is not an ESHA as defined in Section 30107.5 of the Coastal Act since the retaining wall will be located on the remains of the bluff that has slid. Section 30107.5 states: *"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.*

The purpose of the retaining wall, at the time of the emergency, was to protect the applicants' residences. A secondary benefit was that it allows the applicants to restore their rear yards to pre-slide ground levels and to restore the applicants' ability to use their rear yards. The environmentally sensitive habitat area subject to Section 30240(b) of the Coastal Act is the remaining bluff located seaward of and adjacent to the new retaining wall. Section 30240(b) of the Coastal Act states:

> (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.

The City of San Clemente's certified Land Use Plan recognizes that the coastal bluffs contain important natural habitat. Though the coastal bluffs contain natural habitat, the Land Use Plan notes that the coastal bluffs represent remnants of what

was once a much larger habitat zone. The tops of the coastal bluffs, in many cases, have been developed with single family homes and associated improvements such as lawns, decks, and hardscape. Consequently, the habitat quality of the coastal bluffs have been affected by adjacent urban development. The vegetation along the coastal bluffs is a mixture of native and introduced non-native plants and trees.

Though the overall habitat quality of the coastal bluffs has been adversely impacted by adjacent urban development, the City of San Clemente has policies in its certified Land Use Plan to promote habitat restoration of the coastal bluffs. Policy XV.2 and Policy XV.3 of the City's certified LUP restate Section 30240 of the Coastal Act.

Consistent with Section 30240(b) regarding development adjacent to environmentally sensitive habitat areas and the requirements of the City's certified Land Use Plan, the Commission finds it necessary to impose special conditions which will enhance the biological habitat values of coastal bluff. First, the Commission is imposing a special condition to require a future improvements deed restriction to assure that future development in this particular portion of Paseo de Cristobal can be adequately evaluated to promote habitat values. Second, the Commission imposes a special condition for landscaping. A landscaping plan shall be prepared by a licensed landscape architect that will show the area on the bluff face planted with native vegetation and that all non-native vegetation be removed. Native vegetation to be used shall consist of native plants commonly found on coastal bluff in the proximity of the project site. One list of suitable native plants can be found in the brochure by the California Native Plant Society titled *"Recommended List of native Plants for Landscaping in the Santa Monica Mountains"* (January 20, 1992). Temporary irrigation necessary for establishing the plantings will be allowed. Additionally, the plants that are allowed on the remainder of the property shall be non-invasive as a means of protecting the native vegetation on the bluff face. Both the future improvements deed restriction and the landscaping plan shall be subject to the review and approval of the Executive Director.

The proposed development will restore a degraded habitat area (which was further harmed by the landslide) through the planting of native vegetation. This will restore and enhance the functionality of the habitat of the bluff face. The Commission has conditioned the applicant for a future improvements deed restriction and to develop and implement a landscaping plan composed of native vegetation. Therefore, the Commission finds that the project, as conditioned, is consistent with Section 30240(b) of the Coastal Act.

E. VISUAL RESOURCES

The proposed development consists of the construction of a retaining wall on a coastal bluff that sustained a landslide. The retaining wall allowed under the emergency permit, which has been constructed, is approximately 20 feet high and is approximately 110 feet long. The portions of the retaining wall that are exposed would adversely change the visual character of the natural bluff through the introduction of a manmade structure when viewed by the public from the public beach below. Section 30251 of the Coastal Act, in relevant part, states:

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. ...*

The coastal bluffs in San Clemente constitute a scenic coastal area. The new retaining wall will significantly adversely impact the scenic coastal views from the public beach below. As a new manmade structure, the retaining wall would not be compatible with the character of the surrounding area since it should be preserved in its natural form and the proposed development has not restored the bluff to its pre-existing condition. The retaining wall was constructed under an emergency permit to protect the existing single family residences.

Under this permit application, the applicants have proposed the use of two treatments to reduce the visual impact. The two treatments proposed are the use of color and vegetation. According to the applicants, the retaining wall was colorized at the time of construction to match the ground color. Since the retaining wall has been completed, Commission staff visited the project site to examine the visual impact of the wall. The wall is highly visible from the public beach below which means that the attempted colorization was less than adequate.

In terms of the use of vegetation to screen the wall, the height of the wall (20 feet) limits the ability to screen the wall through vegetative means. The applicants have submitted a list of plants (Exhibit 18) which can potentially screen the wall. These plants include Myrica californica, Prunus ilicifolia, and Rhus integrefolia. Though these plants may eventually screen the wall, it may take approximately ten years for the plants to grow to height which will screen the wall.

The City of San Clemente (City) submitted a letter (September 21, 1999, Exhibit 11) requesting that vegetation be used to help screen the wall. In its letter the City requested that the wall have planting pockets and that plantings at the top of wall

be designed to cascade down the face of the retaining wall. In response to this request by the City the applicants have proposed the use of a vine, Calystegria macrostegia (Anacapa Pink/Island Morning Glory) which can be planted at the top of the retaining wall so that it cascades down the face of the retaining wall. According to the applicants landscape architect, Lynne Deane Barbaro (Letter of November 16, 1999, Exhibit 18) the vine *"... is a very fast grower. In 5 years, it will be approximately 20' tall twining on the trellis provided."* The Commission finds the applicants alternative as one of the acceptable means of mitigating the adverse visual impact of the retaining wall. Furthermore, the use of a vine, rather than the use of planting pockets addresses the concern expressed by the applicant's structural engineer (Exhibits 16 and 17) that the planting pockets could adversely affect the structural integrity of the retaining wall.

Besides color and vegetation, a third method exists to reduce the visual impact by sculpting the wall to match the texture and grain of the bluff. Sculpting the wall to match the terrain of the bluff has not been proposed. Therefore, the Commissions finds that, as constructed, the 20 foot high retaining wall is not consistent with Section 30251 of the Coastal Act since it will not protect public views inland from the public beach below the project site and that is a significant landform alteration not compatible with the character of the surrounding area. The new retaining wall is a vertical flat structure which does not mimic the sloping and varied topography of the San Clemente coastal bluffs. However, if the project is modified to require that the retaining wall be screened through vegetation and that it be textured and colorized to match the surrounding terrain, the project can be found consistent with Section 30251 of the Coastal Act regarding the protection of scenic resources and compatibility with the character of the surrounding area. The Commission also finds that the texturizing and colorizing the wall is necessary to resolve the adverse visual impact of the wall as it will take time for the vegetative treatments to screen the wall.

The Commission has approved two coastal development permits in the vicinity of the project site, which required visual screening, colorization, and texturizing to minimize the visual impact of a retaining wall. The Commission approved bluff slope repairs for the La Ventana slide under Coastal Development Permit A5-DPT-93-275 (City of Dana Point) which included using vegetative screening, colorization, and texturization to camouflage the wall. The retaining wall approved under A5-DPT-93-275 (City of Dana Point) is similar in height to the retaining wall under consideration for this permit. The La Ventana retaining wall was 25' high; the retaining wall under this permit is 20' high. In terms of length, the La Ventana retaining wall was 300' long versus this wall's length of110'. The La Ventana wall treatment was quite successful at minimizing the visual impacts of the retaining wall. Under Coastal Development Permit 5-94-256 (City of San Clemente), the Commission approved slope repairs for Colony Cove which is a residential

development above Coast Highway in San Clemente between Camino San Clemente and the Marblehead bluffs. This project included the use of vegetative screening, colorization, and texturizing to minimize the visual impacts of the retaining wall.

Because of the retaining wall's height and length, the Commission finds that all three treatment styles are necessary to minimize the adverse visual effects of this manmade structure. For example, even though an attempt was made to colorize the wall to match the ground, it is nevertheless highly visible as a manmade structure due to the lack of vegetative screening and the lack of three dimensional texture to match the grain and shape of the bluff face. Therefore, the Commission is imposing a special condition to require that the applicant submit plans, for the review and approval of the Executive Director, for minimizing the visual impacts of the retaining wall through landscaping, colorization and texturization.

The applicants, however, have asserted that the requirements to colorize and texturize the wall are onerous. The applicant's engineer, Harold Larson, (May 17, 2000) estimates that *"because of the hostile exposure any anchored or attached veneers will probably spall in 5 – 7 years, due to corrosion of the anchors or deterioration of the anchors"*. Nevertheless, the emergency permit clearly stipulated that visual impacts would be addressed through this follow-up permit action (Exhibit 10). The emergency permit allowed the applicants to construct a retaining wall to protect their homes. An incidental effect was that it also allowed the applicants to restore their back yards to pre-slide condition. Though the applicants were able to protect their homes and restore their back yards the visual impacts of the retaining wall on public views were not resolved through the emergency permit and this issue, as the applicants have known, must now be resolved through this permit action.

The applicants, through a letter from Harold Larson (October 5, 1999, Exhibit 16), also contend that the colorizing and texturizing the wall plus the inclusion of planting pockets would weaken the wall and create a maintenance problem besides being expensive. To partially address this concern the Commission has accepted an alternative from the applicant to use a vine to camouflage the wall instead of planting pockets. The Commission's Coastal Engineer, however, has reviewed the assertion that the efforts to visually screen the wall would create maintenance problems (Exhibit 15) and determined that maintaining the planters and wall veneer can be considered to be within the scope of normal maintenance. The Commission has required that many seawalls be fronted by a textured veneer and these seawalls are exposed to a much more hostile environment that this wall. The Commission concurs that maintenance of the wall, which benefits the applicants by protecting their property, is a normal activity that should be pursued to mitigate the project's

adverse visual impacts on public views. Furthermore, the applicants have not provided specific evidence that texturing the wall can not be accomplished.

To help minimize the adverse visual impact, the applicants have proposed plants which will grow up to 20 feet in height (Exhibit 18). These plants include Myrica californica which will achieve a height of 15 to 20 feet in ten years, Prunus ilicifolia which will achieve a height of 20 to 25 feet in ten years and Rhus integrefolia which will achieve a height of 10 to 15 feet in ten years. At their full height, the plants will screen the wall. The applicants believe that colorizing and texturzing of the wall is therefore unnecessary. Though the plants proposed by the applicants may eventually screen the wall, the Commission finds that colorizing and texturizing in combination with the plantings is still necessary, as the plants will take an estimated ten years to screen the wall, during this interim period an adverse visual impact will remain which must be mitigated.

