

CALIFORNIA COASTAL COMMISSION

SOUTH CENTRAL COAST AREA
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Filed: 11/16/99
49th Day: 1/04/00
180th Day: 5/14/00
Staff: MKH-V
Staff Report: 11/16/99
Hearing Date: 12/09/99
Commission Action:



STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-98-285

APPLICANT: Robert MacLeod

PROJECT LOCATION: 19220 and 19222 Pacific Coast Highway, City of Malibu, County of Los Angeles

PROJECT DESCRIPTION: Construct two 3-story, 35 ft. high above grade single family residences on adjacent lots, one residence 2,160 sq. ft. with no garage (at 19220 Pacific Coast Highway), and one residence 2,875 sq. ft. with attached 430 sq. ft. garage (at 19222 Pacific Coast Highway), with bulkhead, new septic disposal systems, removal of debris from structures previously destroyed by storm waves, and an offer to dedicate a lateral public access. No grading is proposed.

Lot area:	6,000 sq. ft. (total)
Building coverage:	3,200 sq. ft.
Pavement coverage:	1,200 sq. ft.
Landscape coverage:	1,200 sq. ft.
Parking spaces:	4

LOCAL APPROVALS RECEIVED: City of Malibu: Planning Approval-in-Concept, dated March 23, 1998, Environmental Health Department Septic Approval, dated April 16, 1999, State Lands Commission, letter of review and approval, dated February 16, 1999.

SUBSTANTIVE FILE DOCUMENTS: Certified Malibu/Santa Monica Mountains Land Use Plan; Coastal Development Permit 4-94-107 (MacLeod); Wastewater treatment report prepared by Bob Wilson, Environmental Planning and Design, dated March 18, 1999, "Update of Wave Uprush Study for 19220-19222 Pacific Coast Highway," dated June 17, 1999, prepared by David C. Weiss, Structural Engineer & Associates, Inc., "Wave Uprush Study for 19220-19222 Pacific Coast Highway," dated December 19, 1990, prepared by David C. Weiss, "Geologic Report Update," dated October 27, 1998 for subject property, prepared by Donald B. Kowalewsky, incorporating previous reports by same author concerning the subject site dated January 11, 1993, April 3, 1995, and January 10, 1997, and "Engineering Geologic Report and Geotechnical Report for Development of Duplex on Lots 21 and 22 at

19222 Pacific Coast Highway," dated December 10, 1990, prepared by Donald B. Kowalewsky. "Change of Soil Engineer of Record," dated April 6, 1995, by MTC Engineering, Inc., "Addendum to Soil Engineering Investigation," dated December 20, 1993, prepared by SWN Soiltech Consultants, Inc., "Addendum II to Soil Engineering Investigation," dated August 14, 1992, prepared by SWN Soiltech Consultants, "Addendum to Soil Engineering Investigation," dated July 28, 1992 prepared by SWN Soiltech Consultants, Inc., "Soil Engineering Investigation," dated January 25, 1991, prepared by SWN Soiltech Consultants, Inc.

SUMMARY OF STAFF RECOMMENDATION

Staff recommends **approval** of the proposed project with ten (10) special conditions regarding revised plans, construction responsibilities and debris removal, removal of existing debris, geology, landscape plan, assumption of risk, construction of sidewalk, sign restriction, public view corridor, future limitations: seawall construction, and revised offer to dedicate lateral public access.

The proposed project was previously approved by the Commission (CDP 4-94-107 MacLeod) but subsequently lapsed. The applicant submitted the same plans previously approved by the Commission pursuant to CDP 4-94-107 with the present application on October 20, 1998, but in consultation with staff regarding contemporary septic system technology and the related placement of seawalls, the applicant voluntarily revised the proposed project. As the result, the present proposal includes the use of contemporary bottomless sand filter septic disposal systems that have enabled the landward relocation of the septic systems by approximately ten (10) feet. In addition, the proposed seawall, which is only necessary to protect the septic systems, has similarly been relocated as far landward as feasible (the sole purpose of the seawall is to protect the septic disposal system from storm wave attack), and as proposed herein the seawall would be located five (5) feet seaward of the seawardmost portion of the septic systems.

The proposed project is residential infill development on Las Tunas Beach, which is characterized as a relatively narrow, eroding beach. The applicant has previously recorded an offer to dedicate a lateral public access easement; the associated deed restriction would be revised to reflect the current permit data pursuant to recommended Special Condition 10. The Commission has noted in recent permit decisions in the Malibu area, however, general public access along the front property lines that is necessary to reach vertical accessways in the Malibu area is highly constrained by the high speed, high volume traffic along Pacific Coast Highway, and safe passage by properties with cars parked in front becomes virtually impossible without sidewalks (pedestrians end up on PCH to avoid parked cars where there are no sidewalks). Therefore recommended Special Condition 7 requires the construction of a sidewalk along the front property lines, which would also be reflected in the revised plans required pursuant to recommended Special Condition 1.

In addition to beachgoing use, Las Tunas Beach is also a popular location along Pacific Coast Highway for public turnouts and ocean viewing. The project as proposed includes the required 20 percent of lot width open areas for view corridors; nevertheless, recommended

Special Condition 9 incorporates specific recommendations to restrict construction such as fences, gates, or landscaping within the sideyard setbacks comprising the view corridors that would achieve a height or density that would obstruct public coastal views from PCH, a designated scenic highway. This requirement is also implemented in Special Condition 1 (revised plans). Staff notes that because the applicant has already revised the project plans to incorporate many of the design considerations typically of concern to the Commission, the revisions to the project plans made necessary by the recommended special conditions are relatively minor and would not entail any redesign of the basic structures proposed.

STAFF RECOMMENDATION:

The staff recommends that the Commission APPROVE the permit application with special conditions.

MOTION

Staff recommends a YES vote on the following motion:

I move that the Commission approve with special conditions Coastal Development Permit No. 4-98-285 per the staff recommendation set forth below.

A majority of the Commissioners present is required to pass the motion.

I. Approval with Conditions

The Commission hereby grants, subject to the conditions below, a permit for the proposed development on the grounds that the development, as conditioned, will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, is located between the sea and the first public road nearest the shoreline and is in conformance with the public access and public recreation policies of Chapter 3 of the Coastal Act, and, as conditioned, 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 on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Compliance.** All development must occur in strict compliance with the proposal as set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. **Interpretation.** Any questions of intent or interpretation of any term or condition set forth herein will be resolved by the Executive Director or the Commission.
5. **Inspections.** The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.
6. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. Special Conditions

1. Revised Plans

Prior to the issuance of Coastal Development Permit 4-98-285, the applicant shall submit, for the review and approval of the Executive Director, revised project plans that show that:

- (a) as consistent with Special Condition 9, proposed development located within the width of the sideyard setbacks shown on the proposed project plans and comprising the required view corridor, is deleted. Fencing consisting of visually permeable designs and materials (such as wrought iron or non-tinted glass

material) and low-lying vegetation consistent with the landscape plan approved pursuant to Special Condition 5 shall be allowed.

- (b) the sidewalks required pursuant to Special Condition 7 have been incorporated into the project plans.

2. Construction Responsibilities & Debris Removal

The applicant shall, by accepting this permit, agree: a) that no stockpiling of dirt shall occur on the beach; b) that all site disturbance for placement of pilings, etc., shall be properly covered, sand-bagged, and ditched to prevent runoff and siltation; and, c) that measures to control erosion must be implemented at the end of each day's work. In addition, no machinery will be allowed in the intertidal zone at any time. The permittee shall continuously remove from the beach and seawall area any and all debris that results from the construction period.

3. Removal of Existing Debris

The applicant shall remove the existing remnants of concrete bulkhead and any residual debris remaining from previously destroyed structures on the subject site prior to the commencement of construction of the proposed residences.

4. Geology

All recommendations contained in the Update of Wave Uprush Study for 19220-19222 Pacific Coast Highway," dated June 17, 1999, prepared by David C. Weiss, Structural Engineer & Associates, Inc., "Wave Uprush Study for 19220-19222 Pacific Coast Highway," dated December 19, 1990, prepared by David C. Weiss, "Geologic Report Update," dated October 27, 1998 for subject property, prepared by Donald B. Kowalewsky, incorporating previous reports by same author concerning the subject site dated January 11, 1993, April 3, 1995, and January 10, 1997, and "Engineering Geologic Report and Geotechnical Report for Development of Duplex on Lots 21 and 22 at 19222 Pacific Coast Highway," dated December 10, 1990, prepared by Donald B. Kowalewsky. "Change of Soil Engineer of Record," dated April 6, 1995, by MTC Engineering, Inc., "Addendum to Soil Engineering Investigation," dated December 20, 1993, prepared by SWN Soiltech Consultants, Inc., "Addendum II to Soil Engineering Investigation," dated August 14, 1992, prepared by SWN Soiltech Consultants, "Addendum to Soil Engineering Investigation," dated July 28, 1992 prepared by SWN Soiltech Consultants, Inc., "Soil Engineering Investigation," dated January 25, 1991, prepared by SWN Soiltech Consultants, Inc., shall be incorporated into all final design and construction including recommendations concerning foundations, drainage, and septic system plans, must be reviewed and approved by the consultants who prepared the recommendations or by the applicant's consultants of the same technical disciplines and qualifications, prior to commencement of development. Prior to issuance of Coastal Development Permit 4-98-285, the applicant shall submit evidence to the

Executive Director of the consultants' review and approval of all final design and construction plans. Such evidence shall include the affixation to the final plans of the registration stamps and signatures of the respective geotechnical consultants and of the coastal engineer.

The final plans approved by the consultant shall be in substantial conformance with the plans approved by the Commission relative to construction, grading and drainage. Any substantial changes in the proposed development approved by the Commission which may be required by any of the applicant's consultants shall require an amendment to the permit or a new coastal permit.

5. Landscape Plan

Prior to the issuance of Coastal Development Permit 4-98-285, the applicant shall submit a landscape plan, prepared by a licensed architect or a qualified natural resource specialist, for review and approval by the Executive Director. The plans shall identify the species, extent, and location of all plant materials and shall incorporate the following criteria:

- (a) The portion of the site that is located within the public view corridor designated pursuant to Special Condition 9 and the portion of the site between the proposed residence and Pacific Coast Highway shall be planted within sixty (60) days of receipt of the certificate of occupancy for the residence. Any portion of the site that is subject to wave action shall be maintained as sandy beach area. To minimize the need for irrigation, all landscaping shall consist primarily of native, drought tolerant plants as listed by the California Native Plant Society, Santa Monica Mountains Chapter, in their document entitled Recommended List of Plants for Landscaping in the Santa Monica Mountains, dated October 4, 1994. Such planting shall be adequate to provide 90 percent coverage within two (2) years, and this requirement shall apply to all to all disturbed soils. Invasive, non-indigenous plant species which tend to supplant native species shall not be used.
- (b) Plantings shall be maintained in good growing condition throughout the life of the project and, whenever necessary, shall be replaced with new plant materials to ensure continued compliance with applicable landscape requirements.
- (c) Vegetation within the public view corridor, as consistent with Special Condition 9, shall be limited to low-lying vegetation of no more than two feet in height at maturity.
- (d) The plan shall include vertical elements within the area between Pacific Coast Highway and the residence to screen and soften the adverse visual effects of the proposed development to public views from the highway.

6. Assumption of Risk/Shoreline Protection

- A. By acceptance of this permit, the applicant acknowledges and agrees to the following:
- (1) The applicant acknowledges and agrees that the site may be subject to hazards from liquefaction, storm waves, surges, erosion, landslide, flooding, and wildfire.
 - (2) The applicant acknowledges and agrees 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.
 - (3) The applicant unconditionally waives any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards.
 - (4) The applicant agrees 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.
 - (5) No future repair or maintenance, enhancement, reinforcement, or any other activity affecting the shoreline protective device approved pursuant to Coastal Development Permit No. 4-98-285 shall be undertaken if such activity extends the seaward footprint of the subject shoreline protective device. By acceptance of this permit, the applicant hereby waives, on behalf of itself and all successors and assigns, any rights to such activity that may exist under Public Resources Code section 30235.
- B. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall execute and record a deed restriction, in a form and content acceptable to the Executive Director incorporating all of the above terms of this condition. The deed restriction shall include a legal description of the applicant's entire parcel and an exhibit showing the location of the shoreline protective device approved by this permit. 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 approval of an amendment to this coastal development permit.

7. Construction of Sidewalk

Prior to the issuance of Coastal Development Permit 4-98-285, the applicant shall submit for the review and approval of the Executive Director, revised plans for the construction of a six (6) ft. wide sidewalk between Pacific Coast Highway and the proposed development. The applicant shall construct the sidewalk improvements no later than sixty (60) days after the issuance of the certificate of occupancy. No encroachments, such as planters, vegetation, or other structures or obstacles, that

would affect the public's ability to use the entire sidewalk area shall be constructed or placed.

8. Sign Restriction

No signs shall be posted on the property subject to this permit which (a) explicitly or implicitly indicate that the portion of the beach on the subject site located seaward of the residence and deck permitted in this application 4-98-285 is private or (b) contain similar messages that attempt to prohibit public use of this portion of the beach. In so instance shall signs be posted which read "*Private Beach*" or "*Private Property*." In order to effectuate the above prohibitions, the permittee/landowner is required to submit the design and content of any proposed sign on the subject property to the Executive Director for review and approval prior to posting any proposed sign.

9. Public View Corridor

Prior to the issuance of Coastal Development Permit 4-98-285, the applicant shall execute and record a document, in a form and content acceptable to the Executive Director, which provides that:

- (a) No less than 20% of the lineal frontage of the project site shall be maintained as a public view corridor from Pacific Coast Highway to the Pacific Ocean.
- (b) As consistent with Special Condition 1, no structures, vegetation, or obstacles which result in an obstruction of public views of the ocean from Pacific Coast Highway shall be permitted within the public view corridor/sideyard setback distances shown on the proposed project plans.
- (c) Fencing within the public view corridor shall be limited to visually permeable designs and materials (such as wrought iron or non-tinted glass materials).
- (d) Vegetation within the public view corridor, as consistent with Special Condition 5, shall be limited to low-lying vegetation of no more than two feet in height at maturity.

The document 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 Coastal Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

10. Offer to Dedicate Lateral Public Access

In order to implement the applicant's proposal of an offer to dedicate an easement for lateral public access and passive recreational use along the shoreline as part of this project, the applicant agrees to complete the following prior to issuance of the permit: the landowner

shall execute and record a document, in a form and content acceptable to the Executive Director, irrevocably offering to dedicate to a public agency or private association approved by the Executive Director an easement for lateral public access and passive recreational use along the shoreline. The document shall provide that the offer of dedication shall not be used or construed to allow anyone, prior to acceptance of the offer, to interfere with any rights of public access acquired through use which may exist on the property. Such easement shall be located along the entire width of the property from the ambulatory mean high tide line landward to the deck stringline as illustrated on the site plan shown as Exhibit 2, prepared by Bill Wilson dated June 6, 1992.

The document shall be recorded free of prior liens which the Executive Director determines may affect the interest being conveyed, and free of any other encumbrances which may affect said interest. The offer shall run with the land in favor of the People of the State of California, binding all successors and assignees, and shall be irrevocable for a period of 21 years, such period running from the date of recording. The recording document shall include legal descriptions of both the applicant's entire parcel(s) and the easement area. This deed restriction shall not be removed or changed without a Coastal Commission-approved 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. Background

The applicant proposes to construct two relatively small, infill development single family residences on adjacent beachfront lots that total 6,000 sq. ft. at 19220 and 19222 Pacific Coast Highway, at the west end of Las Tunas Beach, within the City of Malibu, Los Angeles County. The houses, 2,160 sq. ft. with no garage (at 19220 Pacific Coast Highway), and 2,875 sq. ft. with an attached 430 sq. ft. garage (at 19222 Pacific Coast Highway), respectively, would be built on caissons with a seawall constructed beneath the residences and not occupying any portion of the sandy beach seaward of the dripline of the proposed decks (proposed within the deck stringline drawn from adjacent properties) proposed on the beach side of the lots. The seawall would, however, be located within the wave uprush zone most of the year, and would therefore be expected to steepen the beach profile and reduce the total amount of beach sand available on or near the subject site.

