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STATE OF CALIFORNIA -- THE RESOURCES AGENCY GRAY DAVIS, *Governor*

CALIFORNIA COASTAL COMMISSION

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Staff:	SLG-V
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Hearing Date:	12/11/01
Commission Action:	

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STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-01-051

APPLICANT: Bluewater Builders, Inc.

PROJECT LOCATION: 6164 Galahad Drive, Malibu, Los Angeles County

PROJECT DESCRIPTION: Construction of a 3,529 sq. ft., 25 ft. high above existing grade, two-story, single family with 524 sq. ft. attached garage, driveway, retaining walls, septic system, drainage system, and 660 cu. yds. of grading (615 cu.yds cut, 45 cu. yds fill).

Lot Area:	43,558 sq. ft. (1 acres)
Building Coverage:	4,251 sq. ft.
Pavement Coverage:	3,144 sq. ft.
Landscaped Area:	8,000 sq. ft.
Parking Spaces:	3
Height above existing grade:	25 feet

LOCAL APPROVALS RECEIVED: City of Malibu Planning Department, Approval in Concept, dated 6/20/01; City of Malibu Environmental Health Department, Approval in Concept (Septic), dated 3/7/01; City of Malibu, Geology and Geotechnical Engineering Review Sheet, Approval in Concept, dated 8/8/00; County of Los Angeles, Fire Department, Approval in Concept, 4/24/01; Los Angeles County Fire Department, Preliminary Fuel Modification Plan Approval, dated 6/26/00; City of Malibu, Engineering Department Permit (construction of driveway approach and paving over street easement), 5/31/01.

SUMMARY OF STAFF RECOMMENDATION: Staff recommends **approval** of the proposed project with seven (7) special conditions regarding: (1) conformance to geologic recommendations for design and construction, (2) drainage and polluted run-off control, (3) landscaping and erosion control, (4) removal of natural vegetation, (5) removal of excavated material, (6) future development, and (7) wildfire waiver of liability.

SUBSTANTIVE FILE DOCUMENTS: Certified Malibu/Santa Monica Mountains Land Use Plan (1986); Response to California Coastal Commission Letter Dated May 25, 2001 (GeoSystems, 6/15/01); Response to City of Malibu Geology and Geotechnical Engineering Review Sheet, Lot 7, Tract 40860 (GeoSystems, 9/26/00); Percolation Test Results, Tract 40860 (GeoSystems, 4/9/97); Updated Soils and Engineering-Geologic Investigation, Lots 7 and 8, Tract 40860 (GeoSystems, 5/22/00); Fault Rupture Potential, Expansion Index and File Review, Lots 7 and 8, Tract 40860 (GeoSystems, 7/18/00).

I. STAFF RECOMMENDATION

MOTION: ***I move that the Commission approve Coastal Development Permit No. 4-01-051 pursuant to the staff recommendation.***

STAFF RECOMMENDATION OF APPROVAL:

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

RESOLUTION TO APPROVE THE PERMIT:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

1. **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. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

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

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

All recommendations contained in the *Updated Soils and Engineering-Geologic Investigation, Lots 7 and 8, Tract 40860 (GeoSystems, 5/22/00); Response to City of Malibu Geology and Geotechnical Engineering Review Sheet, Lot 7, Tract 40860 (GeoSystems, 9/26/00); Percolation Test Results, Tract 40860 (GeoSystems, 4/9/97); Response to City of Malibu Geology and Geotechnical Engineering Review Sheet reports, (GeoSystems, 11/5/96)*, shall be incorporated into all final design and construction including foundations, grading, drainage, and sewage disposal. Final plans must be reviewed and approved by the project's consulting geotechnical engineer. Prior to the issuance of the coastal development permit, the applicant shall submit, for review and approval by the Executive Director, evidence of the consultants' review and approval of two (2) sets of all project plans.

The final plans approved by the consultants 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 the consultants shall require an amendment to the permit or a new coastal permit.

2. Drainage and Polluted Runoff Control Plans

Prior to issuance of the coastal development permit, the applicant shall submit to the Executive Director for review and written approval, two (2) sets of final drainage and runoff control plans, including supporting calculations. The plan shall be prepared by a licensed engineer and shall incorporate structural and non-structural Best Management Practices (BMPs) designed to control the volume, velocity and pollutant load of stormwater leaving the developed site. The plan shall be reviewed and approved by the consulting geotechnical engineer and engineering geologist to ensure the plan is in conformance with consultants'

recommendations. In addition to the specifications above, the plan shall be in substantial conformance with the following requirements:

(a) The plan shall be configured and designed to generally conform with the conceptual drainage plan shown on Exhibit 4 (Site Plan).