Furthermore, the applicants through construction of the retaining wall have immediately restored their back yards for their private benefit; however, mitigation for the adverse public visual impact of the retaining wall has not been fully proposed. The emergency permit granted to construct the retaining wall explicitly stated that the visual impacts of the retaining wall would be resolved through this permit action. Simply requiring the planting of vegetation will take years to successfully screen the wall since small plants must be planted as full sized plants do not survive transplanting very well. During this interim period, while the plants are growing, the wall will be highly visible. Therefore, to resolve the adverse public visual impact, the wall must be colorized and texturized.

The special condition shall require that the applicant submit, for the review and approval of the Executive Director, a landscaping plan consisting of native plants, which shall screen the proposed retaining wall. Landscape screening shall include the placement of plants at the base of the retaining wall and the use of plants at the top of the retaining wall which can cascade down the face of the retaining wall. The landscaping plan (for the portion on the bluff face) shall consist of native plants commonly found on coastal bluffs in the general vicinity of the project site. The landscaping plan shall be prepared by a licensed landscape architect. Furthermore, the retaining wall, to minimize visual impacts shall be colorized and texturized to match the existing terrain. Therefore, as conditioned, to submit a landscaping plan to screen the wall and to colorize and texturize the wall, the Commission finds that the project is consistent with Section 30251 of the Coastal Act regarding the protection of public views.

F. PUBLIC ACCESS

The project site is on the seaward side of Paseo de Cristobal, which is the first public road immediately inland of the Pacific Ocean. 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 development is located on two lots each with an existing single family dwelling. The proposed development will not change the use nor intensity of use of the site. Public access opportunities exist from Paseo de Cristobal to the beach through an overpass, which takes pedestrians over the railroad tracks. The proposed development, as conditioned, will not result in any adverse impacts to existing public access or recreation in the area. Therefore, the Commission finds that the project is consistent with the public access and recreation policies of the Coastal Act.

G. LAND USE PLAN

Section 30604 of the Coastal Act provides for the issuance of coastal development permits directly by the Commission in regions where the local government having jurisdiction does not have a certified local coastal program. The permit may only be issued if the Commission finds that the proposed development will not prejudice the ability of the local government to prepare a local coastal program, which conforms with the Chapter 3 policies of the Coastal Act.

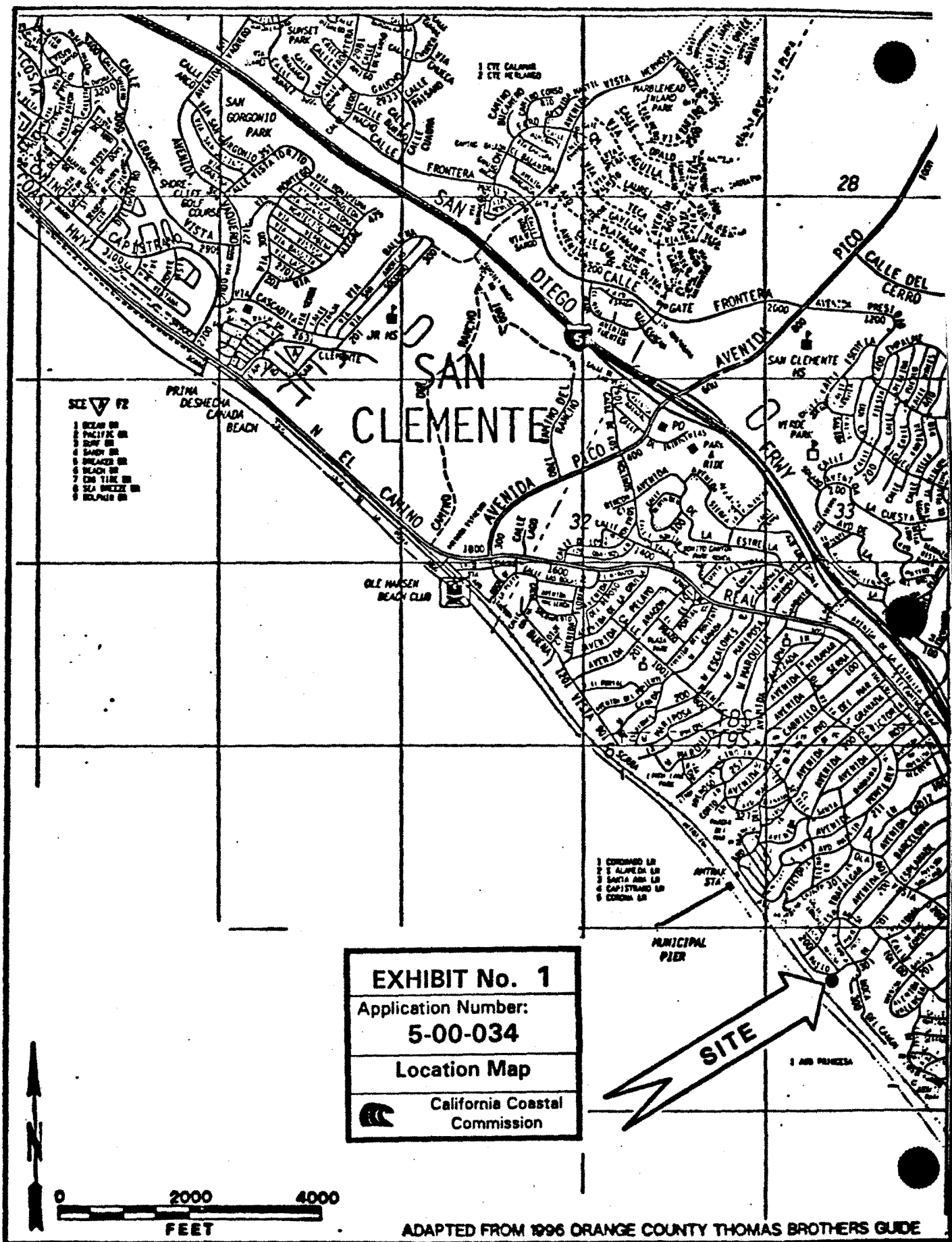
The City of San Clemente does not have a certified local coastal program (LCP). Accordingly, the Commission has reviewed this application for consistency with Chapter 3 of the Coastal Act. The certified City of San Clemente Land Use Plan (LUP) recognizes that coastal bluffs contain important habitat and can be considered as an environmentally sensitive habitat area (ESHA). Consistent with Section 30240 of the Coastal Act, the certified LUP mandates that development occurring on the coastal bluffs and adjacent to the coastal bluffs enhance habitat value. In addition, the coastal bluffs in San Clemente are considered to be a valuable scenic and natural feature. In recognition of this, the San Clemente LUP restricts development in the vicinity of coastal bluffs to preserve their natural and scenic character. This LUP policy is consistent with Section 30251 of the Coastal Act regarding the protection of scenic resources.

The Commission certified the Land Use Plan for the City of San Clemente on May 11, 1988, and certified an amendment approved in October 1995. On April 10, 1998, the Commission certified with suggested modifications the implementation program (IP) portion of the local coastal program. The suggested modifications expired on October 10, 1998. As conditioned, the proposed development is consistent with the Chapter 3 of the Coastal Act. Therefore, approval of the proposed development will not prejudice the City's ability to prepare a local coastal program for San Clemente that is consistent with the Chapter 3 policies of the Coastal Act as required by Section 30604(a).

H. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Section 13096 of the Commission's administrative 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 27380.5(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 project site is located at the top of a coastal bluff. The face of the coastal bluff is an environmentally sensitive habitat area. The proposed development has been conditioned to assure that the project will not have a significant adverse impact on coastal resources and has been conditioned to: record an assumption of risk deed restriction, develop and implement a landscaping plan, record a future improvements deed restriction, conformance with the geotechnical recommendations, submission and implementation of a drainage and runoff control plan, and for submission and implementation of a plan to minimize the visual impacts of the retaining wall. The proposed development, as conditioned, is consistent with the Chapter 3 policies of the Coastal Act. There are no feasible alternatives or mitigation measures available, which would substantially lessen any significant adverse impact, which the activity may have on the environment. Therefore, the Commission finds that the proposed project is consistent with CEQA and the policies of the Coastal Act.



LOCATION MAP			
JOB NO.: 11575-00	DATE: MAY 1998	FIGURE: 1	

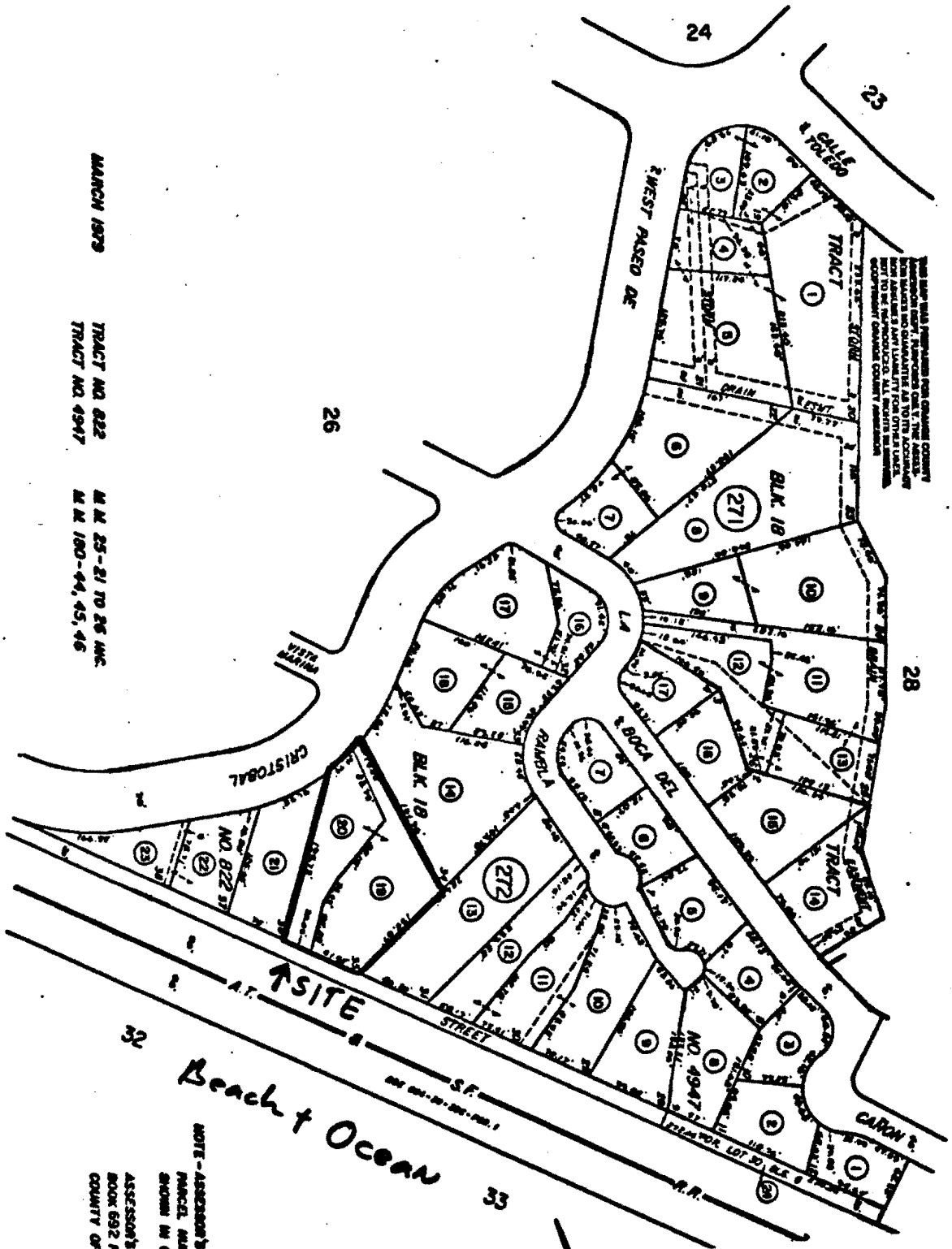


EXHIBIT No. 2
Application Number: 5-00-034
Assessor's Map
California Coastal Commission