The proposed project is located approximately ½ mile east of Las Tunas State Beach and approximately 1-1/2 miles west of Topanga State Beach. The shoreline in this area has eroded considerably as verified by staff observations of the site in 1994 and since. The applicant has previously recorded an offer to dedicate a lateral public access easement (CDP 4-94-107 MacLeod, permit since lapsed) that would be revised to reflect the pending permit approval.

A three-unit residential structure which previously existing on the two lots was destroyed by storm waves in 1988. Some debris from the previous structures remains on site, and the applicant proposes to remove the debris prior to construction of the proposed residences.

A. Shoreline Processes and Seaward Encroachment

Section 30235 of the Coastal Act states that:

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

Section 30250(a) states that:

(a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.

Finally, Section 30253 states in pertinent part that:

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.

Past Commission review of shoreline residential projects in Malibu has shown that such development results in potential individual and cumulative adverse effects upon coastal processes, shoreline sand supply, and public access. Shoreline development, if not properly designed to minimize such adverse effects, may result in encroachment on lands subject to the public trust (thus physically excluding the public); interference with the natural shoreline processes necessary to maintain publicly-owned tidelands and other public beach areas; overcrowding or congestion of such tideland or beach areas;

and visual or psychological interference with the public's access to and the ability to use public tideland areas. The Commission finds it necessary to analyze the proposed project in relation to the characteristics of the shoreline, location of the development on the beach, and wave action to determine what adverse effects upon coastal resources will result from the proposed project.

Site Shoreline Characteristics

The proposed project site is located on a section of Las Tunas Beach, a narrow, eroding beach that is developed with single family homes. As noted above, the proposed site is located approximately ½ mile east of Las Tunas State Beach and approximately 1-1/2 miles west of Topanga State Beach.

In the case of the project site, the back of the beach has been previously fixed in place by Pacific Coast Highway and attendant residential development on the beach side of the highway. In addition, the Malibu/Los Angeles County Coastline Reconnaissance Study of the Malibu/Los Angeles County coastline by the United States Army Corps of Engineers dated April 1994 concludes that Las Tunas Beach is an eroding beach. In addition, as noted previously, the recorded observations of Commission staff regarding the beach profiles at the proposed site over a period of at least 6 previous years have noted substantial erosion of the beach. No evidence to the contrary has been submitted by the applicant or the applicant's coastal engineer.

Stringline

As a means of controlling seaward encroachment of residential structures on a beach to ensure maximum public access and minimize wave hazards, as well as minimize adverse effects upon coastal processes, shoreline sand supply, and public views, the Commission has, in past permit actions, developed the "stringline" analytical method of evaluating the potential effects of shoreline development. As applied to beachfront development, the stringline limits the seaward extension of a structure to a line drawn between the nearest corners of adjacent structures and limits decks to a similar line drawn between the nearest corners of the adjacent decks. The Commission has applied the stringline analysis to numerous past permits involving infill development on sandy beaches and has found the method to be an effective tool in identifying and preventing further encroachments onto sandy beaches.

In the case of coastal development permit application no. 4-98-285, the applicant proposes to construct decks on the seaward side of the two proposed residences within the stringline drawn from the decks of neighboring residences on the adjacent lots. Thus, the proposed project would not result in the seaward encroachment of residential development on Las Tunas Beach, and thus the proposed project will be consistent with the stringline analytical standards set by the Commission over years of reviewing infill beach development in Malibu.

In addition, the proposed septic system and bulkhead, while not specifically a portion of the stringline analysis, are, as discussed elsewhere in this report, subject to the redesign and relocation of these structures further landward where feasible to achieve a similar goal—that is, reducing the seaward encroachment of new development. As discussed in the background section, the applicant's consultants have determined, at the request of Commission staff, that the originally proposed septic disposal system may be replaced by a more contemporary technology known as the bottomless sand filter design. Among the advantages of the new design are superior leachate treatment capacity, reduced leachfield requirements, and the elimination of the need to additionally identify (and protect with shoreline protective devices) future leachfield locations. Thus, implementation of the new design facilitates the landward relocation of the proposed septic system and bulkhead approximately 10 feet and allows the bulkhead to be placed unobtrusively below the proposed residence, at approximately the mid-point of the floor area. Therefore, the Commission finds that the redesign and relocation of the proposed septic disposal system, and the relocation of the proposed bulkhead, as submitted by the applicant will ensure that the proposed project does not result in the seaward encroachment of development on Las Tunas Beach and will serve to minimize the adverse effects on coastal resources that might otherwise have been caused if the project had been constructed as previously designed.

Wave Uprush and Mean High Tide Line

The Wave Uprush Study prepared by the applicant's coastal engineer, David Weiss, indicates that the ambulatory mean high tide line has been measured to be as much as 114 feet from the Pacific Coast Highway right-of-way line (1980) to a minimum of 80 feet (1961). The maximum wave uprush zone calculated by the coastal engineer is approximately 9 feet landward of the Pacific Coast Highway right-of-way line. Therefore, the wave uprush limit will extend as far as 65-70 feet landward under the proposed structure. Thus, because the septic system will be located approximately 50 feet landward of the seaward edge of the proposed structure, a shoreline protective device will be needed to protect the septic disposal system.

Despite the landward relocation of the proposed bulkhead, however, the Commission notes that the project will still result in adverse effects upon coastal processes and shoreline sand supply. Seawalls typically steepen the beach profile (when there is beach sand present) and result in an overall loss of sand supply on and near the subject site. To mitigate this loss, the applicant in a past permit approval (CDP 4-94-107) has recorded an offer to dedicate a lateral public access easement. Special Condition 10 requires that the previously recorded offer simply be updated to reflect the Commission's approval of CDP 4-98-285.

The applicant has offered to revise and record a new lateral access easement that reflects the most recent requirements for an offer to dedicate. The Commission finds that to carry out the applicant's offer, Special Condition 10 is necessary.

Effects of the Shoreline Protective Device on the Beach

As described above, the proposed timber bulkhead and revised septic disposal systems have been revised by the applicant to ensure that these structures are located as far landward as feasible on the proposed site. Nonetheless, the proposed bulkhead would be located within the wave uprush zone and as the result of wave interaction, would still have the potential to adversely impact the configuration of the shoreline and the beach profile.

Although the precise impact of a structure on a specific increment of beach is the subject of a persistent debate within the discipline of coastal engineering, and particularly between coastal engineers and marine geologists, it is generally agreed that a shoreline protective device will affect the configuration of the shoreline and beach profile. Adverse impacts upon the shoreline may accrue as the result of beach scour, end scour (undermining of the beach areas at the ends of the seawall), the retention of beach material behind the wall, the fixing of the back beach and the interruption of alongshore processes. To evaluate these potential impacts relative to the proposed structure and its location on Las Tunas Beach, each of the identified effects will be evaluated below.

Beach Scour

Scour is the removal of beach material from the base of a cliff, seawall or revetment due to wave action. The scouring of beaches caused by seawalls and revetments is a frequently observed occurrence. When waves impact a hard surface such as a coastal bluff, rock revetment, or vertical bulkhead, some of the energy from the wave is absorbed, but much of the energy is reflected back seaward. This reflected wave energy in combination with the incoming wave energy, will disturb the material at the base of the seawall and cause erosion to occur in front and down coast of the hard structure. This phenomenon has been recognized for many years and the literature acknowledges that such shoreline protective devices do affect the supply of beach sand. The wave uprush study prepared by the applicants' coastal engineer notes that the maximum wave uprush applicable to the subject site, absent a seawall or other shoreline protective device, extends approximately 9 feet landward of Pacific Coast Highway.

The Commission notes that the proposed timber bulkhead is located seaward of the maximum wave uprush and will therefore be periodically acted upon by wave action. In past permit actions, the Commission has found that shoreline protective devices that are subject to wave action tend to exacerbate or increase beach erosion. The following quotation summarizes a generally accepted opinion within the discipline of coastal engineering that:

These structures are fixed in space and represent considerable effort and expense to construct and maintain. They are designed for as long a life as possible and hence are not easily moved or replaced. They become permanent fixtures in our coastal scenery but their performance is poor in

protecting community and municipalities from beach retreat and destruction. Even more damaging is the fact that these shoreline defense structures frequently enhance erosion by reducing beach width, steepening offshore gradients, and increasing wave heights. As a result, they seriously degrade the environment and eventually help to destroy the areas they were designed to protect.¹

The above 1981 statement signed by 94 coastal geologists indicates that sandy beach areas available for public use can be harmed through the introduction of shoreline protective devices. Thus, in evaluating an individual project, the Commission assumes that the principles reflected in that statement are applicable. To do otherwise would be inconsistent with the Commission's responsibilities under the Coastal Act to protect the public's interest in shoreline resources and to protect the public's access along the ocean and to the water, as discussed in more detail in the subsequent section concerning public coastal access.

The impact of shoreline protective devices as they are related to sand removal on the sandy beaches is further documented by the State Department of Boating and Waterways:

While seawalls may protect the upland, they do not hold or protect the beach, which is the greatest asset of shorefront property. In some cases, the seawall may be detrimental to the beach in that the downward forces of water, created by the waves striking the wall rapidly remove sand from the beach.²

Finally this observation was underscored more recently in 1987 by Robert G. Dean in "Coastal Sediment Processes: Toward Engineering Solutions":

Armoring can cause localized additional storm scour, both in front of and at the ends of the armoring...Under normal wave and tide conditions, armoring can contribute to the downdrift deficit of sediment through decreasing the supply on an eroding coast and interruption of supply if the armoring projects into the active littoral zone.³

Dr. Craig Everts found that on narrow beaches where the shoreline is not armored, the most important element of sustaining the beach width over a long period of time is the retreat of the back beach and the beach itself. He concludes that:

Seawalls inhibit erosion that naturally occurs and sustains the beach. The two most important aspects of beach behavior are changes in width and changes in the position of the beach. On narrow, natural beaches, the retreat of the back

¹ Saving the American Beach: A Position Paper by Concerned Coastal Geologists (March 1981, Skidaway Institute of Oceanography), pg. 4.

² State Department of Boating and Waterways (formerly called Navigation and Ocean Development), Shore Protection in California (1976), page 30.

³ Coastal Sediments '87.

beach, and hence the beach itself, is the most important element in sustaining the width of the beach over a long time period. Narrow beaches, typical of most of the California coast, do not provide enough sacrificial sand during storms to provide protection against scour caused by breaking waves at the back beach line. This is the reason the back boundary of our beaches retreats during storms.⁴

Dr. Everts further concludes that armoring in the form of a seawall or revetment interrupts the natural process of beach retreat during a storm event and that:

...a beach with a fixed landward boundary is not maintained on a recessional coast because the beach can no longer retreat.⁵

The Commission has observed this phenomenon up and down California's coast where a seawall has successfully halted the retreat of the shoreline, but only at the cost of usurping the beach. For example, at La Conchita Beach in Ventura County, placement of a rock revetment to protect an existing roadway has caused narrowing of the existing beach. Likewise, at City of Encinitas beaches in San Diego County, construction of vertical seawalls along the base of the bluffs to protect existing residential development above has resulted in preventing the bluffs' contribution of sand to the beaches, resulting in narrowing.

As set forth in earlier discussion, the western portion of Las Tunas Beach is a narrow, receding beach. The applicants' coastal engineering consultant has indicated that the bulkhead will be acted upon by waves during high tide and storm conditions, even though the consultant asserts that these events are expected to be rare and that the stated results of the wave uprush study are therefore considered by the consultant to be conservative. If even seasonal beach condition occurs with greater frequency due to the placement of a bulkhead on the subject site, then the subject beach would also—at a minimum—accrete at a slower rate. The Commission notes that many studies performed on both eroding and oscillating beaches have concluded that loss of beach occurs on both types of beaches where a shoreline protective device exists. Therefore, the Commission notes that the proposed bulkhead, over time, will result in potential adverse impacts to the beach sand supply resulting in increased seasonal erosion of the beach and longer recovery periods.

The impacts of potential beach scour are important relative to beach use for two reasons. The first reason involves public access. The subject property is located on Las Tunas Beach – an area noted by staff on site visits to be popular with surfers and other beach visitors when conditions are inviting. If the beach scours at the base of the bulkhead, even minimal scouring in front of the timber bulkhead will translate into a loss of beach sand available (i.e., erosion) at a more accelerated rate than would otherwise

⁴ Letter Report dated March 14, 1994 to Coastal Commission staff civil engineer Lesley Ewing from Dr. Craig Everts, Moffatt and Nichol Engineers.

⁵ *ibid.*

occur under a normal winter season if the beach were unaltered. The second impact relates to the potentially turbulent ocean conditions. Scour at the face of a bulkhead will result in greater interaction with the bulkhead and thus make the ocean along Las Tunas Beach more turbulent than it would be along an unarmored beach area.

Thus, the Commission has ordinarily required that shoreline protection devices be located as far landward as possible to reduce adverse impacts from scour and erosion. The applicant acknowledged during project filing review that the proposed project originally submitted could be revised to incorporate more recently available septic disposal system technology than that available when the project was originally approved by the Commission in 1994. The applicant therefore undertook the septic system redesign that resulted in moving the septic systems and the bulkhead necessary to protect the septic system 10 feet further landward than had previously been designed. The bulkhead is only necessary to protect the septic systems—the residences are designed on caissons to withstand wave effects.

In past permit actions, the Commission has also required a lateral public access easement for new shoreline protection devices to mitigate adverse impacts to beach sand supply and public access. To ensure that any potential adverse effects of the proposed revetment are mitigated to the maximum extent feasible, the applicants have previously recorded an offer to dedicate a lateral public access easement across the subject lots. The applicant has offered to revise and record a new lateral access easement that reflects the most recent requirements for an offer to dedicate. The Commission finds that to carry out the applicant's offer, Special Condition 10 is necessary.

Therefore, as conditioned, the project will minimize the adverse impacts resulting from construction of the timber bulkhead and is consistent with the applicable Coastal Act sections and with past Commission action. Public access is discussed in more detail below.

End Effects

End scour effects involve the changes to the beach profile adjacent to the shoreline protection device at either end. One of the more common end effects comes from the way reflection of waves off of the shoreline protection device in such a way that they add to the wave energy which is impacting the unprotected coastal areas on either end. Coastal engineers have compared the end effects impacts between revetments and bulkheads. In the case of a revetment, the many angles and small surfaces of the revetment material reflect wave energy in a number of directions, effectively absorbing much of the incoming wave rather than reflecting it. Because of the way revetments modify incoming wave energy, there is often less problem with end effects or overtopping than that which occurs with a vertical bulkhead. In the case of a vertical bulkhead, return walls are typically constructed in concert with the seawall, and, thus, wave energy is also directed to the return walls causing end erosion effects.

In addition, the Commission notes that the literature on coastal engineering repeatedly warns that unprotected properties adjacent to any shoreline protective device may experience increased erosion. Field observations have validated this concern. Although it is difficult to quantify the exact loss of material due to end effects, Gerald G. Kuhn of the Scripps Institute of Oceanography concludes in a paper entitled, "Coastal Erosion along Oceanside Littoral Cell, San Diego County, California," (1981) that erosion on properties adjacent to a rock seawall is intensified when wave runup is high.

An extensive literature search on the interaction of seawalls and beaches was performed by Nicholas Kraus in which he found that seawalls have the same effects on narrow beaches or beaches eroded by storm activity as Dr. Kuhn observed in relation to rock seawalls. Dr Kraus' research indicated that the form of the erosional response to storms that occurs on beaches without seawalls that are adjacent to beaches with seawalls is manifested as more localized toe scour and end effects of flanking and impoundment at the seawall.⁶ Dr. Kraus' concluded that seawalls were a likely cause of retained sediment, increased local erosion and increased end erosion. Dr. Kraus states:

At the present time, three mechanisms can be firmly identified by which seawalls may contribute to erosion at the coast. The most obvious is retention of sediment behind the wall which would otherwise be released to the littoral system. The second mechanism, which would increase local erosion on downdrift beaches, is for the updrift side of the wall to act as a groin and impound sand. This effect appears to be primarily theoretical rather than actualized in the field, as a wall would probably fail if isolated in the surf zone. The third method is flanking, i.e. increased local erosion at the ends of walls. (underline added for emphasis)

In addition, the results of other researchers investigating the length of shoreline affected by heightened erosion adjacent to seawalls concluded that:

...erosion at the ends of seawalls increases as the structure length increases. It was observed in both the experimental results and the field data of Walton and Sensabaugh (1978) that the depth of excess erosion is approximately 10% of the seawall length. The laboratory data also revealed that the along-coast length of excess erosion at each end of the structure is approximately 70% of the structure length.⁷

A more comprehensive study was performed over several years by Gary Griggs, which concluded that beach profiles at the end of a seawall are further landward than natural

⁶ "Effects of Seawalls on the Beach", published in the Journal of Coastal Research, Special Issue #4, 1988.

⁷ "Laboratory and Field Investigations of the Impact of Shoreline Stabilization Structures on Adjacent Properties" by W.G. McDougal, MA Sturtevant, and P.D. Komar in Coastal Sediments '87.

profiles.⁸ This effect appears to extend for a distance of about 6/10 the length of the seawall and represents both a spatial and temporal loss of beach directly attributable to seawall construction.

The Commission notes that end effect erosion may be further minimized by locating a proposed shoreline protection device as landward as possible to reduce the frequency with which the seawall is subject to wave action. In the case of the proposed project, and as noted previously, the proposed bulkhead will be located as landward as feasible to protect the proposed septic system. In addition, most development on Las Tunas Beach is designed on caissons and the seawalls present are similarly necessary primarily, or solely, to protect septic disposal systems. Thus, in this case end effects from the proposed bulkhead are not anticipated to cause any significant effects due to scour.

Retention of Potential Beach Material

A shoreline protective device's retention of potential beach material impacts shoreline processes simply by depriving beaches of nutrients that would normally be fed into the littoral cell and deposited on beaches through the actions of normal shoreline processes. A revetment prevents upland sediments from being carried to the beach by wave action and bluff retreat. In the case of Las Tunas Beach, which is located in the Santa Monica Littoral Cell, the back of the beach is fixed at Pacific Coast Highway. Thus, construction of the highway has ultimately established the unavailability of bluff material for this beach area.

Past Commission Actions on Residential Shoreline Development

Many portions of the Malibu coastline are intensely developed with single family residences. The eastern and central portion of the Malibu coastline, form an almost solid wall of residential development along a five mile stretch of the shoreline. Las Tunas Beach is highly developed with few vacant lots. This residential development extends over the sandy and rocky beach in many areas and most of the residences are built on caissons, though some have shoreline protective devices such as rock revetments and concrete or timber seawalls. This residential development and their associated protective devices prevent access to the coast, obscure the views to the beach and water from Pacific Coast Highway, interrupt shoreline processes and impact the fragile biological resources in these areas.

Given Malibu's close proximity to the Los Angeles metropolitan area it is understandable why the Malibu coastline has experienced such intensive development of its coastline over the past 50 years. The vast majority of this development took place prior to the passage of Proposition 20, which established the Coastal Commission and

⁸ "the Interaction of Seawalls and Beaches: Seven Years of Field Monitoring, Monterey Bay, California" by G. Griggs, J. Tait, and W. Corona, in *Shore and Beach*, Vol. 62, No. 3, July 1994.

the 1976 Coastal Act. As previously stated, Section 30235 of the Coastal Act allows for the construction of protective devices only if the device serves to protect coastal dependent uses, or to protect existing structures or public beaches in danger from erosion. The construction of protective devices to protect new residential development is generally not allowed under this Coastal Act section. The majority of the residential development described above required some type of shoreline protective device in order to be developed. Therefore, it is safe to assume under this policy and the other resource protection policies of the Coastal Act that this type of development along Malibu's coastline would either not have been approved or would be developed in a much different configuration or design than it is today.

Infill Development

The Commission has previously permitted a number of new residential developments with protective devices on the Malibu coast, but only when that development was considered "infill" development. The developed portions of the Malibu coastline include a number of vacant parcels between existing structures. Typically, there is no more than one to two vacant lots between existing structures. Infill development can be characterized as the placement of one to two residential structures on one to two lots with protective structures provided those protective structures tie into adjacent protective structures.

The term "infill development," as applied by the Commission in past permit decisions, refers to a situation where construction of a single-family residence (and/or in limited situations a duplex) on a vacant lot or the demolition of an existing single-family residence (SFR) and construction of a new single-family residence is proposed in an existing geographically definable residential community which is largely developed or built out with similar structures. When applied to beachfront development, this situation typically is applied to an existing linear community of beach-fronting residences where the majority of lots are developed with SFRs and relatively few vacant lots exist. In other words, within the linear stretch of developed beachfront lots, there is an occasional undeveloped lot or two which can be expected to be developed in a similar fashion. By nature of this description, an "infill development" situation can occur only in instances where roads and other services are already existing and available within the developed community or stretch of beach. Typically, the term "infill development" would not be applied to a large or long stretch of undeveloped beach (i.e. several lots or a large lot which is not similar in size and character to developed lots in the community or areas which do not contain existing roads and infrastructure).

Another characteristic of largely developed beachfront communities is that many, but not all, existing SFRs have some form of shoreline protective device. In Malibu, all beachfront homes utilize a septic system which, when determined to be subject to wave uprush by a coastal engineer, are required to have a shoreline protective device to protect the system. This requirement of assessing wave uprush applies to all new development, extensive remodels, and/or reconstruction, as well as any changes to an existing septic system or when a new septic system is required or proposed.

In "infill development" situations only, as described above, the Commission has found in past permit actions in Malibu pursuant to Section 30235 of the Coastal Act, that seawalls, revetments, or other types of shoreline protective devices can be permitted to protect existing structures or new structures which constitute infill development and when designed and engineered to eliminate or mitigate adverse impacts on the shoreline (certified Malibu LUP Polices 166 and 167). The Commission has also found, in past permit actions in Malibu, that in beach areas largely committed to residential development having shoreline protective devices, the construction of shoreline protective devices should tie into adjacent seawalls where appropriate or possible (Malibu LUP Policy 251).

To the maximum extent feasible, protective structures are required to tie into adjacent protective structures. Depending on past development that has occurred on developed beaches, requiring seawalls to form one contiguous line is not always possible. In addition, many of the protective devices that were constructed on these beaches were built under emergency situations where it is difficult to place the seawall under an existing structure. Therefore, the majority of the developed beaches along the eastern end of Malibu, consist of a patchwork of protective devices ranging from wooden bulkheads, rock revetments, shotcrete or gunite walls, or a combination of a bulkhead with a revetment. Thus, the seawalls do not always tie into adjacent structures at every location on a developed beach.

The Commission recognized that the infilling of residential development between existing structures would not result in significant adverse impacts to coastal resources within these existing developed shoreline areas. The Commission also acknowledged that the gaps these vacant parcels created between protective devices focused wave energy between these structures resulting in erosion of the vacant property between the structures and potentially endangering infrastructure along Pacific Coast Highway or adjacent frontage roads and endangering adjacent structures. Faced with the prospect of denying beach front residential development with protective devices due to inconsistency with section 30235 of the Coastal Act, the Commission has approved "infill" development through permit actions on beach front development in Malibu. The Commission has found that infilling these gaps would prevent this type of focused shoreline erosion and would not significantly further impact shoreline processes or adversely impact other coastal resources given the prevailing development pattern along these sections of the Malibu coast, so long as shoreline protective devices are designed and located as far landward as possible to avoid or minimize impacts to access and shoreline processes.

The Commission notes that the area surrounding the subject site is characterized as a substantially developed beach. In the case of the proposed development, the construction of two adjacent single-family residence with a wooden bulkhead and septic systems can clearly be considered as infill development within an existing developed area. Moreover, the subject site contained a multiple residence structure until the structure was destroyed by wave attack in approximately 1988.

Conclusion

Coastal Act sections 30235, 30253 and 30250(a) set forth the Commission's mandate relative to permitting shoreline protective devices and beachfront development. In order for the Commission to permit the proposed project, which includes a timber bulkhead, and return wall, it must find the project consistent with the Chapter 3 policies of the Coastal Act.

Coastal Act section 30235, cited above, states that shoreline protective devices such as revetments, bulkheads, and other construction that would alter natural shoreline processes shall be permitted when those structures are necessary to serve coastal-dependent uses or to protect existing structures or to protect public beaches in danger from erosion and when they are designed to eliminate or mitigate adverse impacts on local shoreline sand supply. In addition to the consideration of Section 30235, the Commission has approved new development on the beach where such development is consistent with the Commission's treatment of "infill development" as described above in detail. In the case of this project, the proposed timber bulkhead is necessary to protect the septic system which would serve the proposed residence. The bulkhead as relocated in accordance with the applicant's proposed, revised plans will be located at the most landward location feasible. In addition, the proposed project meets the Commission's interpretation of infill development, as defined in past permit decisions. As designed, the proposed project would minimize adverse impacts on shoreline sand supply.

Coastal Act section 30253, (also cited above) mandates that new development neither create nor contribute significantly to erosion, or contribute to 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 or cliffs. In past permit actions, the Commission has required that new shoreline protection devices be located as landward as possible to reduce adverse impacts to sand supply and public access resulting from the development. In the case of this project, the bulkhead will be located at the most landward location feasible.

Further, in past permit actions, the Commission has also required a lateral public access easement for new shoreline protection devices to mitigate adverse impacts to beach sand supply and public access. In the case of this project, to mitigate any possible adverse impacts to public access along the beach that may be caused by the subject proposal, the applicant has previously recorded an offer to dedicate a new public lateral access easement along the beach. The applicant has offered to revise and record a new lateral access easement that reflects the most recent requirements for an offer to dedicate. The Commission finds that to carry out the applicant's offer, Special Condition 10 is necessary.

Section 30250(a) of the Coastal Act states, in part, that new development not adversely affect, either individually or cumulatively, coastal resources. As explained in the

preceding section regarding past Commission action on residential development, the proposed project is located on a fully developed stretch of beach and is considered to be infill development. In addition, as conditioned the project minimizes adverse impacts resulting from the construction of the proposed timber bulkhead by ensuring that the structure is located as far landward as possible and by including an offer to dedicate lateral public access in the project description. To ensure that the proposed project does not result in future adverse effects to coastal processes, Special Condition 6 prohibits the applicant or any future landowner from undertaking any additional construction that would extend the footprint of the approved seawall any further landward than the extent of the seawall approved herein. Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Sections 30235, 30250, and 30253 of the Coastal Act.

C. Hazards and Geologic Stability

Coastal Act Section 30253 states in pertinent part that:

New development shall:

- (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- (2) Assure stability and structural integrity and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

Section 30253 of the Coastal Act mandates that new development provide for geologic stability and integrity and minimize risks to life and property in areas of high geologic, flood, and fire hazard. The proposed development would be located in the Santa Monica Mountains, an area that is generally considered to be subject to an unusually high amount of natural hazards. Geologic hazards common to the Santa Monica Mountains include landslides, erosion, and flooding. In addition, fire is an inherent threat to the indigenous chaparral community of the coastal mountains. Even beachfront properties have been subject to wildfires. Finally, beachfront sites are subject to flooding and erosion from storm waves.

The applicant has submitted a series of reports prepared by the consulting coastal engineer and the consulting engineering geologist and project geologist. These include: Wastewater treatment report prepared by Bob Wilson, Environmental Planning and Design, dated March 18, 1999, "Update of Wave Uprush Study for 19220-19222 Pacific Coast Highway," dated June 17, 1999, prepared by David C. Weiss, Structural Engineer & Associates, Inc., "Wave Uprush Study for 19220-19222 Pacific Coast Highway," dated December 19, 1990, prepared by David C. Weiss, "Geologic Report Update," dated October 27, 1998 for subject property, prepared by Donald B.

Kowalewsky, incorporating previous reports by same author concerning the subject site dated January 11, 1993, April 3, 1995, and January 10, 1997, and "Engineering Geologic Report and Geotechnical Report for Development of Duplex on Lots 21 and 22 at 19222 Pacific Coast Highway," dated December 10, 1990, prepared by Donald B. Kowalewsky. "Change of Soil Engineer of Record," dated April 6, 1995, by MTC Engineering, Inc., "Addendum to Soil Engineering Investigation," dated December 20, 1993, prepared by SWN Soiltech Consultants, Inc., "Addendum II to Soil Engineering Investigation," dated August 14, 1992, prepared by SWN Soiltech Consultants, "Addendum to Soil Engineering Investigation," dated July 28, 1992 prepared by SWN Soiltech Consultants, Inc., "Soil Engineering Investigation," dated January 25, 1991, prepared by SWN Soiltech Consultants, Inc.

The consulting environmental planning/wastewater treatment consultant, the engineering geologist and soils engineer, and the coastal engineer provide numerous recommendations concerning foundations and drainage, retaining walls, sewage disposal, construction, bulkhead design and other recommendations.

The engineering geologist concludes that:

"We have reviewed the referenced geotechnical documents. In addition, the site was visited on January 8, 1997. The site is in essentially the same conditions as previously reported. There were no changes that would affect our previous recommendations. Recommendations in the referenced reports are still valid. Those recommendations were incorporated in the plans which were previously reviewed, stamped and signed on 8-21-92. Both building sites will be safe from landslide, settlement or slippage. In addition, development of this parcel, utilizing our recommendations, will not adversely affect offsite property."

Finally, as discussed above, the applicant has submitted a Wave Uprush Study, dated October 20, 1998, prepared by David Weiss, which addresses site conditions and design considerations. The consultant determined that the maximum wave uprush at the subject site would extend to approximately 9 feet landward of Pacific Coast Highway. Thus, the entire development is located within the wave uprush zone.

Based on the recommendations of the consulting geologist, geotechnical engineer, and coastal engineer, the Commission finds that the proposed development will minimize risks from geologic hazards, consistent with Section 30253 of the Coastal Act so long as the consultants' recommendations are incorporated into the project plans. Therefore, the Commission finds it necessary to require the applicant to submit project plans that have been certified in writing by the consultants as conforming to their recommendations. This is included as Special Condition 5.

However, the Commission notes that the proposed development is located on a beachfront lot in the City of Malibu. The Malibu coast has historically been subject to substantial damage as the result of storm and flood occurrences--most recently, and perhaps most dramatically, during the past 1997-1998 El Nino severe winter storm

season. In addition, as noted above, the entire site is located within the wave uprush zone. Both the geotechnical consultants and the coastal engineer warn that no project similarly located could be made completely free of all hazards. The site is subject to risks that arise from natural hazards and forces, and which cannot be fully mitigated. The subject site is subject to risks from storm waves, surges, erosion, landslide, flooding, and wildfire.

The subject site is clearly susceptible to flooding and/or wave damage from storm waves, storm surges and high tides. Past occurrences have caused property damage resulting in public costs through emergency responses and low-interest, publicly subsidized reconstruction loans in the millions of dollars in Malibu area alone from last year's storms.

In the winter of 1977-1978, storm-triggered mudslides and landslides caused extensive damage along the Malibu coast. According to the National Research Council, damage to Malibu beaches, seawalls, and other structures during that season caused damages of as much as almost \$5 million to private property alone.

The El Nino storms recorded in 1982-1983 caused high tides of over 7 feet, which were combined with storm waves of up to 15 feet. These storms caused over \$12.8 million to structures in Los Angeles County, many located in Malibu. The severity of the 1982-1983 El Nino storm events are often used to illustrate the extreme storm event potential of the California, and in particular, Malibu coast. The 1998 El Nino storms also resulted in widespread damage to residences, public facilities and infrastructure along the Malibu Coast. Most particularly, a previously existing older three unit structure on the subject site was destroyed by wave attack c. 1988 according to the applicant.

Thus, ample evidence exists that all beachfront development in the Malibu area is subject to an unusually high degree of risk due to storm waves and surges, high surf conditions, erosion, and flooding. The Coastal Act recognizes that development, such as the proposed residence, even as designed and constructed to incorporate all recommendations of the consulting coastal engineer, may still involve the taking of some risk. When development in areas of identified hazards is proposed, the Commission considers the hazard associated with the project site and the potential cost to the public, as well as the individual's right to use the subject property.