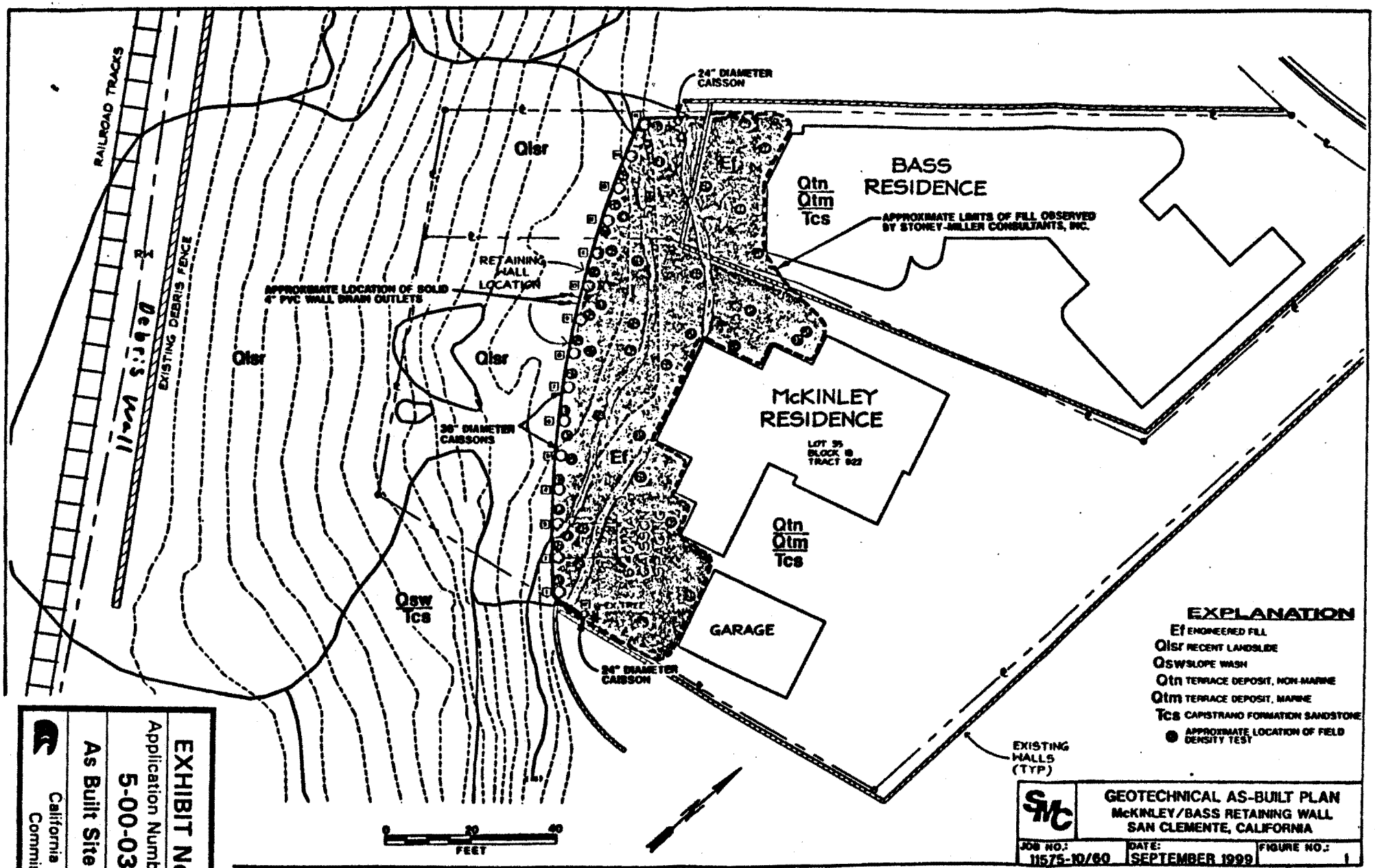


EXHIBIT No. 3
Application Number: 5-00-034
As Built Site Plan
California Coastal Commission