Finally, due to the fact that the proposed project is located in an area subject to an extraordinary potential for damage or destruction from wild fire, the Commission will only approve the project if the applicant also agrees to indemnify the Commission from any liability associated with such risks.

The Commission finds that due to the possibility of liquefaction, storm waves, surges, erosion, flooding, landslide, and threat from wildfire, the applicant shall assume these risks as conditions of approval. Because this risk of harm cannot be completely avoided, eliminated, or fully mitigated, the Commission requires the applicant to waive any claim of liability against the Commission for damage to life or property which may

occur as a result of the permitted development. The applicant's assumption of risk, as required by Special Condition 6, when executed and recorded on the property deed, will show that the applicant is aware of and appreciates the nature of the hazards which exist on the site, and that may adversely affect the stability or safety of the proposed development.

The proposed development, with its excavation and construction staging on the sandy beach and the possible generation of debris and or presence of equipment and materials that could be subject to tidal action could pose hazards to beachgoers or swimmers if construction site materials were discharged into the marine environment or left inappropriately/unsafely exposed on the project site. In addition, such discharge to the marine environment could result in disturbance through increased turbidity caused by erosion and siltation of coastal waters. To ensure that effects to the marine environment are minimized and that the construction phase of the proposed project poses no hazards, Special Condition 2, Construction Responsibilities and Debris Removal requires the applicant to ensure that stockpiling of dirt or materials shall not occur on the beach, that no machinery will be allowed in the intertidal zone at any time, and that all debris resulting from the construction period is promptly removed from the beach and seawall area.

The applicant also proposes to remove debris remaining on site from the previously destroyed structures noted previously. Special Condition 3 requires such removal prior to the commencement of construction of the proposed residence, and will further ensure the safety of beachgoers from hazards that may be posed by such debris.

The Commission finds, for the reasons set forth above, that the proposed development, as conditioned to conform to geologic and engineering recommendations, to assume the risk of development, and to minimize impacts from construction practices and debris, and to remove residual debris presently on site, is consistent with Section 30253 of the Coastal Act.

D. Public Access and Visual Resources.

The Coastal Act mandates the provision of maximum public access and recreational opportunities along the coast. The Coastal Act contains several policies which address the issues of public access and recreation along the coast.

Section 30210 of the Coastal Act states that:

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30211 of the Coastal Act states that:

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212 (a) of the Coastal Act provides that in new shoreline development projects, access to the shoreline and along the coast shall be provided except in specified circumstances, where:

- (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources.
- (2) adequate access exists nearby, or,
- (3) agriculture would be adversely affected. Dedicated access shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

Section 30220 of the Coastal Act states that:

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

Finally, Section 30251 of the Coastal Act states that:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Coastal Act sections 30210 and 30211 mandate that maximum public access and recreational opportunities be provided and that development not interfere with the public's right to access the coast. Likewise, section 30212 of the Coastal Act requires that adequate public access to the sea be provided to allow use of dry sand and rocky coastal beaches.

The major access issue in this permit application is the occupation of sandy beach area by a structure and potential effects on shoreline sand supply and public access in contradiction of Coastal Act policies 30211 and 30221. As proposed, the bulkhead would be constructed on the sandy beach at the edge of the proposed residences as shown on the project plans. The proposed project is located on Las Tunas Beach, approximately 500 feet from the nearest public vertical coastal accessway.

All projects requiring a coastal development permit must be reviewed for compliance with the public access and recreation provisions of Chapter 3 of the Coastal Act. Based on the access, recreation and development sections of the Coastal Act, the Commission has required public access to and along the shoreline in new development projects and has required design changes in other projects to reduce interference with access to and along the shoreline.

As noted above, interference by a shoreline protective device has a number of effects on the dynamic shoreline system and the public's beach ownership interests. First, changes in the shoreline profile, particularly changes in the slope of the profile, which results from reduced beach width, alter the usable area under public ownership. A beach that rests either temporarily or permanently at a steeper angle than under natural conditions will have less horizontal distance between the mean low water and mean high water lines. This reduces the actual area in which the public can pass on their own property. The second effect on access is through a progressive loss of sand as shore material is not available to nourish the bar. The lack of an effective bar can allow such high wave energy on the shoreline that materials may be lost far offshore where it is no longer available to nourish the beach. The effect of this on the public is again a loss of area between the mean high water line and the actual water. Third, shoreline protective devices such as revetments and bulkheads cumulatively affect public access by causing accelerated and increased erosion on adjacent public beaches. This effect may not become clear until such devices are constructed individually along a shoreline and they eventually affect the profile of a public beach. Fourth, if not sited landward in a location that insures that the revetment is only acted upon during severe storm events, beach scour during the winter season will be accelerated because there is less beach area to dissipate the wave's energy. Finally, revetments and bulkheads interfere directly with public access by their occupation of beach area that will not only be unavailable during high tide and severe storm events but also potentially throughout the winter season.

Due to the aforementioned adverse impacts of shoreline protective structures on public access, the proposed shoreline protection device must be judged against the public access and recreation policies of the State Constitution, Sections 30210, 30220, and 30211 of the Coastal Act. Along the California coast, the line between land and ocean is complex and constantly moving.

The State owns tidelands, which are those lands below the Mean High Tide Line as it exists from time to time. By virtue of its admission into the Union, California became the owner of all tidelands and all lands lying beneath inland navigable waters. These lands are held in the State's sovereign capacity and are subject to the common law public trust. The public trust doctrine restricts uses of sovereign lands to public trust purposes, such as navigation, fisheries, commerce, public access, water oriented recreation, open space, and environmental protection. The public trust doctrine also severely limits the ability of the State to alienate these sovereign lands into private ownership and use free of the public trust. Consequently, the Commission must avoid

decisions that improperly compromise public ownership and use of sovereign tidelands.

Where development is proposed that may impair public use and ownership of tidelands, the Commission must consider where the development will be located in relation to tidelands. The legal boundary between public tidelands and private uplands is relation to the ordinary high water mark. In California, where the shoreline has not been affected by fill or artificial accretion, the ordinary high water mark of tidelands is determined by locating the existing "mean high tide line." The mean high tide line is the intersection of the elevation of mean high tide with the shore profile. Where the shore is composed of sandy beach whose profile changes as a result of wave action, the location at which the elevation of mean high tide line intersects the shore is subject to change. The result is that the mean high tide line (and therefore the boundary) is an "ambulatory" or moving line that moves seaward through the process known as accretion and landward through the process known as erosion.

Consequently, the position of the mean high tide line fluctuates seasonally as high wave energy (usually but not necessarily) in the winter months causes the mean high tide line to move landward through erosion, and as milder wave conditions (generally associated with the summer) cause the mean high tide line to move seaward through accretion. In addition to ordinary seasonal changes, the location of the mean high tide line is affected by long term changes such as sea level rise and diminution of sand supply.

The Commission must consider a project's direct and indirect impact on public tidelands. To protect public tidelands when beachfront development is proposed, the Commission must consider (1) whether the development or some portion of it will encroach on public tidelands (i.e., will the development be located below the mean high tide line as it may exist at some point throughout the year) and (2) if not located on tidelands, whether the development will indirectly affect tidelands by causing physical impacts to tidelands.

To avoid approving development that will encroach on public tidelands during any time of the year, the Commission, usually relying on information supplied by the State Lands Commission, considers whether the project is located landward of the most landward known location of the mean high tide line. In this case, the State Lands Commission presently does not assert a claim that the project intrudes onto sovereign lands (SLC letter dated February 16, 1999).

Even structures located above the mean high tide line, however, may have an impact on shoreline processes as wave energy reflected by those structures contributes to erosion and steepening of the shore profile, and ultimately to the extent and availability of tidelands. That is why the Commission also must consider whether a project will have indirect impacts on public ownership and public use of shorelands. The applicant seeks Commission approval of two new beachfront residences on adjacent lots with a timber bulkhead. As discussed elsewhere in the Commission's findings, there is

substantial evidence that this project will result in some indirect impacts on tidelands because the new proposed revetment is located in an area that is subject to wave attack and the effects of wave energy. The applicant has previously recorded an offer to dedicate a lateral public access easement, however, to mitigate any adverse effects on coastal access or recreation that the subject revetment may have. The applicant has offered to revise and record a new lateral access easement that reflects the most recent requirements for an offer to dedicate. The Commission finds that to carry out the applicant's offer, Special Condition 10 is necessary.

The Commission must also consider whether a project affects any public right to use shorelands that exist independently of the public's ownership of tidelands. In addition to a development proposal's impact on tidelands and on public rights protected by the common law public trust doctrine, the Commission must consider whether the project will affect a public right to use beachfront property, independent of who owns the underlying land on which the public use takes place. Generally, there are three additional types of public uses identified as: (1) the public's recreational rights in navigable waters guaranteed to the public under the California Constitution and state common law, (2) any rights that the public might have acquired under the doctrine of implied dedication based on continuous public use over a five-year period; and (3) any additional rights that the public might have acquired through public purchase or offers to dedicate.

These use rights are implicated as the public walks the wet or dry sandy beach below the mean high tide plane. This area of use, in turn moves across the face of the beach as the beach changes in depth on a daily basis. The free movement of sand on the beach is an integral part of this process, and it is here that the effects of structures are of concern.

In this case, no evidence has been presented in connection with this application that the public may have acquired rights of use under the doctrine of implied dedication. Although the Commission notes that the subject bulkhead is located as landward as possible in relation to the proposed septic systems, as discussed previously, there is still evidence that the timber bulkhead will be subject to wave uprush which may result in some potential adverse individual and cumulative impacts on sand supply, beach profile, and ultimately, public access as a result of localized beach scour, retention of beach material and interruption of the alongshore and onshore sand transport process.

The beaches of Malibu are extensively used by visitors of both local and regional origin and most planning studies indicate that attendance of recreational sites will continue to increase significantly over the coming years. The public has a right to use the shoreline under the public trust doctrine, the California Constitution and California common law. The Commission must protect those public rights by assuring that any proposed shoreline development does not interfere with or will only minimally interfere with those rights. In the case of the proposed project, the potential for the permanent loss of sandy beach as a result of the change in the beach profile or steepening from

potential scour effects, as well as the presence of a residential structure out over the sandy beach does exist.

In past permit actions, the Commission has required that new shoreline protective devices be located as landward as possible to reduce adverse impacts to the sand supply and public access resulting from development. In the case of the proposed project, the applicant has demonstrated that the proposed bulkhead, which was relocated landward during the application filing review by staff, is located as far landward as feasible. In addition, to ensure that no future changes or improvements to the subject bulkhead result in seaward expansion of the bulkhead, the Commission finds it necessary to impose Special Condition 6, which requires the applicant to record a deed restriction acknowledging that no future seaward expansion of the subject bulkhead will be authorized. If implemented, Special Condition 6 ensures that the adverse impacts of the subject shoreline protective device, considered herein, are not compounded in the future by a seaward expansion of the bulkhead that undercuts the mitigation of the bulkhead's adverse effects on the shoreline achieved by ensuring that the bulkhead is constructed as far landward as possible.

In addition, in past permit actions, the Commission has also required a lateral public access easement for new shoreline protection devices to mitigate adverse impacts to beach sand supply and public access. In the case of this project, to conclude with absolute certainty what impacts the proposed development would cause on the shoreline processes and public access, a historical shoreline analysis based on site-specific studies would be necessary. Although this level of analysis has not been submitted by the applicant, the applicant has previously recorded, and continues to offer to dedicate a public lateral access easement along the beach to mitigate any possible adverse impacts the proposed revetment may have on public access. Because the applicant has proposed, as part of the project, an offer to dedicate a new lateral access easement along the width of the lot, it has not been necessary for Commission staff to engage in an extensive analysis of the potential adverse effects to public access resulting from the proposed project. As such, Special Condition 10 has been included to implement the applicants' continued offer to dedicate a new lateral public access easement by ensuring that the recorded document is revised to reflect the Commission's most recent permit approval.

The Commission further notes that chronic unauthorized postings of signs illegally attempting to limit, or erroneously noticing restrictions on, public access have occurred on beachfront private properties in the Malibu area. These signs have a chilling effect on the legitimate, protected access of the public to public trust lands. The Commission has determined, therefore, that to ensure that such postings are clearly understood by the applicants to be off limits until or unless a coastal development permit is obtained for such signage, it is necessary to impose Special Condition 8 to ensure that similar signs are not posted on or near the proposed development. The Commission finds that if implemented, Special Condition 8 will help to protect the public's right of access to the sandy beach.

In addition, the Commission notes that the proposed bulkhead would be located beneath the proposed structures. The proposed residence and decks would extend no further seaward than existing development on either side as defined by a stringline connecting adjacent development.

An important feature of coastal access and coastal recreation in the Las Tunas Beach area of Pacific Coast Highway, is the preservation of bluewater views where feasible. Pacific Coast Highway is a major coastal access route, not only utilized by local residents, but also heavily used by tourists and visitors to access several public beaches located in the surrounding area which are only accessible from Pacific Coast Highway. Public views of the beach and water from Pacific Coast Highway have been substantially reduced, or completely blocked, in many areas by the construction of single family residences, privacy walls, fencing, landscaping, and other residential related development between Pacific Coast Highway and the ocean. Specifically, the Commission notes that when residential structures are located immediately adjacent to each other, or when large individual residential structures are constructed across several contiguous lots, such development creates a wall-like effect when viewed from Pacific Coast Highway. This type of development limits the public's ability to view the coast or ocean to only those few parcels which have not yet been developed. The Commission notes that the construction of individual beachfront residences, when viewed on a regional basis, results in potential cumulative adverse effects to public views and to the visual quality of coastal areas.

The subject site has been previously developed with an multi-unit residential structure that was demolished by storm waves in approximately 1988, thus, the are significant views of the Pacific Ocean available along this portion of Pacific Coast Highway. The proposed project will include the construction of two three-story single family residences on the two adjacent, small lots, which have a combined linear width of 59 feet. As stated above, Coastal Act Section 30251 requires that new development be sited and designed to protect views to and along the ocean and scenic coastal areas and, where feasible, to restore and enhance visual quality in visually degraded areas. Policy 138 of the Malibu/Santa Monica Mountains Land Use Plan, certified by the Commission as consistent with Section 30251 of the Coastal Act, provides that new development on a beachfront property located on the seaward side of Pacific Coast Highway, such as the subject site, should reserve 20% of the linear frontage of the lot as visually open area to provide and maintain adequate public coastal views. Further, in past permit actions, in order to protect public views of the ocean from public viewing areas and to enhance visual quality along the coast, the Commission has required that new residential projects, such as the proposed project, be designed to provide for a public view corridor of no less than 20% of the width of the lineal frontage of the subject site to provide for views of the beach and ocean from Pacific Coast Highway [Saban (4-99-146), Broad (4-99-185)].

In the case of the proposed project, the Commission notes that the subject site is 59 ft. in width and that a public view corridor of no less than 20% of the width of the site's lineal frontage would be 12 ft. in width. The proposed project's side yard setbacks total

to 12 feet in width, and there is no prohibition against using the combined total of the setbacks to achieve the necessary total. Although the public view corridors on the subject site would be relatively small, the Commission notes that the provision of even a 12 ft. total view corridor on the subject site, when viewed on a cumulative basis, will serve to enhance public views of the coast. The seamless "boxed in" effect of unrelieved stretches of development would thereby be softened somewhat. Thus, it is critical that an adverse precedent is not established by the subject proposal and that adverse effects to coastal views from public viewing areas, such as Pacific Coast Highway, are minimized.

Therefore, in order to ensure that adverse effects to public views of the ocean from the highway are minimized, Special Condition 9 requires the applicant to submit revised project plans which show that no less than 20% of the lineal frontage of the project site shall be maintained as a public view corridor from Pacific Coast Highway to the Pacific Ocean and that all development located within the public view corridor that will block public views of the beach and ocean is deleted.

In addition, pursuant to the provisions of Special Conditions 1, 5, and 9, the sideyard setback distances set forth in the proposed plan achieve the required 20% of lateral linear footage view corridor and the special conditions require the plans to reflect restrictions on the proposed development that may affect the protection of continued, unimpeded public views in these corridors. As such, the Commission finds that the project, as conditioned, will not significantly affect public views of the coast from the sandy beach.