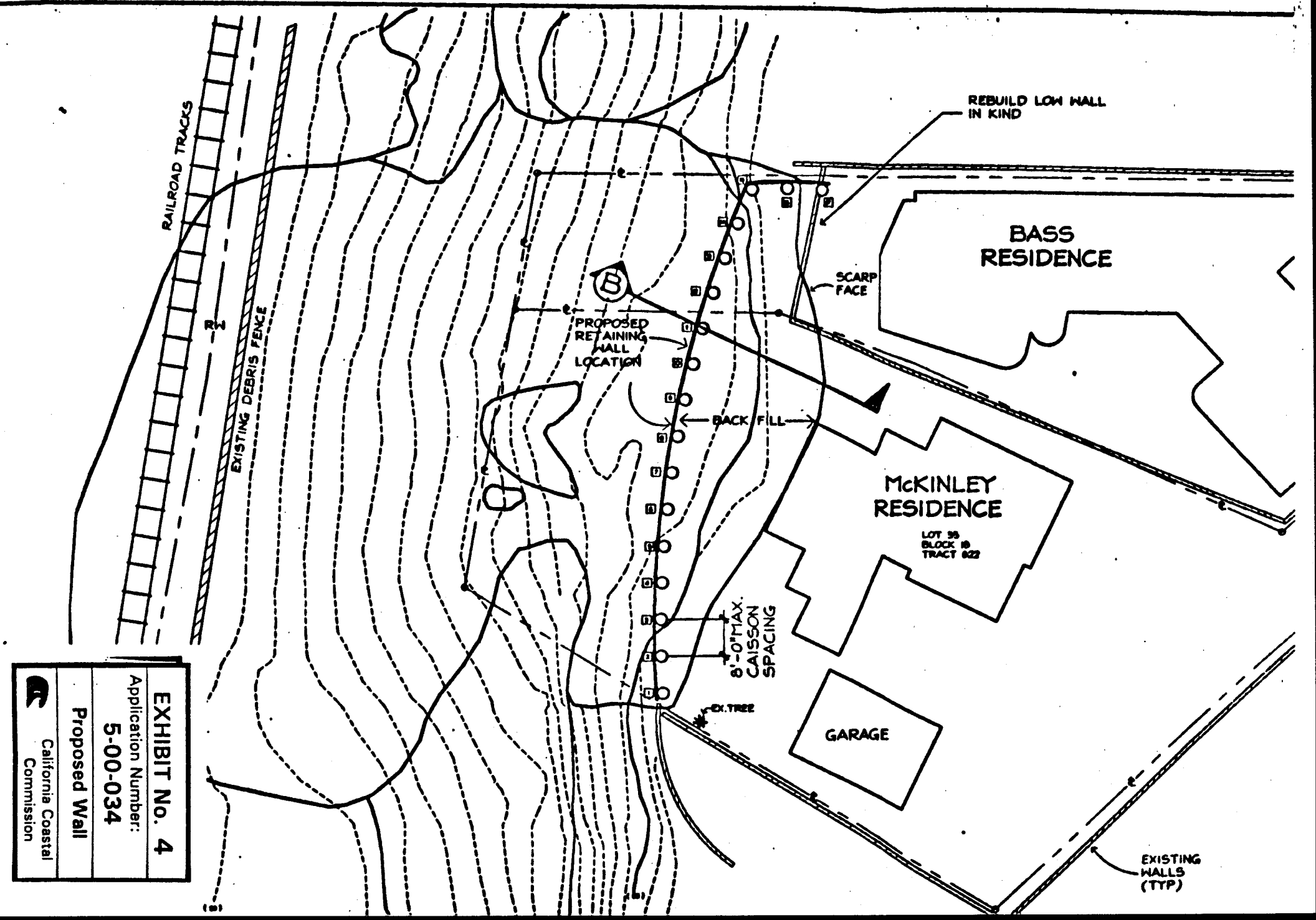


EXHIBIT No. 4

Application Number: 5-00-034

Proposed Wall

California Coastal Commission

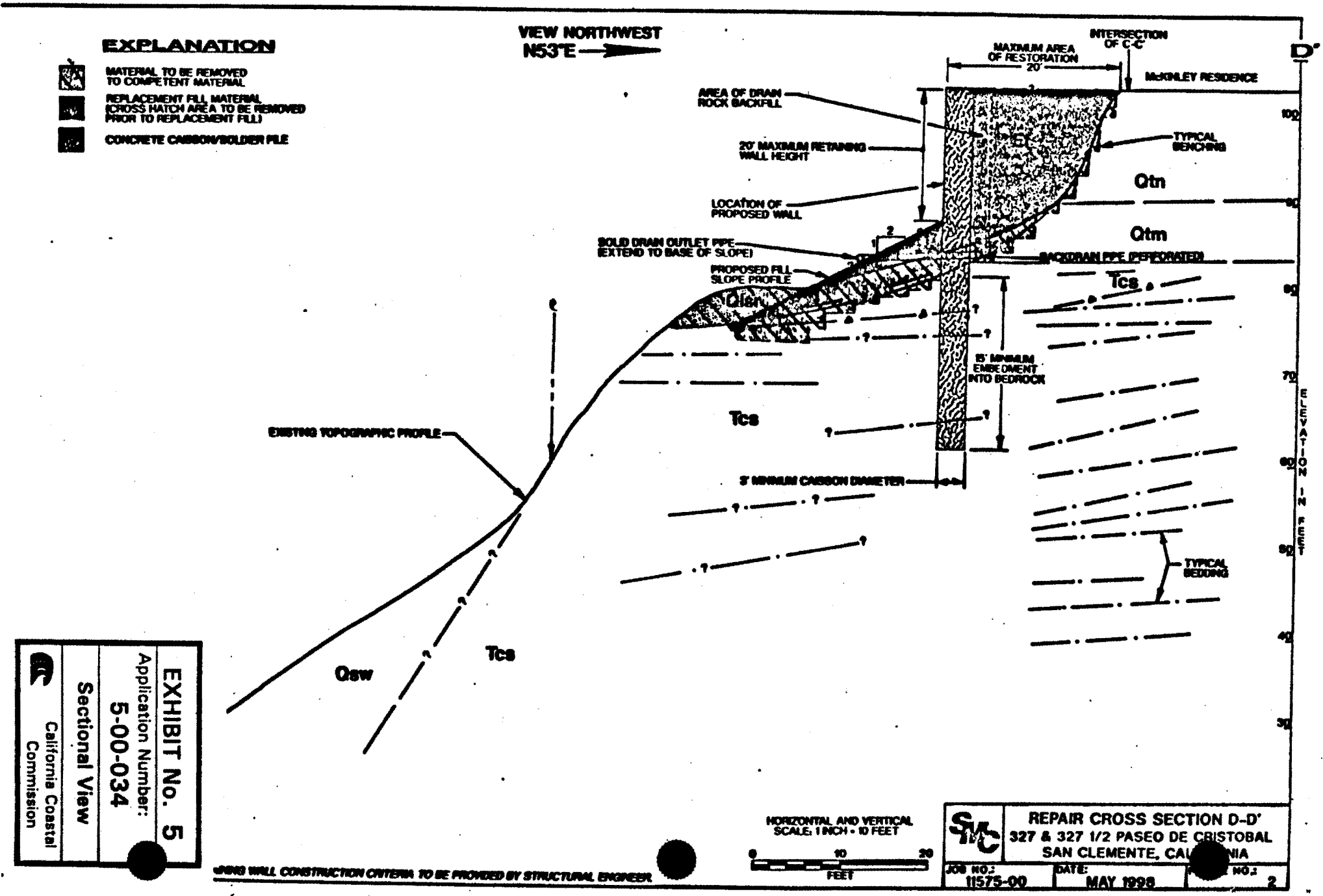


EXHIBIT No. 5
Application Number: 5-00-034
Sectional View
California Coastal Commission

SCALE - 1" = 20'

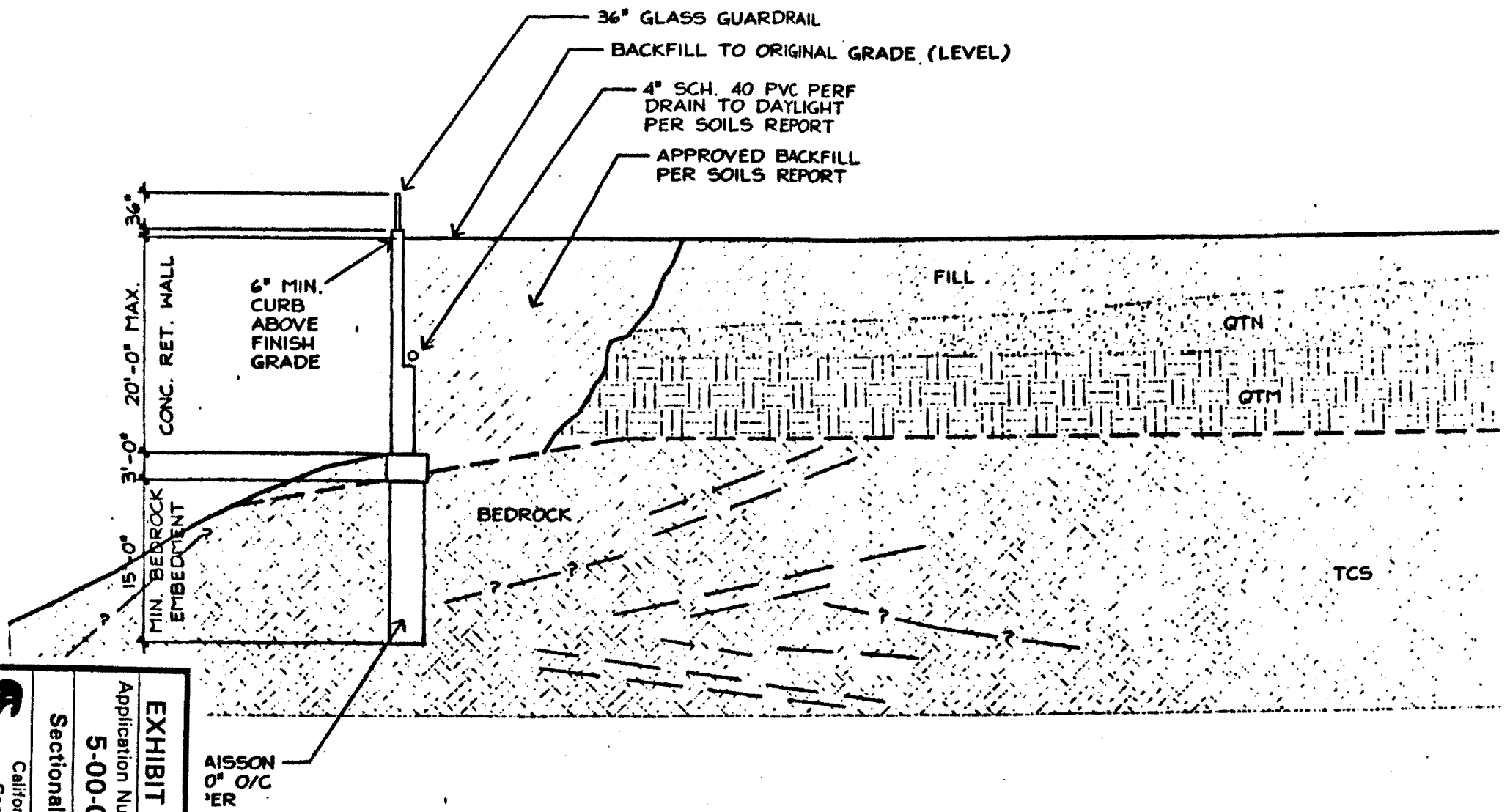
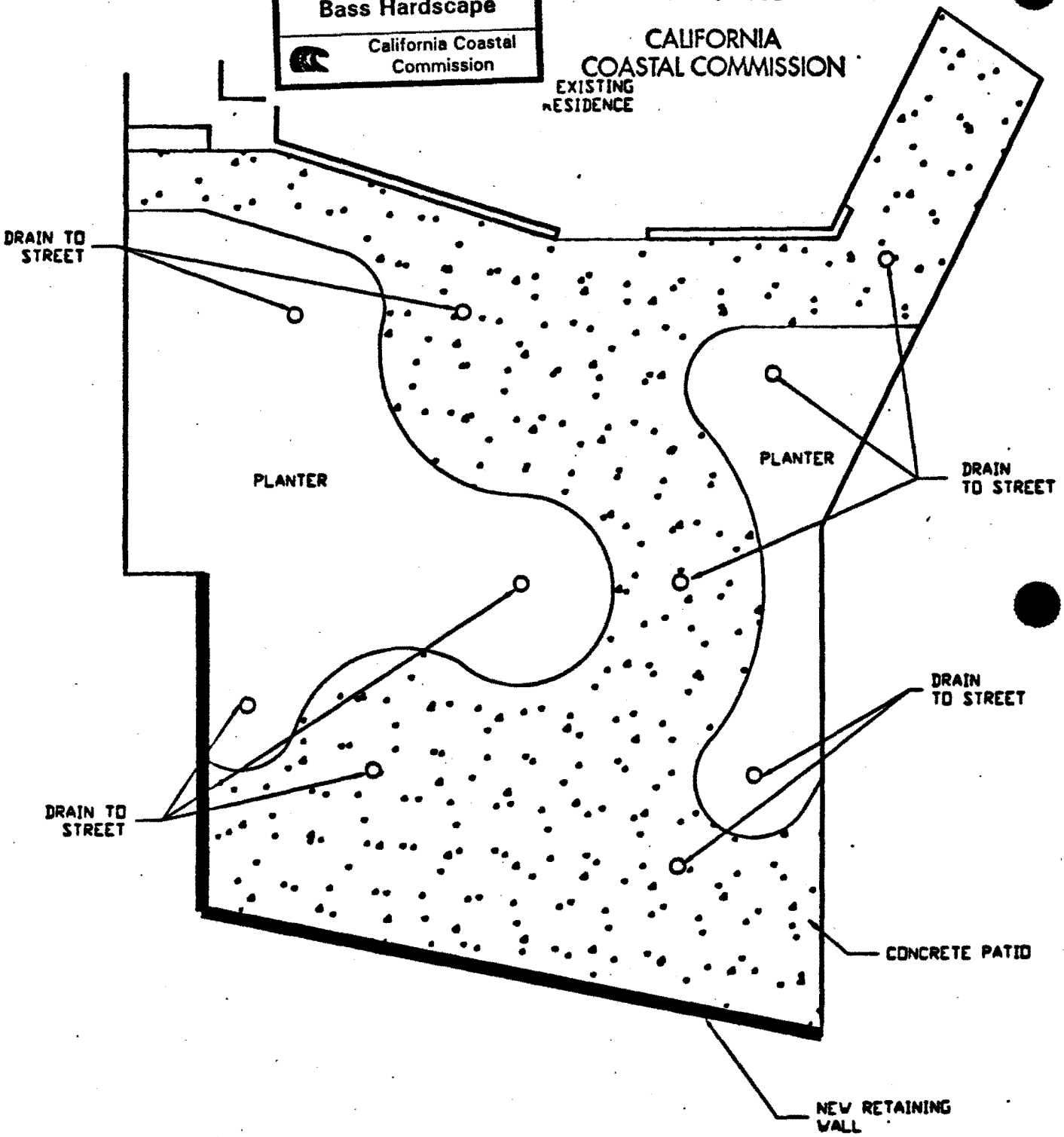