The Commission also notes that residential development immediately adjacent to Pacific Coast Highway, combined with the sheer volume and velocity of traffic on the highway, poses severe challenges to pedestrians trying to traverse the frontage of such property. These obstacles pose a burden on public access and the Commission in recent permit decisions (for example, CDP 4-99-0146-Saban) has required the construction of sidewalks along the front of the properties and that such sidewalks be kept continuously free of obstacles such as planters. These constraints to pedestrians are present at Las Tunas Beach, especially if there are parked cars present – in such cases, pedestrians can actually be forced into the lane of Pacific Coast Highway to cross the front of residential properties. For this reason, the Commission finds it necessary to impose Special Condition 7 to require the construction of a six foot wide sidewalk across the front of the subject parcels. The Commission finds that as conditioned, the proposed project would protect the public's ability to reach vertical public accessways up and downcoast of the proposed project and to enjoy the public coastal views along the scenic highway, especially toward the sea.

For all of these reasons, therefore, the Commission finds that as conditioned, the proposed project is consistent with Sections 30210, 30211, 30212, 30220, and 30251 of the Coastal Act.

E. Septic System.

The proposed development includes the installation of an on-site septic system to provide sewage disposal. The Commission recognizes that the potential build-out of lots in the Santa Monica Mountains, and the resultant installation of septic systems, may contribute to adverse health effects and geologic hazards in the local area. Section 30231 of the Coastal Act states that:

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

In addition, the Malibu/Santa Monica Mountains Land Use Plan, which the Commission has relied upon for guidance in past decisions, contains the following policies concerning sewage disposal:

P217 Wastewater management operations within the Malibu Coastal Zone shall not degrade streams or adjacent coastal waters or cause or aggravate public health problems.

The proposed development includes the installation of new on-site septic system to serve the proposed residences. The applicant has submitted evidence of the City of Malibu Environmental Health Department's in-concept approval of the proposed septic system. The City of Malibu minimum health code standards for septic systems have been found protective of coastal resources and take into consideration the percolation capacity of soils along the coastline, depth to groundwater, etc. The Commission finds that as conditioned, therefore, the project is consistent with Section 30231 of the Coastal Act.

F. Local Coastal Program

Section 30604 of the Coastal Act states that:

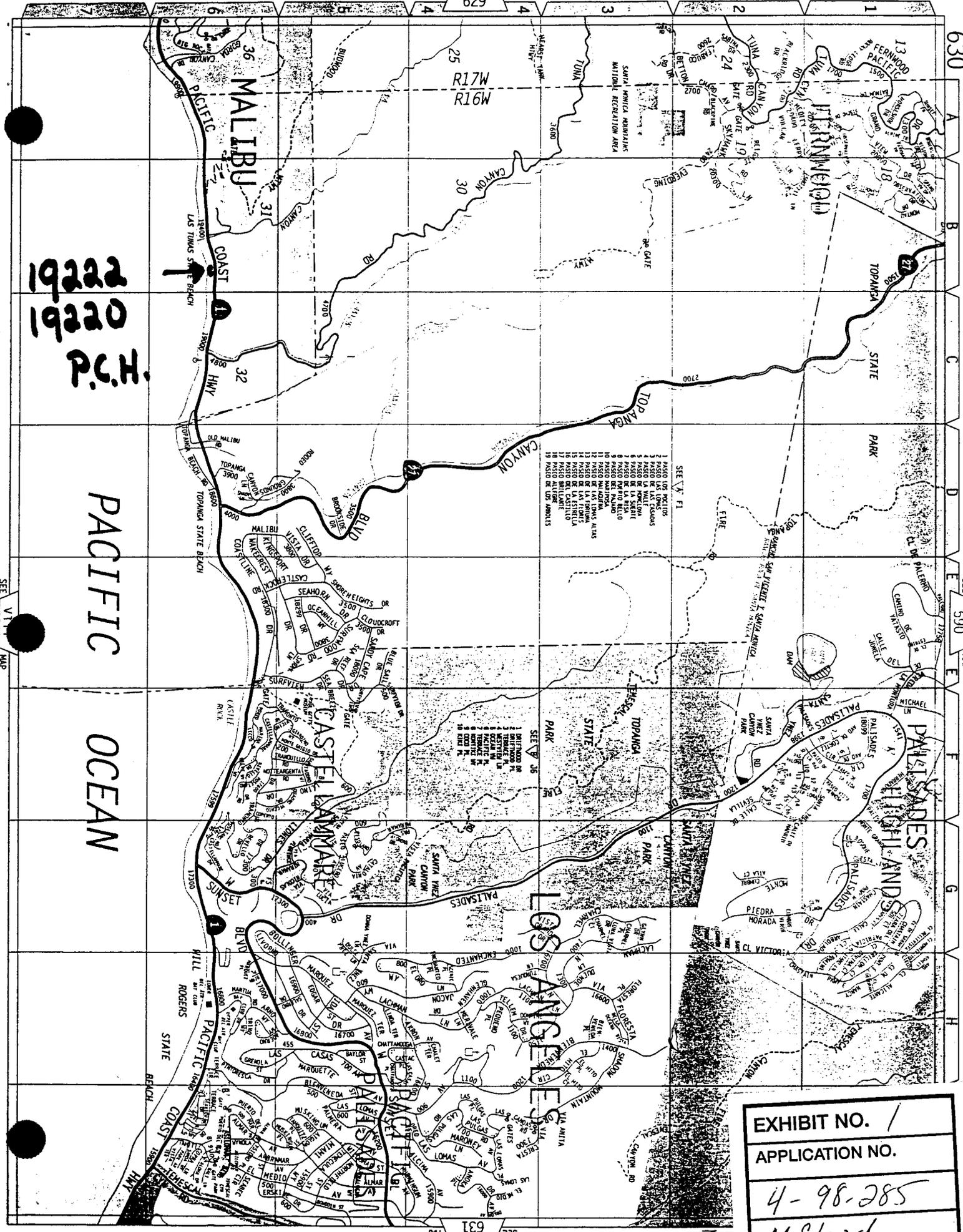
(a) Prior to certification of the local coastal program, a coastal development permit shall be issued if the issuing agency, or the commission on appeal, finds that the proposed development is in conformity with Chapter 3 (commencing with Section 30200) and that the permitted development will not prejudice the ability of the local government to prepare a local coastal program that is in conformity with Chapter 3 (commencing with Section 30200). A denial of a coastal development permit on grounds it would prejudice the ability of the local government to prepare a local coastal program that is in conformity with Chapter 3 (commencing with Section 30200) shall be accompanied by a specific finding which sets forth the basis for that conclusion.

Section 30604(a) of the Coastal Act provides that the Commission shall issue a Coastal Permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program which conforms with Chapter 3 policies of the Coastal Act. The preceding sections provide findings that the proposed project will be in conformity with the provisions of Chapter 3 if certain conditions are incorporated into the project and accepted by the applicants. As conditioned, the proposed development will not create adverse impacts and is found to be consistent with the applicable policies contained in Chapter 3. Therefore, the Commission finds that approval of the proposed development, as conditioned, will not prejudice the City's ability to prepare a Local Coastal Program for Malibu which is also consistent with the policies of Chapter 3 of the Coastal Act as required by Section 30604 (a).

G. CEQA

Section 13096(a) of the Commission's administrative regulations requires Commission approval of a Coastal Development Permit application to be supported by a finding showing the application, as conditioned, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(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 would have on the environment.

The Commission finds that the proposed project, as conditioned, will not have any significant adverse effects on the environment, within the meaning of the California Environmental Quality Act of 1970. Therefore, the proposed project, as conditioned, has been adequately mitigated and is consistent with CEQA and the policies of the Coastal Act.



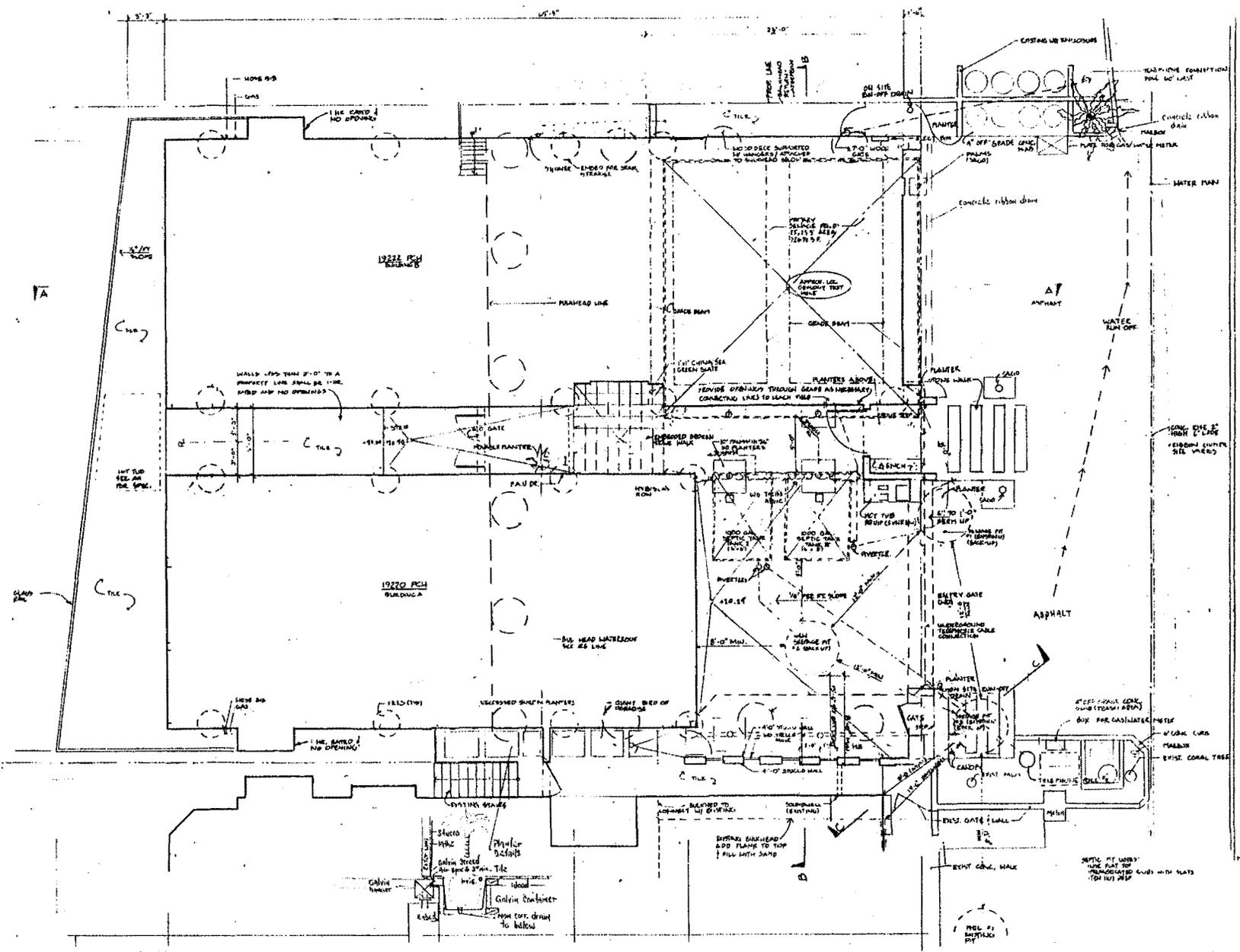
19222
19220
P.C.H.

PACIFIC OCEAN

- SEE 'V' F1
- 1 MISO LOS PUEBLOS
 - 2 MISO LA LOMA
 - 3 MISO LA MALIBU
 - 4 MISO LA MALIBU
 - 5 MISO DE LA MALIBU
 - 6 MISO DE LA MALIBU
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 - 19 MISO DE LA MALIBU

EXHIBIT NO. /
APPLICATION NO.
4-98-285
MaLeod

EXHIBIT NO. 3
 APPLICATION NO.
 4-98-285
 Macleod



CONTRACTOR'S CAUTION
 1. EXISTING HOISTWAY PLAFF
 2. EXISTING OVERHEAD

LANE #1
 LANE #2
 WATER LAKE
 OF P.C.H.

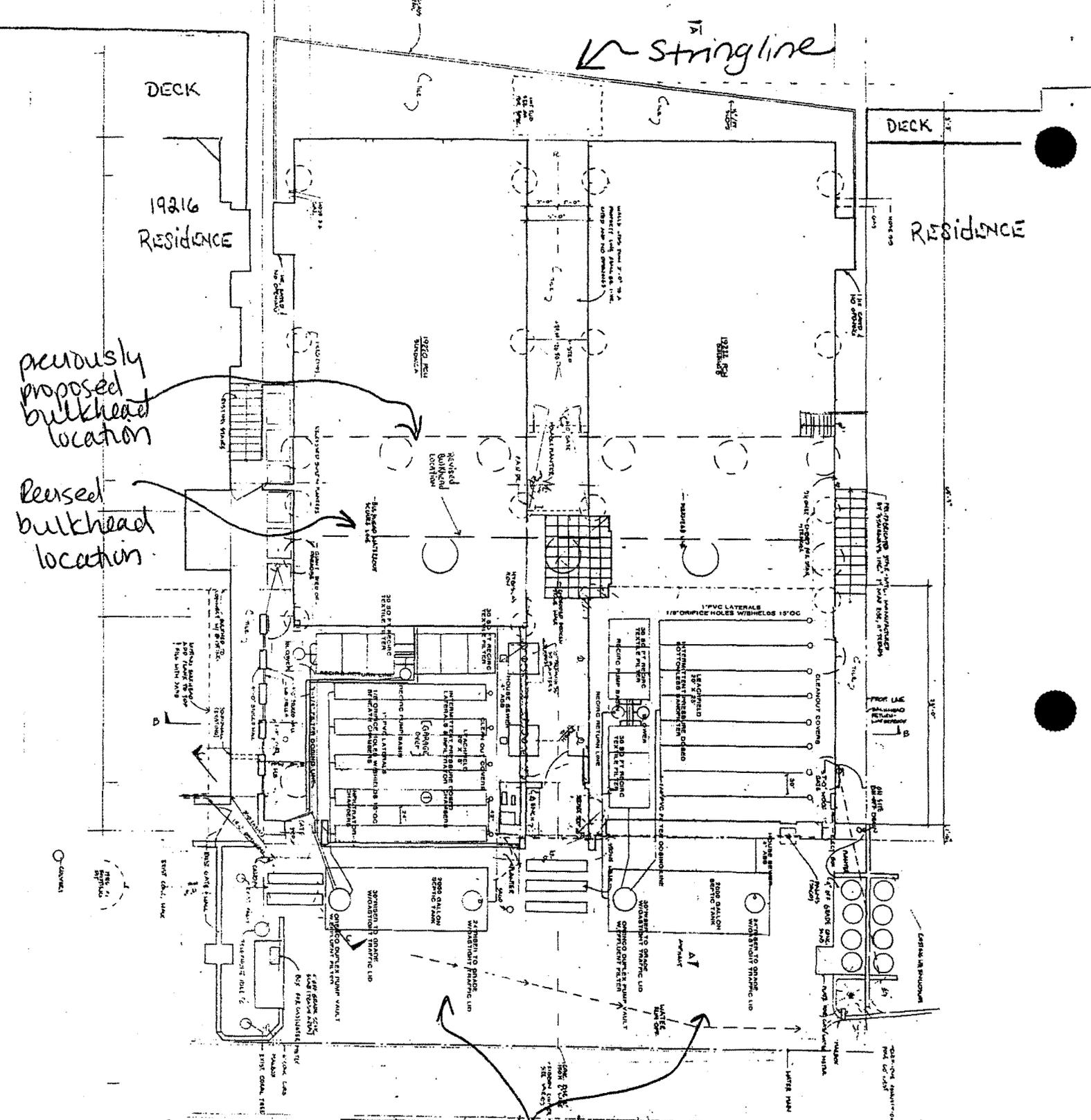
PACIFIC COAST HIGHWAY

Macleod Residence
 -19222- Pacific Coast Highway
 19220 Pacific Coast Highway

APPROVED
 JUN 1 2005
 THE APPROVAL OF THIS PLAN AND SPECIFICATIONS
 DOES NOT IN ANY WAY GUARANTEE OR
 WARRANT THE ACCURACY OF ANY FIGURES,
 DIMENSIONS OR CONDITIONS THEREON.
 EXISTING CONDITIONS

EXTERIOR SURFACE
 PLAN
 REVISED AS PER LANDSCAPE YOUNG
 MAXIMON CITY
 REVISED 10-14-99 6:5-95
 REVISED 10-18-99
 DATE: 9-01-98
 SCALE: 1/4" = 1'-0"





previously proposed bulkhead location

revised bulkhead location

Stringline

updated septic disposal system configurations

NOTES:

1. LEAKY EXHIBIT
2. 1" PVC EXHIBIT
3. EXHIBIT
4. EXHIBIT
5. EXHIBIT
6. EXHIBIT
7. EXHIBIT
8. EXHIBIT
9. EXHIBIT
10. EXHIBIT

EXHIBIT NO. 4

APPLICATION NO. 498-285

MacLeod

SEPTIC SYSTEM & LEACHFIELD PLAN

A 3.5R

DATE: 5/1/17

SCALE: 1/4" = 1'-0"

HP - 1

APPROVED

Bill Wilson - Environmental Planning & Design

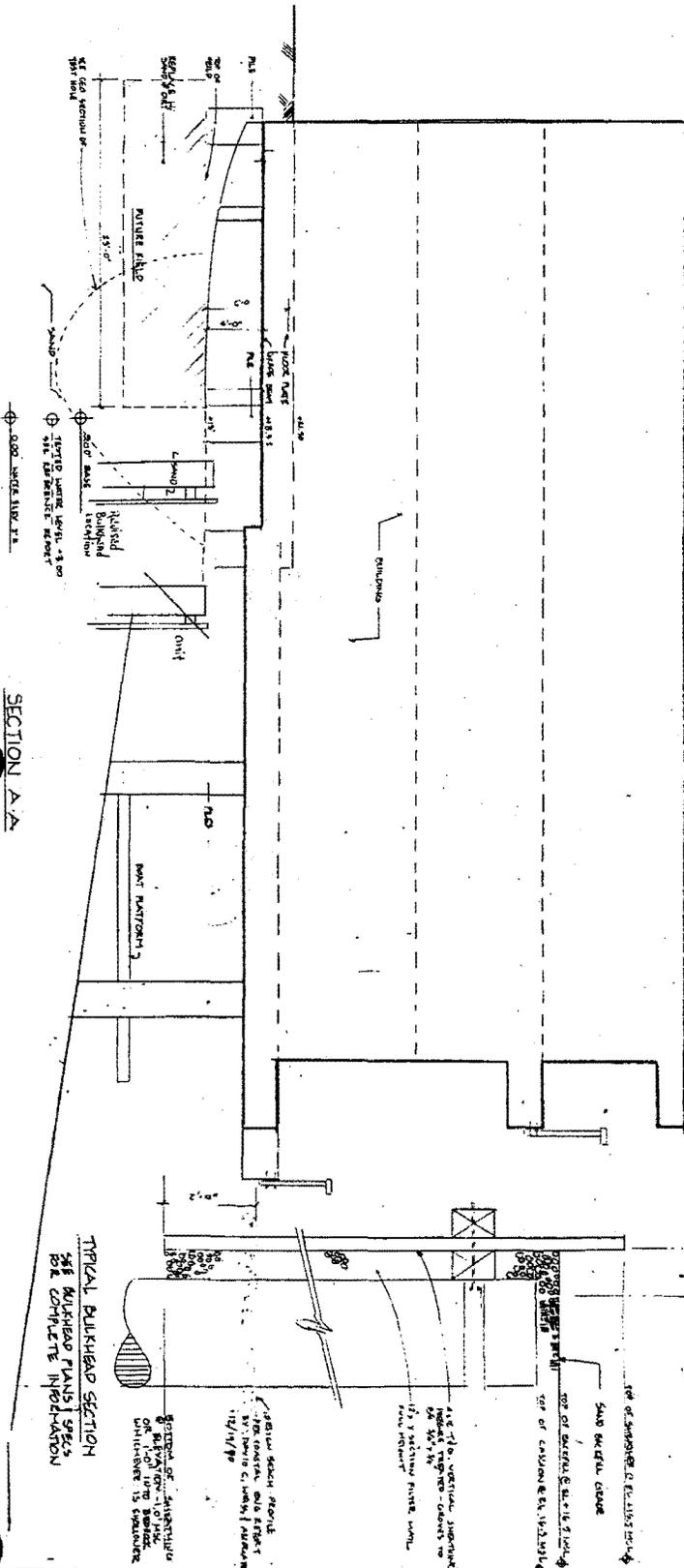
PO Box 2550 - Sunny Hills, California 94211

Phone/FAX (916) 297-4352

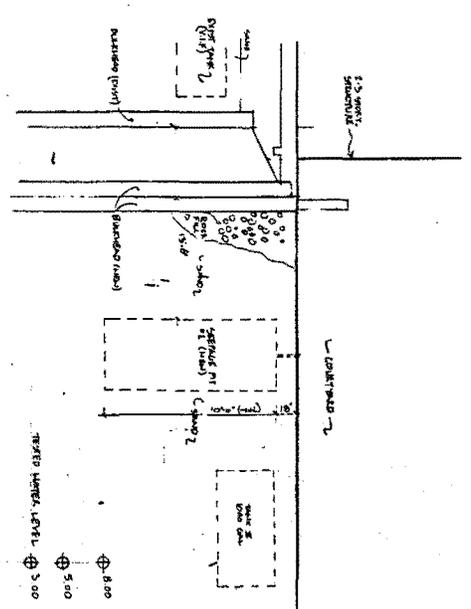
MacLeod Residence - 19222 Pacific Coast Highway

Pritchett Residence - 19220 Pacific Coast Highway

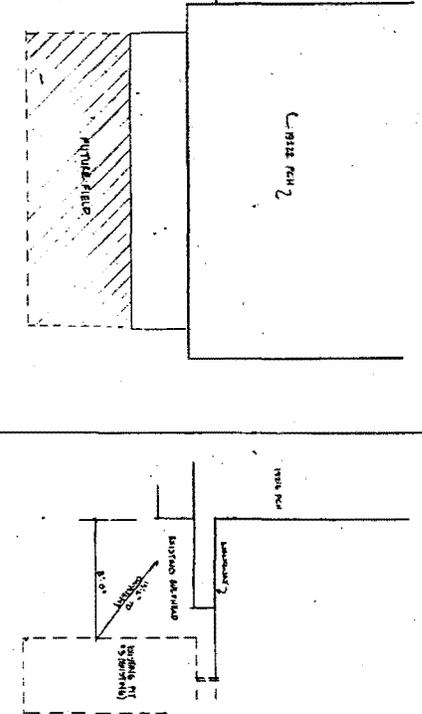
Stringline



SECTION A-A



SECTION B-B



SECTION C-C (continued)

EXHIBIT NO. 5
 APPLICATION NO.
 4-98-285
 Macleod

Macleod Residence
 19222 Pacific Coast Highway
 19220 Pacific Coast Highway

APPROVED

DATE: JUN 2 1995

REVISIONS:

REVISION 1: 12/1/89

REVISION 2: 12/1/89

REVISION 3: 12/1/89

REVISION 4: 12/1/89

REVISION 5: 12/1/89

REVISION 6: 12/1/89

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REVISION 96: 12/1/89

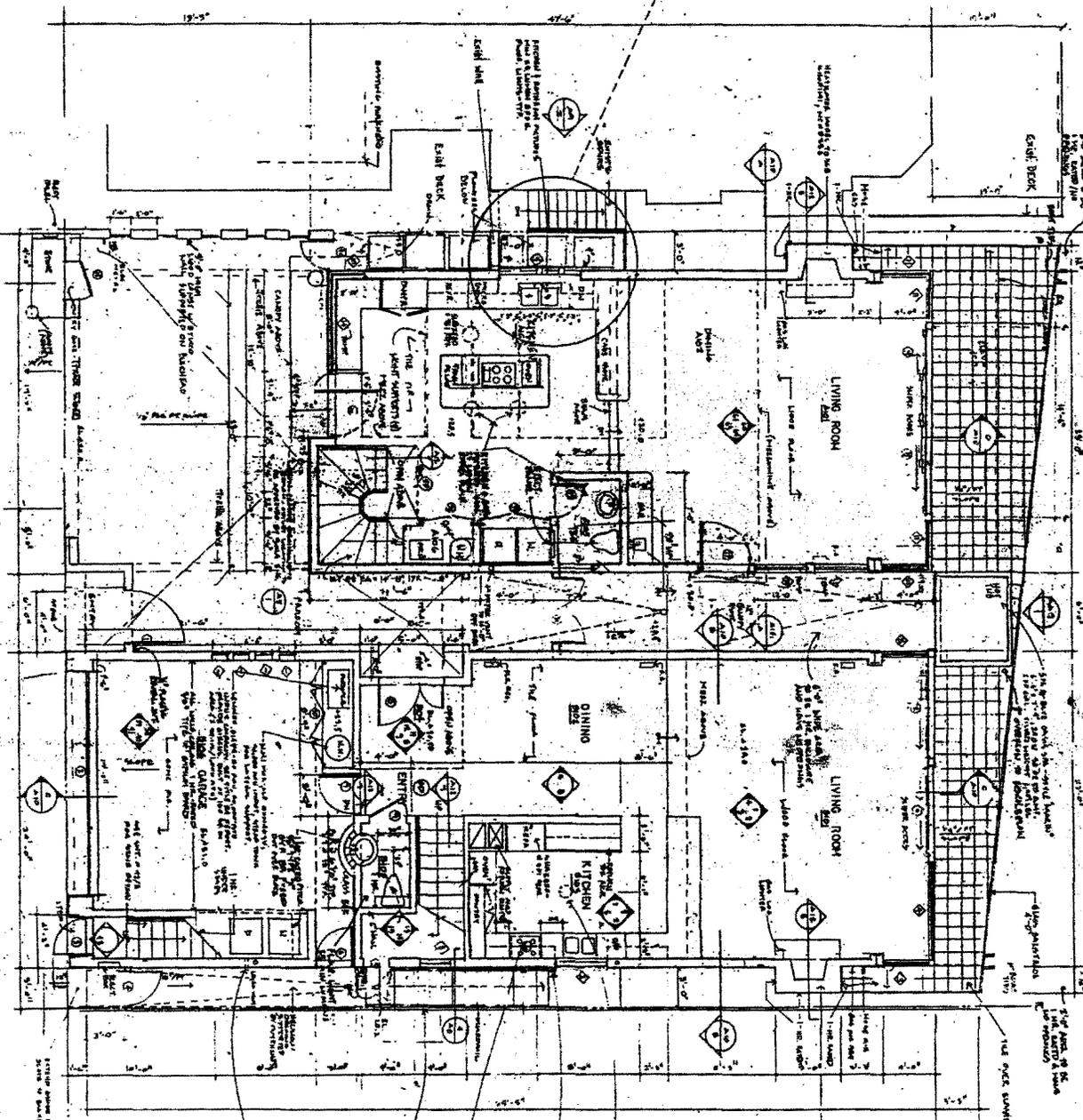
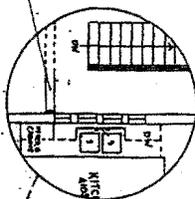
REVISION 97: 12/1/89

REVISION 98: 12/1/89

REVISION 99: 12/1/89

REVISION 100: 12/1/89

ESCAPE ROUTE
Minimum Passageway



NOTES:
1. ALL DIMENSIONS ARE IN FEET AND INCHES.
2. FINISHES TO BE DETERMINED BY THE OWNER.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING STRUCTURES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING LANDSCAPE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING PLANTS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING FENCES.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING DRIVEWAYS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SIDEWALKS.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING STAIRS.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING ELEVATORS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING MECHANICAL EQUIPMENT.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING ELECTRICAL EQUIPMENT.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING PIPING.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING ROOFING.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING FOUNDATIONS.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING STRUCTURES.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES.

EXHIBIT NO.	6
APPLICATION NO.	4-98-285 MacLeod

APPROVED

OWNER/BUILDER:
Rob MacLeod
24580 Malibu Road
Malibu, CA 90265
TEL (310) 456-5098

MacLeod Residence
19222 Pacific Coast Highway

19220 Pacific Coast Highway.

FIRST LEVEL PLAN

DATE: 6-5-95
DRAWN: T-91-78
SCALE: 1/8" = 1'-0"

A4

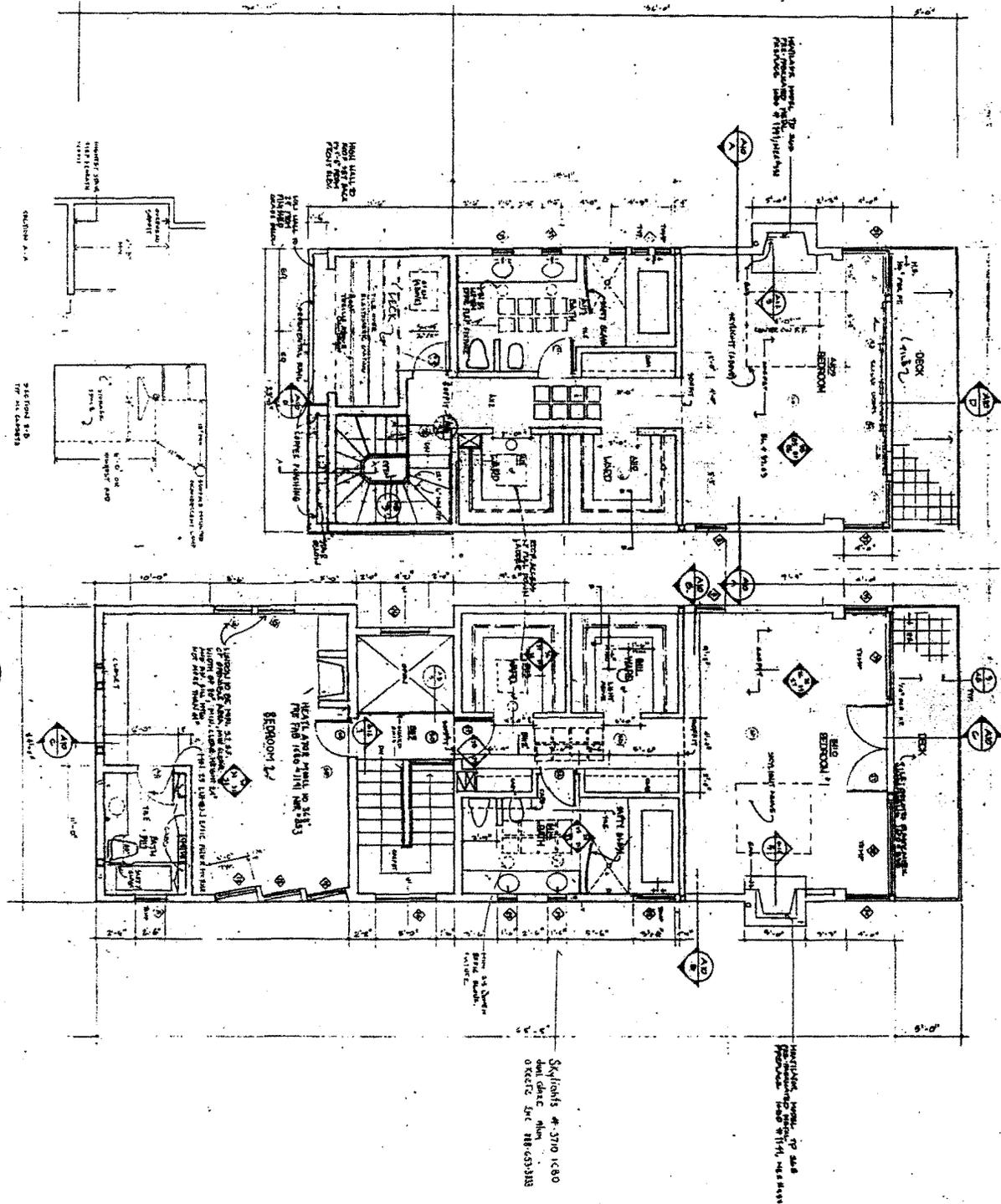


EXHIBIT NO. 8
 APPLICATION NO.
 4-98-285
 MacLeod

OWNER/BUILDER:
 Rob MacLeod
 34680 Malibu Road
 Malibu, CA 90265
 TEL (310) 456-5098