EXHIBIT No. 6
Application Number:
5-00-034
Sectional View
California Coastal Commission

(B) SECTION AT CAISSON / RETAINING WAL

EXHIBIT No. 7
Application Number:
5-00-034
Bass Hardscape
California Coastal Commission

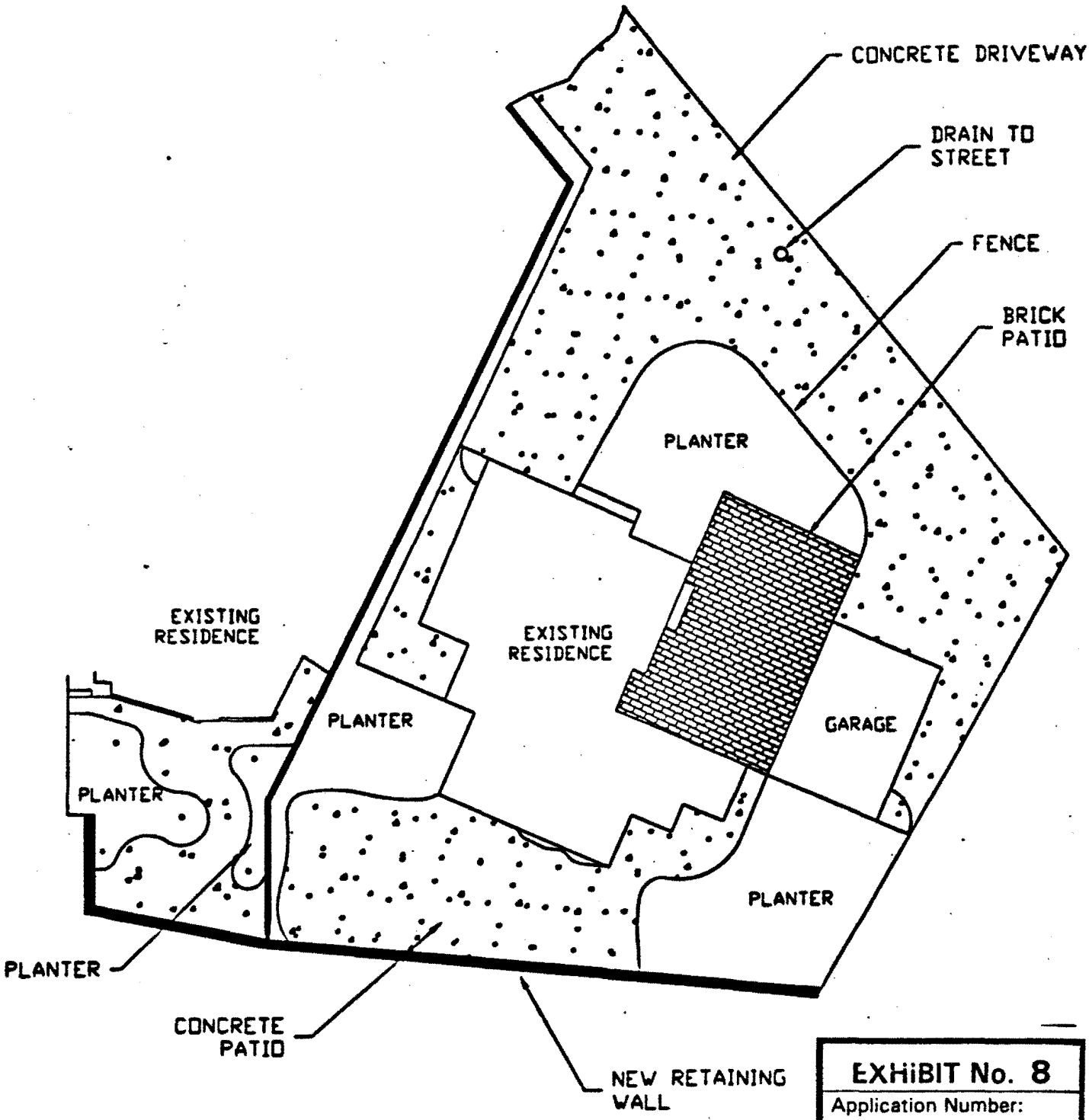
RECEIVED
South Coast Region
SEP 16 1999
CALIFORNIA
COASTAL COMMISSION



BASS RESIDENCE

NOTE:
ALL PLANTS TO BE DROUGHT RESISTANT,
AND NO AUTOMATIC SPRINKLERS WILL BE INSTALLED.

NOTE:
ALL PLANTS TO BE DROUGHT RESISTANT,
AND NO AUTOMATIC SPRINKLERS WILL BE INSTALLED.



BASS/MCKINLEY RESIDENCES

EXHIBIT No. 8
Application Number:
5-00-034
McKinley Hardscape
California Coastal Commission

LYNNE DEANE BARBARO
+ ASSOCIATES

Memorandum

To: Robin Maloney-Rames

From: Naomi Gruenthal

Date: December 23, 1998

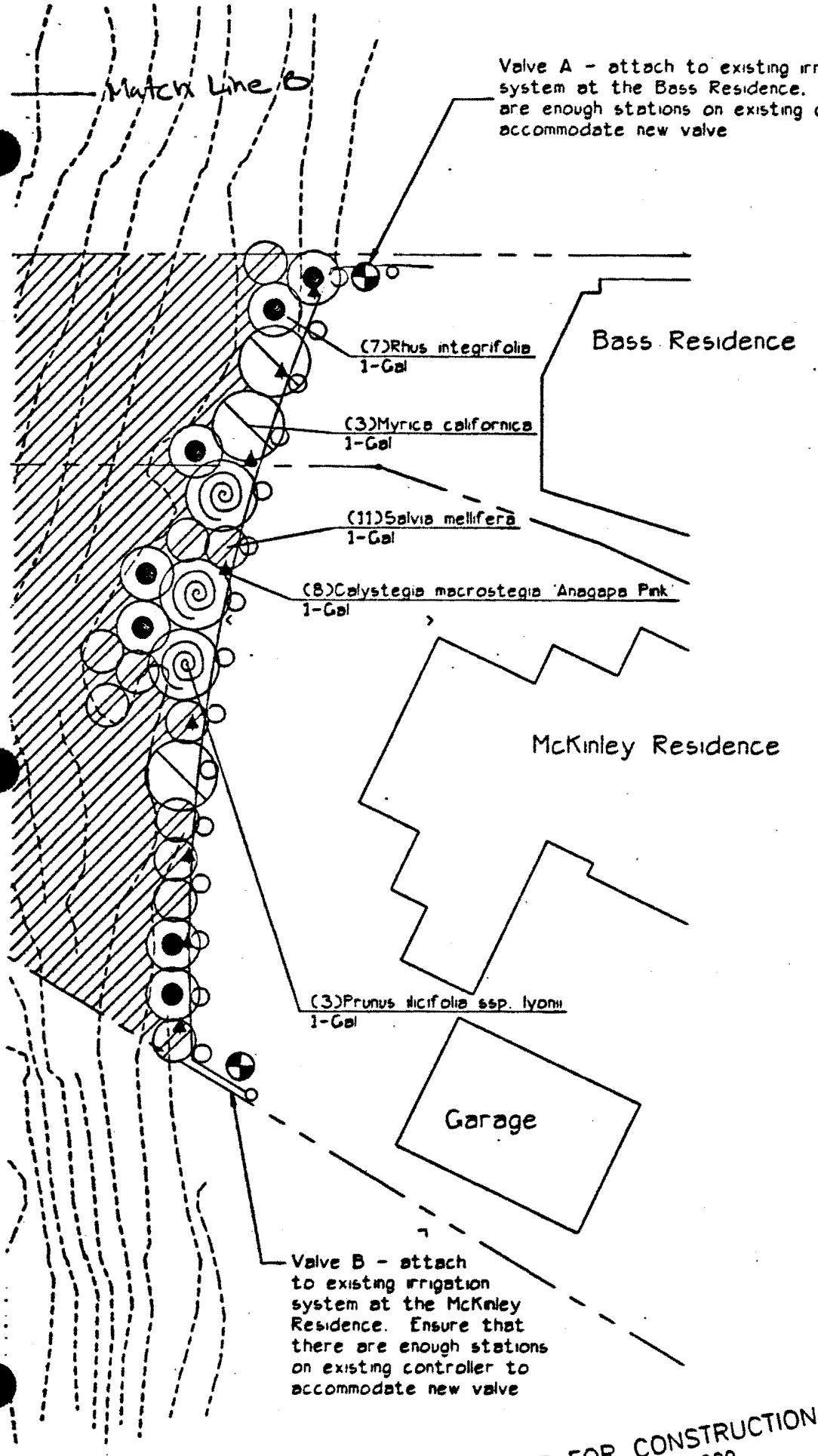
Subject: McKinley/Bass Retaining Wall,
327 & 327½ Paseo De Cristobal, San Clemente

Below is a list of plants we wish to use in a seed mix for a slope which collapsed in San Clemente. Please review and add or remove material as you see fit. All of the seeds noted are California Natives and shall do well along the coast. The area to be hydroseeded will not be irrigated and the soil is not compacted in any way. It is the subsidence of the bluff collapse (the owner's are installing a 25' retaining wall above the subsidence). I will be recommending that they do the Hydroseeding in the next few weeks or they will have to wait until next fall.

DESCRIPTION	Lbs/Acre
Abronia maritma / Sand Verbena	4
Ambrosia Dumosa / Beach Bur-Sage	3
Baccharis pilularis / Coyote Bush	3
Camissonia (Oenothera)cheiranthifolia / Beach Evening Primrose	3
Eriogonum parvifolium / Sea Cliff Buckwheat	8
Eschscholzia californica / California Poppy	3
Isocoma menziesii / Coast Goldenbush	4
Limonium californicum / California Statice, Marsh Rosemary	6
Lupinus bicolor / Lupine, Pigmy-leaved Lupine	3
Lupinus succulentus / Arroyo Lupine	4
Phacelia ramosissma/ Branching Phacelia	4
Salvia leucophylla / Purple sage	3
Salvia mellifera / Black Sage	5

EXHIBIT No. 9
Application Number:
5-00-034
Landscaping Plan
California Coastal Commission

384 Forest Avenue, Suite 12, Laguna Beach, CA 92651 (949) 376-02



IRRIGATION INSTALLATION NOTES:

Contractor shall install all drip irrigation equipment per Manufacturer Recommended installation instructions and in compliance with Local, Municipal and State Codes.