MacLeod Residence
 19222 Pacific Coast Highway
 19220 Pacific Coast Highway

APPROVED
 [Signature]

SECOND LEVEL PLAN
 1/5-95
 DRAWN T.S./T.E.-N
 DATE 5-1-95
 SCALE 1/4" = 1'-0"

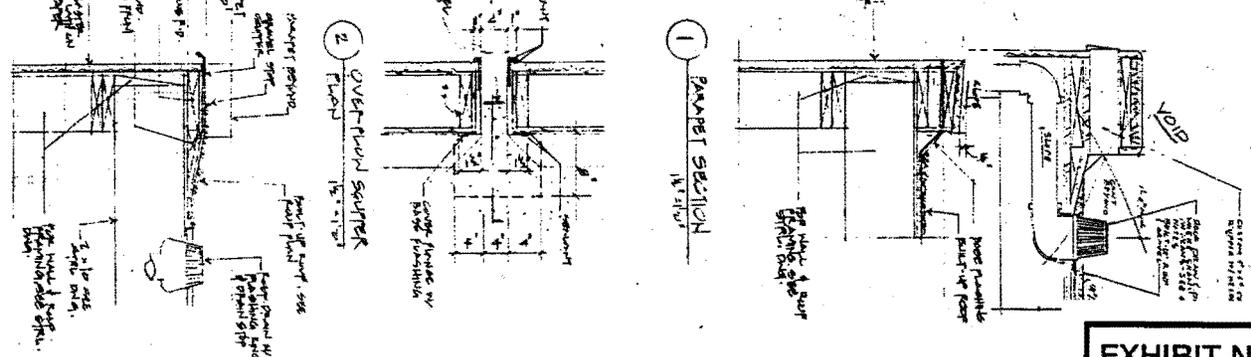
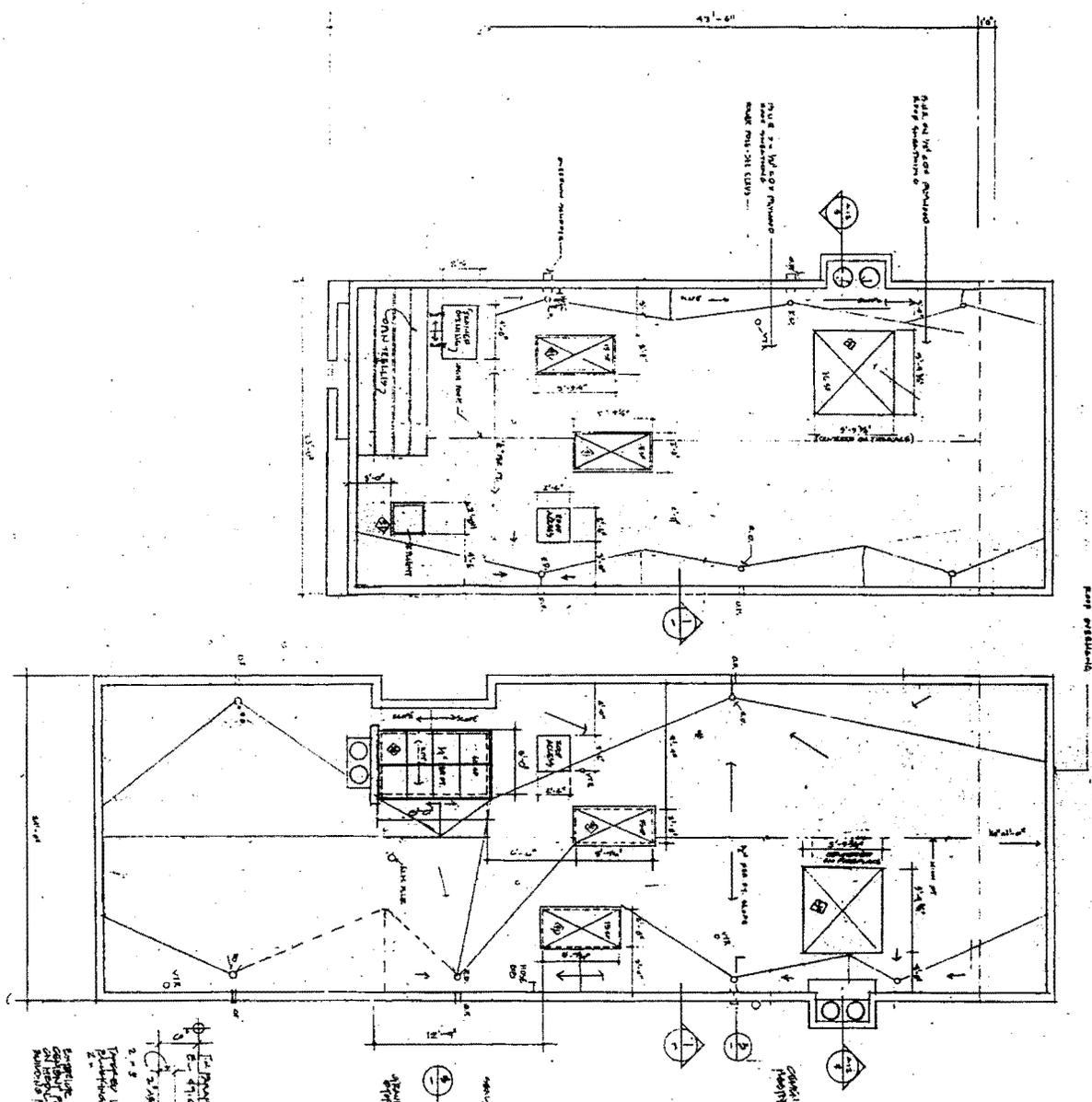


EXHIBIT NO. 9
 APPLICATION NO. 4-98-285
 MacLeod

MacLeod Residence
 19222 Pacific Coast Highway
 19222 Pacific Coast Highway

OWNER/BUILDER:
 Rob MacLeod
 24680 Malibu Road
 Malibu, CA 90265
 TEL: (310) 456-5098

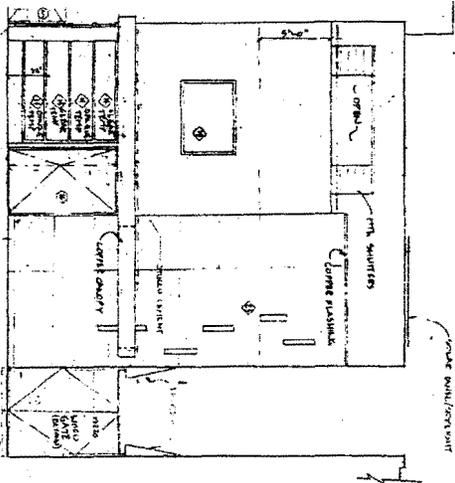
APPROVED
 [Stamp]

ROOF PLAN
 PROVIDER: 7.18.198
 DATE: 01/19/82
 SCALE: 1/8" = 1'-0"

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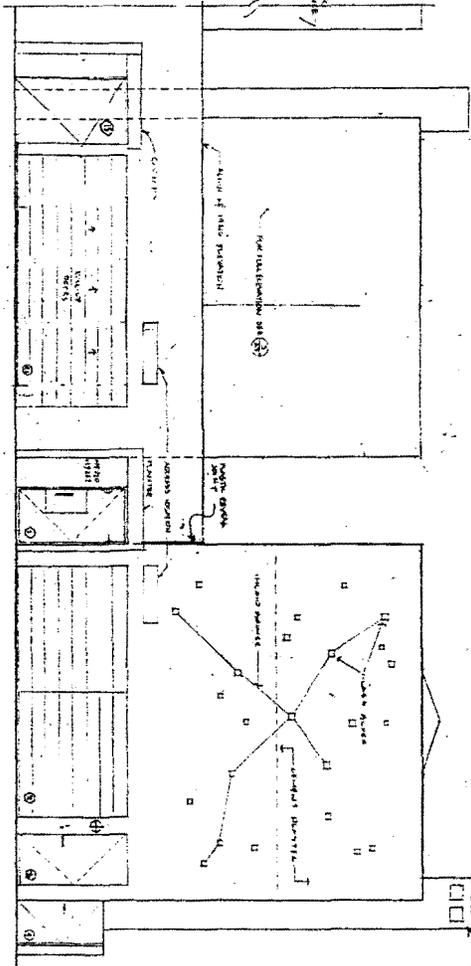
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NORTH ELEVATION - 19220 PCH

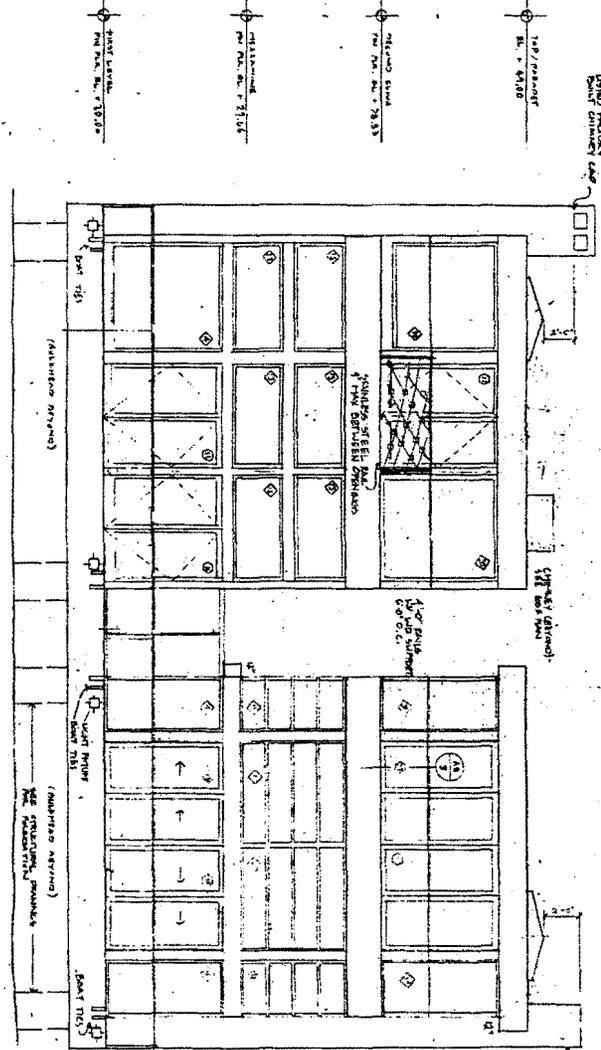


2

NORTH ELEVATION



1 SOUTH ELEVATION



NOTE: ALL DIMENSIONS SHALL BE TO FACE UNLESS OTHERWISE NOTED.
 DIMENSIONS TO FACE UNLESS OTHERWISE NOTED.
 DIMENSIONS TO FACE UNLESS OTHERWISE NOTED.

APPROVED

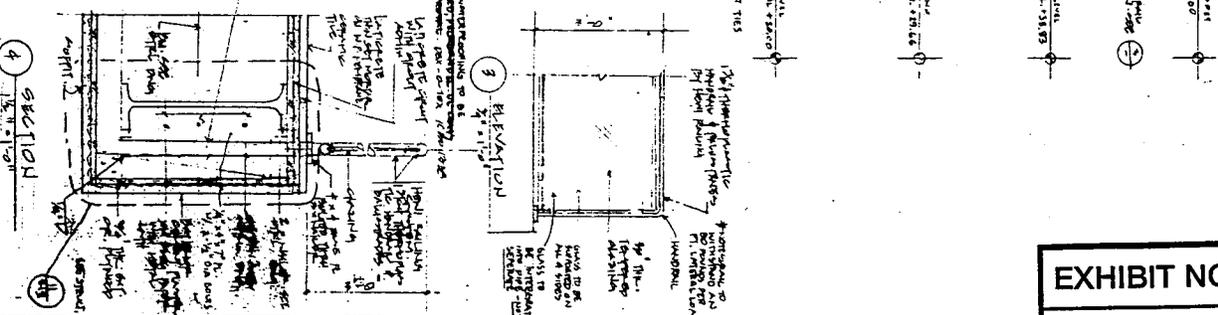
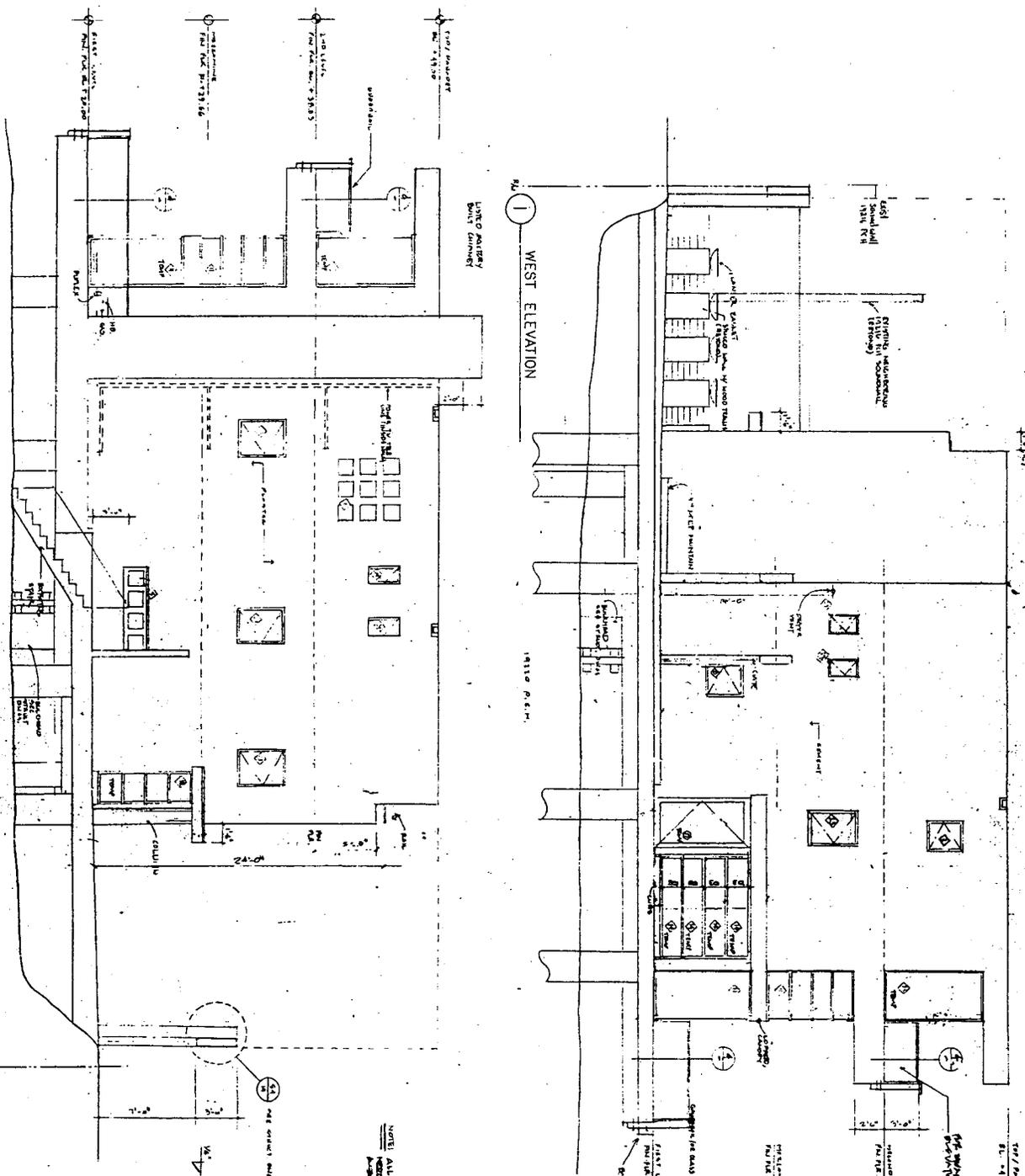
OWNER/BUILDER:
 Rob MacLeod
 24680 Malibu Road
 Malibu, CA 90265
 TEL: (310) 456-5098