Contractor is responsible to install and have the irrigation equipment run in the most efficient manner possible.

Contractor is responsible to instruct the Owner's in the efficient use of the equipment and any maintenance procedures and scheduling needed for the equipment to function properly.

Install EM-12 Vera Clean Emitter Head below ground unless it is determined that there is not enough room or the soil will become less stable due to the extra digging. The goal is to keep animals from chewing on the equipment causing the system to dysfunction and cause possible erosion.

Install a minimum of two (2) emitter outlets with bug caps per plant.

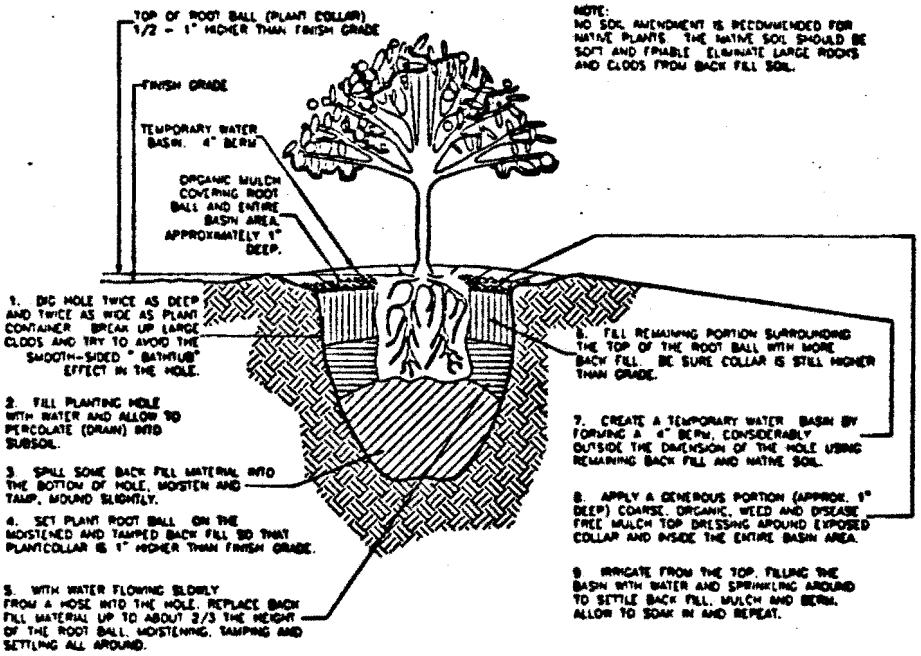
Irrigation Equipment Supplier:
Olson Irrigation Systems
10910 Wheatlands Ave.
Santee CA 92071
Ph: (619) 562-3100, (800) 770LSON
Fax: (619) 562-2724

No irrigation is to be installed in the hydroseeded area.

EXHIBIT No. 9
Application Number:
5-00-034
Landscaping Plan
California Coastal Commission

NOT FOR CONSTRUCTION
FEB. 19, 1999
FOR REVIEW PURPOSES

0 2.5 5 10 20



DETAIL: TREE AND SHRUB PLANTING

Match Line B

PLANT PALETTE

SYMBOL	DESCRIPTION	SIZE	QTY
▲	Calystegia macrostegia Anacapa Pink Island Morning-glory	1-Gal	8
⊘	Myrica californica Pacific Wax Myrtle	1-Gal	3
◎	Prunus ilicifolia ssp. lyonii Holly-leaf Cherry	1-Gal	3
●	Rhus integrifolia Lemonadeberry	1-Gal	7
⊘	Salvia mellifera Black Sage	1-Gal	11

Above plant material available at Tree of Life Nursery
Phone (949)728-0685 Fax (949) 728-0509

EXHIBIT No. 9
Application Number:
5-00-034
Landscaping Plan
California Coastal Commission

Hydroseed Mix

DESCRIPTION	Lbs/Acre
Abronia maritima / Sand Verbena	4
Ambrosia dumosa / Beach Bur-Sage	3
Baccharis pilularis / Coyote Bush	3
Camissonia (Oenothera) cheranthifolia / Beach Evening Primrose	3
Eriogonum parvifolium / Sea Cliff Buckwheat	8
Eschscholzia californica / California Poppy	3
Isocoma menziesii / Coast Goldenbush	4
Limonium californicum / California Statice Marsh Rosemary	6
Lupinus bicolor / Lupine Pigmy-leaved Lupine	3
Lupinus succulentus / Arroyo Lupine	4
Phacelia ramosissima/ Branching Phacelia	4
Salvia leucophylla / Purple sage	3
Salvia mellifera / Black Sage	5

Seed and Hydroseed Materials available at S&S Seeds
Phone (805) 684-0436 Fax (805)684-2798

Match Line A

CALIFORNIA COASTAL COMMISSION

South Coast Area Office
200 Oceangate, 10th Floor
Long Beach, CA 90802-4302
(562) 590-5071

EMERGENCY PERMIT

TO: W. Michael McKinley/John Bass

327 Paseo de Cristobal

San Clemente, CA 92672

July 22, 1998
Date

5-98-273G
(Emergency Permit No.)

327 and 327 1/2 Paseo de Cristobal, San Clemente, Orange County
Location of Emergency Work

Construction of a bluff stabilization structure embedded into bedrock consisting of 16 caisson soldier piles and a 20 foot high, 100 foot long concrete retaining wall. The area between the retaining wall and the landslide scarp will be backfilled with imported dirt. No landscaping or concrete wall face treatment are proposed at this time.
Work Proposed

This letter constitutes approval of the emergency work you or your representative has requested to be done at the location listed above. I understand from your information and our site inspection that an unexpected occurrence in the form of upper coastal bluff failure requires immediate action to prevent or mitigate loss or damage to life, health, property or essential public services. 14 Cal. Admin. Code Section 13009. The Executive Director hereby finds that:

(a) An emergency exists which requires action more quickly than permitted by the procedures for administrative or ordinary permits and the development can and will be completed within 90 days unless otherwise specified by the terms of the permit;

(b) Public comment on the proposed emergency action has been reviewed if time allows; and

(c) As conditioned the work proposed would be consistent with the requirements of the California Coastal Act of 1976.

The work is hereby approved, subject to the conditions listed on the reverse.

EXHIBIT No. 10
Application Number: 5-00-034
Emergency Permit
California Coastal Commission

Very Truly Yours,

Peter M. Douglas
Executive Director

By: Teresa Henry

Title: District Manager

F2: 4/88

CONDITIONS OF APPROVAL:

1. The enclosed form must be signed by the property owner and returned to our office within 15 days.

2. Only that work specifically described above and for the specific property listed above is authorized. Any additional work requires separate authorization from the Executive Director.

3. The work authorized by this permit must be completed within 30 days of the date of this permit.

4. Within 60 days of the date of this permit, the permittee shall apply for a regular Coastal Permit to have the emergency work be considered permanent. If no such application is received, the emergency work shall be removed in its entirety within 150 days of the date of this permit unless waived by the Director.

5. In exercising this permit the applicant agrees to hold the California Coastal Commission harmless from any liabilities for damage to public or private properties or personal injury that may result from the project.

6. This permit does not obviate the need to obtain necessary authorizations and/or permits from other agencies.

Other Conditions pertaining to this specific project:

7. This emergency permit is for bluff stabilization measures as detailed in the project description above. The final visual treatment of the facing of the retaining wall and any proposed bluff top landscaping are not included in this emergency permit but will be analyzed with the follow-up coastal development permit.

8. The follow up permit shall include a visual analysis of the proposed treatment of the concrete retaining wall facing, including several alternative visual treatments and other measures to blend the concrete wall in with the coastal bluff. A native coastal bluff landscaping plan shall be provided, including use of vegetation to break up the visual impact of the wall.

Condition #4 indicates that the emergency work is considered to be temporary work done in an emergency situation. If the property owner wishes to have the emergency work become a permanent development, a Coastal permit must be obtained. A regular permit would be subject to all of the provisions of the California Coastal Act and may be conditioned accordingly. These conditions may include provisions for public access (such as an offer to dedicate an easement) and/or a requirement that a deed restriction be placed on the property assuming liability for damages incurred from storm waves.

If you have any questions about the provisions of this emergency permit, please call the Commission Area office.

Enclosures: 1) Acceptance Form; 2) Regular Permit Application Form

cc: Local Planning Department
DB91G

City of San Clemente
Community Development
James S. Holloway, Community Development Director
Phone: (949) 361-6106 Fax: (949) 361-8281

September 20, 1999

Mr. Steve Raynes
California Coastal Commission
South Coast Area
P.O. Box 1450
200 Oceangate, 10th Floor
Long Beach, CA 90802-4416

Subject: Retaining Wall at 327 Paseo de Cristobal, San Clemente
Emergency Coastal Permit, Your File Number 5-98-273-G

Dear Mr. Raynes:

This letter is in response to the recent telephone conversation you had with John Harris, Associate Planner, of the City's Planning Division, regarding a request for City comments concerning the above matter. My understanding is that this matter is scheduled to be heard by the Coastal Commission at their hearing of October 12-15. It is further my understanding that you requested receipt of comments by September 21, 1999 in order for the comments to be considered in the analysis of your staff report. Please consider the comments below in your analysis and as part of your staff report to the Coastal Commission concerning this matter.

As you know the existing retaining wall was constructed as a result of a slide which impacted the homes located at 327 and 327 ½ Paseo de Cristobal on March 1, 1998. The existing retaining wall is approximately 80 feet long and the exposed face measures approximately 20 feet in height. As a result this retaining wall is a very large visible structure along the coastal bluff facing T-Street beach.

The City would like to encourage the Coastal Commission to consider the use of an aggressive landscape-planting program to mitigate the visual impact of this retaining wall. It is my understanding that the applicant's plan proposes native plantings at the base of the wall only. The City would like to encourage the planting at the base of the wall as well as the use of planting pockets within the surface of the wall at the appropriate spacing based on selected plant materials. The City would also encourage planting at the top of the wall to cascade down the

face of the retaining wall. The planting materials should be drought tolerant and native materials where possible.

Please consider the above in your analysis of the permanent Coastal Development Permit of this project. The City appreciates the opportunity to comment on this important proposal.