MacLeod Residence
 19222 Pacific Coast Highway
 19220 Pacific Coast Highway

EXHIBIT NO. 11
 APPLICATION NO. 4-98-285
 MacLeod

DATE: 6-1-18
 SCALE: 1/4" = 1'-0"

ELEVATIONS



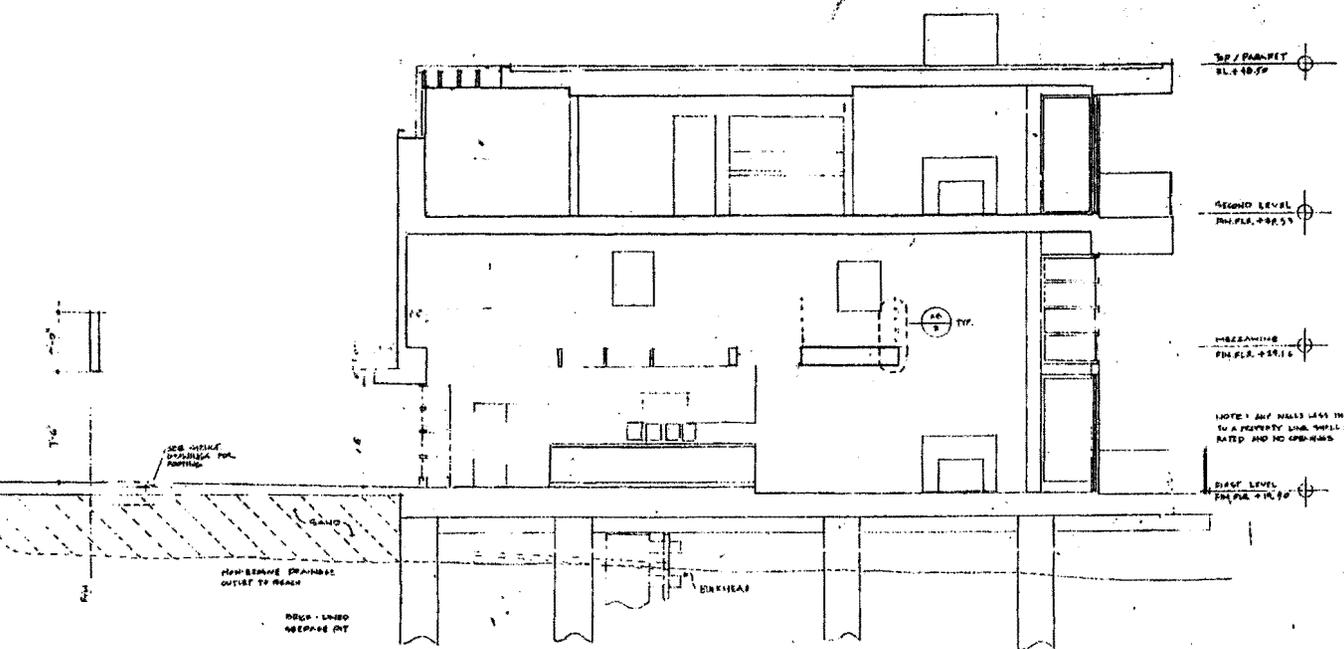
APPROVED
 DATE: 5-11-10
 SCALE: 1/8" = 1'-0"
 DRAWN: T. J. [unclear]
 CHECKED: [unclear]

OWNER/BUILDER:
 Rob MacLeod
 24600 Mulliken Road
 Mill Valley, CA 94965
 TEL: (415) 454-8000

MacLeod Residence
 19222 Pacific Coast Highway

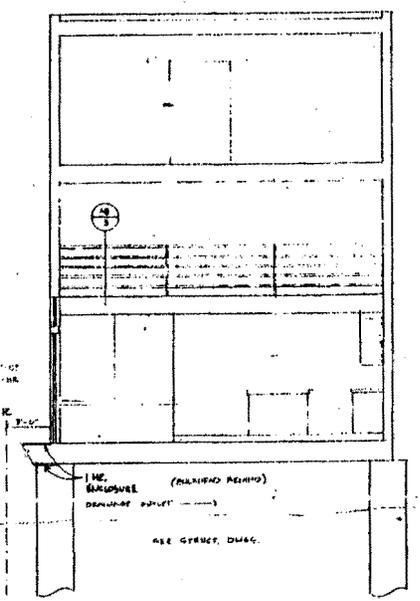
EXHIBIT NO. 13
APPLICATION NO.
4-98-285
MacLeod

EXHIBIT NO. 14
 APPLICATION NO. 498-885
 MACLeod

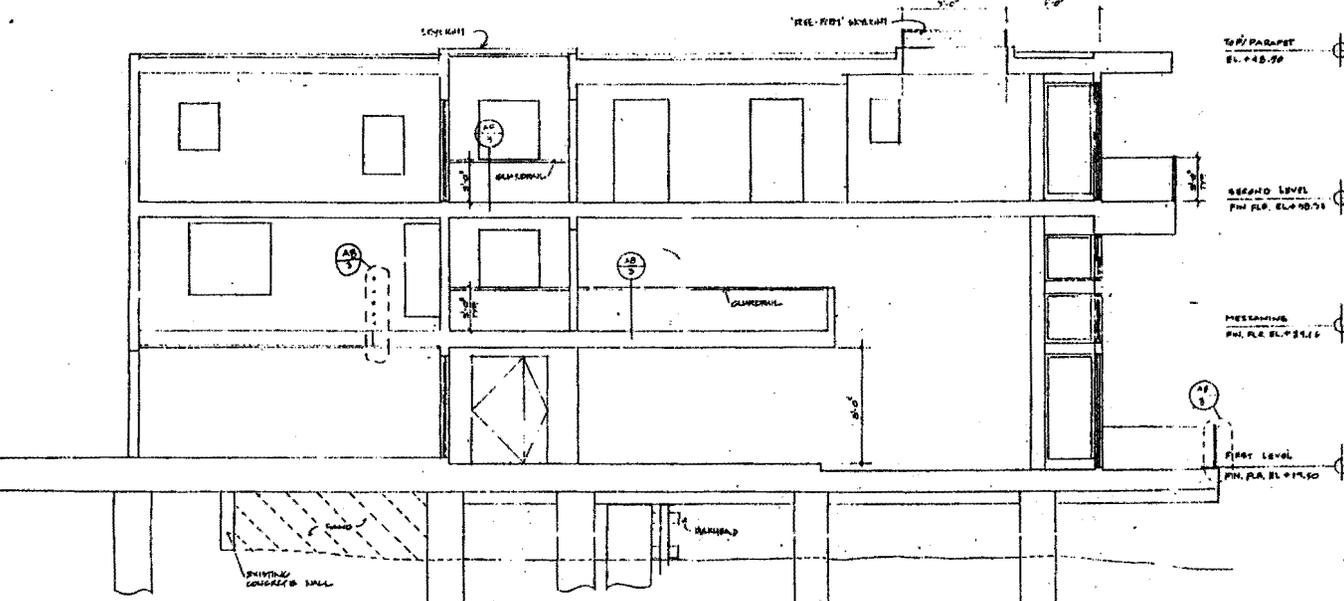


SECTION - DD

19220 Pacific Coast Highway

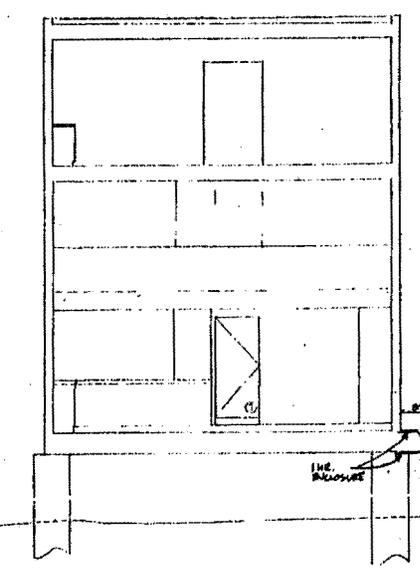


SECTION - AA



SECTION - CC

19222 Pacific Coast Highway



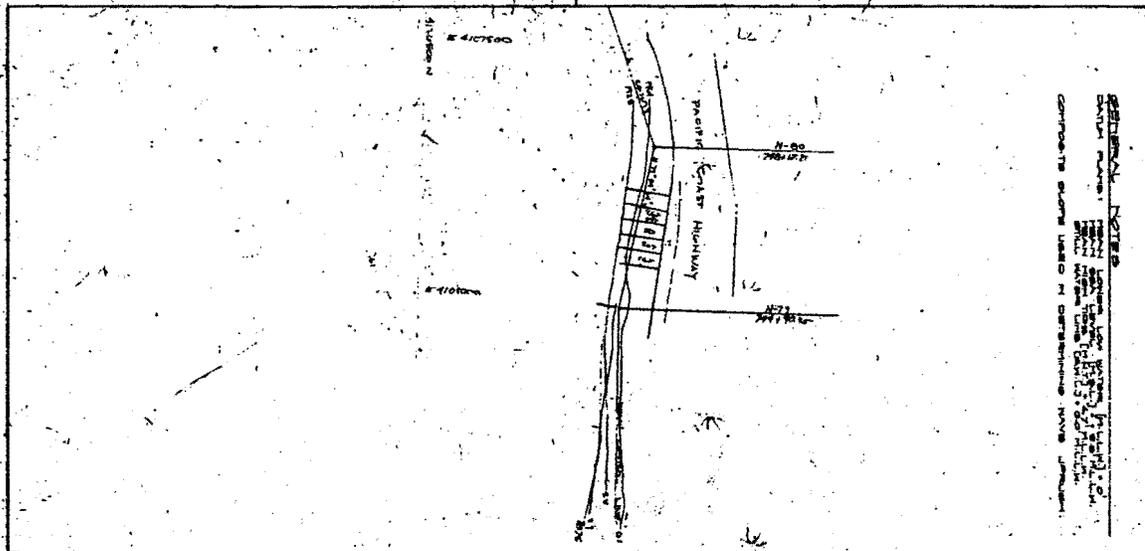
SECTION - BB

MacLeod Residence
 19222 Pacific Coast Highway
 19220 Pacific Coast Highway

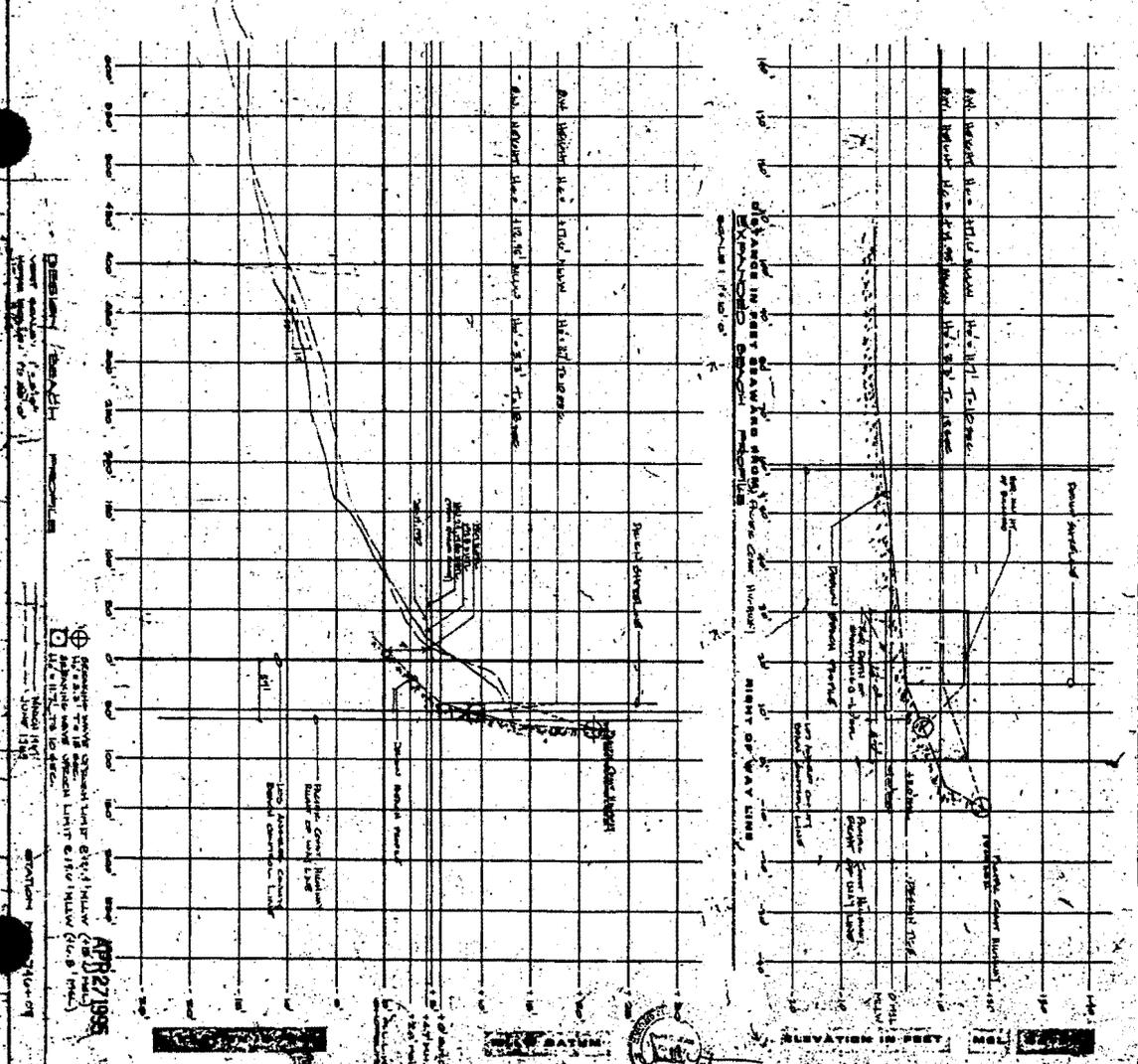
OWNER/BUILDER:
 Rob MacLeod
 24880 Malibu Road
 Malibu, CA 90263
 TEL (310) 456-9994

APPROVED
 JUN - 2 1995
 THE ARCHITECT'S SEAL AND SIGNATURE
 SHALL BE PLACED IN THE SPACE PROVIDED
 HEREON IN THE PRESENCE OF THE CITY
 ENGINEER AT THE TIME OF THE CITY
 ENGINEER'S REVIEW.

SECTIONS
 REVISED 1/31/92
 DATE: 6/1/95
 SCALE: 1/4" = 1'-0"



GENERAL NOTES
 1. ALL ELEVATIONS ARE IN FEET UNLESS OTHERWISE NOTED.
 2. THE ELEVATION OF THE MEAN HIGH WATER (MHW) IS 112.50 FEET.
 3. THE ELEVATION OF THE MEAN LOW WATER (MLW) IS 110.50 FEET.
 4. THE ELEVATION OF THE MEAN TIDE LEVEL (MTL) IS 111.50 FEET.
 5. THE ELEVATION OF THE MEAN SPRING TIDE LEVEL (MSL) IS 112.50 FEET.
 6. THE ELEVATION OF THE MEAN NEAP TIDE LEVEL (MNL) IS 110.50 FEET.
 7. THE ELEVATION OF THE MEAN RANGE OF TIDES (MRT) IS 2.00 FEET.
 8. THE ELEVATION OF THE MEAN RANGE OF TIDES (MRT) IS 2.00 FEET.
 9. THE ELEVATION OF THE MEAN RANGE OF TIDES (MRT) IS 2.00 FEET.



DESIGNER: WESS
 PROJECT: PACIFIC COAST HIGHWAY
 DATE: APR 27, 1958
 SHEET NO. 15
 TOTAL SHEETS: 15
 DRAWN BY: WESS
 CHECKED BY: WESS
 APPROVED BY: WESS

PROJECT: PACIFIC COAST HIGHWAY 1950-1958 PACIFIC COAST HWY MALIBU, CA	DATE: APR 27, 1958 DRAWN BY: WESS CHECKED BY: WESS APPROVED BY: WESS
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EXHIBIT NO. 15
 APPLICATION NO.
 C/98-285
 MacLeod