Sincerely,

James S. Holloway
Community Development Director

EXHIBIT No. 12
Application Number: 5-00-034
Bill Hart Letter
California Coastal Commission

October 8, 1999

Bill Hart
2021 Calle de los Alamos
San Clemente, Ca. 92672

RECEIVED
OCT 13 1999
CALIFORNIA
COASTAL COMMISSION

Mr Steve Rynas
California Coastal Commission
200 Oceangate
Suite 1000
Long Beach, CA 90820-4302

Dear Mr. Rynas,

I would like to offer my views in opposition to the permanent permitting of a blufftop retaining wall near T-Street Beach in San Clemente (CDP Application 5-98-273). I find the design of the wall completely out of character with the surrounding coastal environment.

1. The 100 x 20 ft. vertical wall substantially degrades the view from the beach. Since the beach in question is extremely popular, the detriment to the public resulting from its appearance is multiplied.

2. The wall appears to extend well beyond the original contour of the bluffs. Erected under an emergency permit in response to a landslide, its purported purpose was to save houses that were teetering on the edge. Instead it appears to have been opportunistically designed to extend a patio beyond the previous edge of the bluffs. Although this is certainly of value to the property owners, it further magnifies the adverse visual impact.

3. There is no attempt to contour or otherwise disguise the wall with regard to the natural landscape. The wall is a flat vertical structure that is completely out of character with its surroundings. Its 100 by 20 foot size makes it a prominent feature of the bluffs as viewed from a large stretch of beach. It sticks out like a sore thumb.

4. It is well known that the bluffs in this area undergo an ongoing erosion process. There are many houses atop these bluffs that will face similar slide problems in the future. Since there are no similar retaining walls or blufftop edifices anywhere else in the area, this wall establishes a design precedent. It is a terrible standard for future retaining structures which will inevitably become necessary. The coastal bluffs as far north as the San Clemente Pier and as far south as Cottons Point are currently unspoiled, but could end up as a patchwork of vertical concrete.

5. There has been no public hearing regarding the design, construction or permanency of this structure. It is wrong that development with such great an impact on the beach should go without local input.

One must sympathize with the property owners who were faced with the necessity of saving their homes. But in protecting private property the homeowners have

substantially degraded a public resource. This retaining wall is a textbook example of why the Coastal Commission exists.

While the city has suggested measures to soften the wall's appearance, it is my opinion that their additions amount to little more than a bandaid. I regretfully suggest that the retaining wall should be reduced in horizontal reach and completely redesigned to conform to the surrounding natural landscape, thus preserving the public viewshed.

Sincerely,

Bill Hart

EXHIBIT No. 12
Application Number:
5-00-034
Bill Hart Letter
California Coastal Commission

December 17, 1999

EXHIBIT No. 13
Application Number: 5-00-034
McKinley Bass Letter
California Coastal Commission

CALIFORNIA COASTAL COMMISSION
SOUTH COAST AREA
P O BOX 1450
200 Oceangate 10th Floor
LONG BEACH CA 90802-4416

Re: **Response to Hart Letter (10-8-99)**

This opposition letter makes five basic points to be responded to. The basic premise is that the wall structure is undesirable. To this, we wholeheartedly agree. There is nothing that can replace the natural beauty of the former cliff structure, whether covered in plant life (as much of it is), or the exposed (and vulnerable) stratified earth. Being faced with repairing this act of God was not something we ever imagined we would be faced with. We lived on this bluff a combined 55 years without ever having a trace of warning as to what was coming. Nonetheless, on March 1, 1998, we were faced with an uncompleted tragedy, with additional major damage anticipated if the combined authorized agencies did not work with us to save our homes.

In regards to Mr. Hart's five points:

1. Degrading the View – As the landscaping portion of the required plan remains to be initiated, this is a premature opinion to offer. The plan, as devised, provides plant life reaching 25-30', as well as surface covering indigenous vines which, when fully allowed to develop, should cover the structure and hide its existence (see rendition). This should, according to the landscape architects, provide full coverage and restore a natural flow consistent with existing vegetation in the area. The result will be a positive view with no detrimental effects.

2. Wall Placement – There is nothing "purported" about the building of this structure. It is absolutely true that the wall structure does not (and could not) follow exactly the previous natural cliff formation. It does, however, follow an average through its former placement. It starts and ends at the previous locations of the cliff face, and extends the distance determined by the geotechnical study to be necessary to achieve the purpose of slope stabilization. In regards to being "opportunistic", we can only say that we would not wish this kind of "opportunity" on our worst enemy, or even Mr. Hart for insinuating it. When your life savings are threatened to save your home, you take offense to having others criticize your methods and motives in this manner. We have tried to be defensive and protective of our property without being offensive to our neighbors.

3. Flat Surface – We believe you can refer this back to #1.

4. Future Standard – We discovered, by living through this process, that there can be no such thing as a "standard". There are options of various types that are determined by the terrain, geology, and condition of the failure. There is no "precedent" that can be drawn from our structure. Each incident is unique unto itself, and must be viewed that way. There are several bluff structures (see attached pictures) in San Clemente that we feel would qualify as objectionable, yet those cannot be referred to as standards either.

5-00-034

5. Public Hearing – We cannot debate the existing laws or question the authorities. We did follow all the procedures presented to us, involved every agency and received all correct permits (as presented to us) from both the California Coastal Committee and the City of San Clemente.

It is so easy to critique from the comfort of a secure home some 20 months later. What is missing is the panic that impending disaster creates. Fortunately for us, the controlling agencies assessed the critical nature of the situation and acted cautiously but expeditiously to arrest the erosion and further slides of land and/or houses. Due process was correctly followed, no corners were cut and we did not act independently of the governmental authorities, but with them. All permits are available for inspection. To compare this extensive planning of all agencies and individuals to a "Band-Aid" approach is obviously offensive to us. We have put too much heart, sweat, tears, time and dollars into this recovery to have it trivialized and second-guessed in this manner.

The private property bluff that failed was not a "public resource" at all. It was private property that served the dual purpose of being a visual asset to the public. Were it truly "public", we would have gladly accepted public financial support for repairing it. Unfortunately for us, that was not the case then, and is not the case now. Our concern since March 1, 1998 has always been to save our homes and minimize the visual impact of the repair. We believe that is exactly what we have done, and all these plans were submitted and reviewed by both the City of San Clemente and the California Coastal Commission prior to construction and monitored throughout the analysis, engineering, and construction phases.

We believe we all succeeded in a sound solution, once the landscaping is installed and allowed a reasonable time to grow and mature.

Very truly yours,

W. Michael McKinley **John Bass**

WWM/cdm

ENCLOSURE

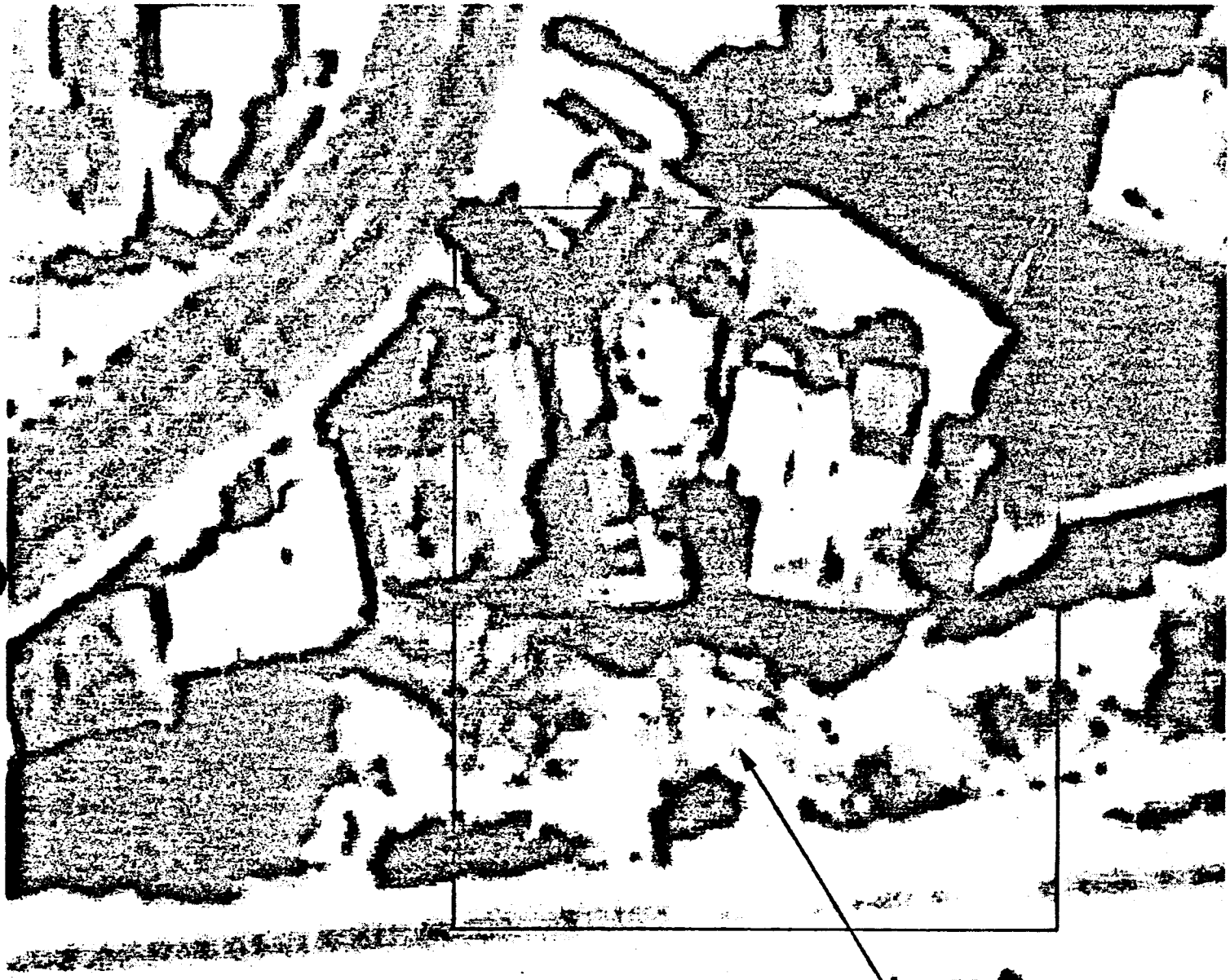


EXHIBIT No. 14
Application Number: 5-00-034
Commission Arial Photograph
California Coastal Commission

ALIFORNIA COASTAL COMMISSION
5 FREMONT STREET, SUITE 2000
AN FRANCISCO, CA 94105-2219
OICE AND TDD (415) 904-5200

EXHIBIT No. 15
Application Number:
5-00-034
Coastal Commission Memo
California Coastal Commission

June 19, 2000

TO: Steven Rynas

FROM: Lesley Ewing

SUBJECT: McKinley/Bass (CDP Application # 5-00-034

I wanted to follow-up on our conversation today concerning two specific issues raised by "Application 5-00-034 Response, specifically the letter and attachments from Stoney Miller dated April 12, 2000. The first issue is the need to site irrigation to prevent the soil cap from shrinking and allowing surface water from infiltrating behind the caisson wall. The second issue is the difficulty in providing effective visual screening of the wall.

Controls of Surface Water: The applicant's consultant, on a letter dated October 1, 1999, and signed by Gary Stoney, contends that proper irrigation is beneficial to the surface stability of the site. Otherwise the cyclic shrinking and swelling of the surface soils and water can penetrate into the backfill.

The soil cap will control surface water from these sites, or a portion of these sites. The applicant has not noted any current controls of groundwater, so the backfill will be subject to water and potential saturation from groundwater and from infiltration of areas not yet treated with the soil cap. The way to address water in the backfill is through proper drainage of the caisson wall. The soil cap may be a useful additional effort to control surface water; it should not be the only effort.

All surface water on the site should be collected and directed to a storm drain or controlled drainage feature (like a street collection system). Normally the site gradient is used to direct water to a collection element, but if a subdrain system was installed with the soil cap, it could also be used.

The soil cap is identified as being a two-foot layer of on-site fine-grained soils (April 12, 2000 letter from Stoney-Miller to Mr. Mike McKinley and Mr. John Bass). No information was provided on the permeability of this material, as placed, to determine its capacity as a protective cap for the backfill. If the current wall drainage is not able to handle all anticipated on-site water, the preferred methods would be to upgrade the drainage to handle all unavoidable water and minimize or avoid additional water.

If the on-site water situation is so critical that the soil cap should remain an element of the overall control effort, the irrigation plan should be carefully developed to insure that the soil cap functions properly during all circumstances. There should be water sensors installed throughout the site and regular feedback with the irrigation system. Such systems have been installed on large projects, such as the Ocean Trails Golf

Course. This system has worked well, but does require monitoring and occasional adjustments. If such a system needs to be part of the long-tem protection of these sites, we should be provided with details about the water control program, such as sensor locations and sensitivity, monitoring, allowable moisture ranges, possible adjustments, and long-term maintenance of the system.

If the soil cap is a useful but not essential feature of the water control program, the soil cap should remain and the surface vegetation and hardscape should be used to direct the surface runoff to a controlled collection point. If some water infiltrates cracks in the soil cap, the drainage for the caisson wall should be designed to handle this, in addition to the water already reaching the site from groundwater and from other neighboring properties.

Visibility of the wall: The applicant has provided information that any effort to screen this wall by using panels or surface coverings would be only temporary. Within 5 to 7 years, the anchors or epoxy would begin to fail. If such covering is necessary, then the periodic reattachment of panels may be considered part of the necessary maintenance. Another option could be to attach the panels for the time that it could take the vegetation screen to mature and then remove the panels once the are no longer visible or effective. The wall could have been colored during construction to minimize its visibility, but at this point in the effort, the only ways I know to change the look of the wall are to cover it with panels, screen it with vegetation or rebuild it so it is less visible.

If there are other parts of this project that you would like me to review, please feel free to sent them up. Also, please feel free to call if you would like to discuss these comments further.

harold larson

Structural Design
1437 Glenneyre St., Laguna Beach, CA 92651
(949) 497-5203 FAX: 497-4671

EXHIBIT "C"

October 8, 1999

Mike McKinley
17611 Armstrong Ave.
Irvine, Calif. 92614

Re: Retaining Wall 327 Paseo Cristobal, San Clemente

This letter is written in response to your call of October 5, 1999. Since the wall is already constructed and its exposure to the ocean will produce a caustic environment, I cannot recommend a viable solution for "hanging" planters or texturing the wall face. I would not advise attaching or veneering anything to the wall face for the following reasons:

1) Brackets or retrofit anchors will be a constant maintenance problem and will discolor the wall face with unattractive stains.

2) Veneers will spall or "flake" over time since adequate attachment to existing wall face is unlikely.

3) Coring or the use of expansive anchoring systems risk severing and weakening wall reinforcement.

4) Providing irrigation for planters on the wall face will be unsightly and probably a source of constant leaking.

5) Introduction of any watering system risks saturating the unsupported soil mass oceanward of the retaining wall face.

It is my opinion the plant material which will spread over the top and down the face of the wall combined with drought-resistance natural shrubs at the base of the wall will provide sufficient screening. The colored concrete used in the construction does provide some "blending". The planting mentioned would be most effective however.

If you have any additional questions or concerns please call.

Sincerely,

Harold Larson

REGISTERED PROFESSIONAL ENGINEER
HAROLD E. LARSON
No. 33222
Exp. 6-30-02
CIVIL
STATE OF CALIFORNIA

harold larson

Structural Design
1437 Glenneyre St., Laguna Beach, CA 92651
(949) 497-5203 FAX: 497-4671

May 17, 2000

Mike McKinley
17611 Armstrong Ave.
Irvine, Calif. 92614

Re: Retaining Wall 327 Paseo Cristobal, San Clemente

This letter is written to expand on my letter of October 8, 1999. The wall was designed and is constructed of high strength concrete to limit permeability, increase torsional resistance and durability. Since the wall faces the ocean, it will be constantly exposed to moist sea air. Any type of penetration using brackets or anchors is going to risk allowing moisture to penetrate the protections outlined above. Because of the hostile exposure any anchored or attached veneers will probably spall in 5-7 years, due to corrosion of the anchors or deterioration of epoxies.

With this reservation stated the wall will support top planter boxes, with soil, not weighing more than 250 pounds per lineal foot, adequately anchored or hung, if absolutely required.

My reluctance to "cut" planters into wall is based on the amount and arrangement of required reinforcing. Saw-cutting planter spaces would be impossible to do without cutting existing reinforcing. I certainly will not recommend cutting any reinforcing in a 20-foot high retaining wall.

Again, the use of native planting that will grow over the face of the wall 3-4 feet with native shrubs 8-10 feet high at the base of the wall will leave very little of the wall visible.

Please call if you have additional questions.

Sincerely,

Harold Larson

EXHIBIT No. 17
Application Number: 5-00-034
Harold Larson Letter
California Coastal Commission

LYNNE DEANE BARBARO
+ ASSOCIATES

EXHIBIT "D"

EXHIBIT No. 18
Application Number: 5-00-034
Lynne Dean Barbaro and Assoc. Letter
California Coastal Commission

November 16, 1999

John Bass
327 1/2 Paseo de Cristobal
San Clemente, CA 92672

Dear John:

We have reviewed the plant material we selected for screening your retaining wall. We used two strategies in choosing the plant material. First, we chose a vine that would essentially cover the entire wall with the help of a wire trellis installed on the entire wall (per plan). Second, we chose shrubs that would help to hold the soil and would grow 10' to 40' high at maturity so that when viewed from the beach, there would be a second layer of screening in front of the wall. The intent is to give the planting a more natural look and hide the flatness of the wall from various angles.

The vine chosen was the Calystegia macrostegia 'Anacapa Pink' / Island Morning Glory. This is a very fast grower. In 5 years, it will be approximately 20' tall twining on the trellis provided. . We have used it on a recent installation with similar loose soil conditions and in 3 months, all specimens grew 1.5' plus.

The shrubs chosen are listed below along with their expected growth rate.

SHRUB	EXPECTED GROWTH	
Myrica californica / Pacific Wax Myrtle	6'-8' 5 yrs	15'-20' 10 yrs
Prunus ilicifolia ssp. lyonii / Catalina Cherry	6'-8' 5 yrs	20'-25' 10 yrs
Rhus integrefolia / Lemonadeberry	5'-7' 5 yrs	10'-15' 10 yrs

The remainder of the shrubs and the hydroseed mix were selected for their erosion control characteristics and relatively small size so that not too much weight will be on the unconsolidated soil.

The hydroseeded area will not be watered. It has to be installed in the winter to take advantage of the winter rains so that the plant material will grow. The only plants to be watered are the containerized plant material at the base of the wall. The containerized material should be drip irrigated. Hand watering is not recommended

384 Forest Avenue, Suite 12, Laguna Beach, CA 92651 Ph (949) 376-0240 Fax (949) 497-1387

at this site. This is due to the fact that watering from above at the top of the wall, the water will come down in large drops at a high speed which would cause erosion of the top soil rather than watering the roots of the plants. Watering by hand at the base of the wall would be dangerous to the person doing the watering. The soil does not appear to be very stable and could slide from under their feet. Also, there is no control of how much water is being added to the soil. With a drip system, the exact precipitation rate of the drip emitter is determined by the manufacturer. With the addition of a controller (timer), you know exactly how much water is being distributed to each plant.

We consulted with the manufacturer of the irrigation products specified on the plans and got their impression of the situation at this site and their experience in the drip irrigation field. In the situation of the unconsolidated soils at the base of the walls, only the roots should be watered. This can be accomplished by only watering a few minutes at a time several times a day, a few days a week via drip irrigation. The amount of water given to each plant should not exceed the amount of water needed to offset evapotranspiration stress. In the San Clemente Area, the amount of rain received is about 12 to 13 inches. The evapotranspiration rate average (the rate at which water is used by the plant to live and the loss of water due to evaporation) in the area is about 42 inches (see Landscape Plants for Western Regions by Bob Perry, Copyright 1992).

The approximate amount of water needed to be added throughout the year is about 30 inches. The amount of water needed per week can be calculated and accurately distributed via the drip and controller system. This is the simplest strategy needed for new plants. A more involved strategy mimicking what really happens during the year reflecting weather cycles and the plants needs is instituted as the plants get older (after the first two years). Supplemental water would be added in the winter and spring during their growth period and no water added in the summer and fall. The use of strategies of giving the plant only enough water when it needs and uses it will eliminate excess water in the soil.

Hopefully this information will help with the permitting process. We have placed a call to Dr. Soldowski of CIT at Fresno State. He does all the research on irrigation systems and provides scientific information of different irrigation strategies and their effectiveness. If you have any questions or need further clarification, please contact me at (949)376-0240.

Sincerely,

Naomi Gruenthal, ASLA Lic #4118
Project Manager