(b) Selected BMPs (or suites of BMPs) shall be designed to treat or filter stormwater from each runoff event, up to and including the 85th percentile, 24-hour runoff event for volume-based BMPs, and/or the 85th percentile, 1-hour runoff event, with an appropriate safety factor, for flow-based BMPs.

(c) Runoff shall be conveyed off site in a non-erosive manner.

(d) Energy dissipating measures shall be installed at the terminus of outflow drains.

The plan shall include provisions for maintaining the drainage system, including structural BMPs, in a functional condition throughout the life of the approved development. Such maintenance shall include the following: (1) BMPs shall be inspected, cleaned and repaired when necessary prior to the onset of the storm season, no later than September 30th each year and (2) should any of the project's surface or subsurface drainage/filtration structures or other BMPs fail or result in increased erosion, the applicant/landowner or successor-in-interest shall be responsible for any necessary repairs to the drainage/filtration system or BMPs and restoration of the eroded area. Should repairs or restoration become necessary, prior to the commencement of such repair or restoration work, the applicant shall submit a repair and restoration plan to the Executive Director to determine if an amendment or new coastal development permit is required to authorize such work.

3. Landscaping and Erosion Control Plans

Prior to issuance of a coastal development permit, the applicant shall submit two (2) sets of landscaping and erosion control plans, prepared by a licensed landscape architect or a qualified resource specialist, for review and approval by the Executive Director. The landscaping and erosion control plans shall be reviewed and approved by the geotechnical consultants to ensure that the plans are in conformance with the consultants' recommendations. The plans shall identify the species, extent, and location of all plant materials and shall incorporate the following criteria:

A. Landscaping Plan

(1) All graded and disturbed areas on the subject site shall be planted and maintained for erosion control purposes within (60) days of receipt of the certificate of occupancy for the residence. To minimize the need for irrigation all landscaping shall consist primarily of native/drought resistant 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 February 5, 1996. Invasive, non-indigenous plant species which tend to supplant native species shall not be used. All graded & disturbed areas on the subject site shall be planted and maintained for erosion control purposes within (60) days of receipt of the certificate of occupancy for the residence.

(2) All cut and fill slopes shall be stabilized with planting at the completion of final grading. Plantings should be of native plant species indigenous to the Santa Monica Mountains using accepted planting procedures, consistent with fire safety requirements. Such planting shall be adequate to provide 90 percent coverage within two (2) years, and this requirement shall apply to all disturbed soils.

(3) Plantings will 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.

(4) The Permittee shall undertake development in accordance with the final approved plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Coastal Commission - approved amendment to the coastal development permit, unless the Executive Director determines that no amendment is required.

(5) Vegetation within 50 feet of the proposed house may be removed to mineral earth, vegetation within a 200 foot radius of the main structure may be selectively thinned in order to reduce fire hazard. However, such thinning shall only occur in accordance with an approved long-term fuel modification plan submitted pursuant to this special condition. The fuel modification plan shall include details regarding the types, sizes and location of plant materials to be removed, and how often thinning is to occur. In addition, the applicant shall submit evidence that the fuel modification plan has been reviewed and approved by the Forestry Department of Los Angeles County. Irrigated lawn, turf and ground cover planted within the fifty foot radius of the proposed house shall be selected from the most drought tolerant species or subspecies, or varieties suited to the Mediterranean climate of the Santa Monica Mountains.

B. Interim Erosion Control Plan

(1) The plan shall delineate the areas to be disturbed by grading or construction activities and shall include any temporary access roads, staging areas and stockpile areas. The natural areas on the site shall be clearly delineated on the project site with fencing or survey flags.

(2) The plan shall specify that should grading take place during the rainy season (November 1 – March 31) the applicant shall install or construct temporary sediment basins (including debris basins, desilting basins or silt traps), temporary drains and swales, sand bag barriers, silt fencing, stabilize any stockpiled fill with geofabric covers or other appropriate cover, install geotextiles or mats on all cut or

fill slopes and close and stabilize open trenches as soon as possible. These erosion measures shall be required on the project site prior to or concurrent with the initial grading operations and maintained through out the development process to minimize erosion and sediment from runoff waters during construction. All sediment should be retained on-site unless removed to an appropriate approved dumping location either outside the coastal zone or to a site within the coastal zone permitted to receive fill.

(3) The plan shall also include temporary erosion control measures should grading or site preparation cease for a period of more than 30 days, including but not limited to: stabilization of all stockpiled fill, access roads, disturbed soils and cut and fill slopes with geotextiles and/or mats, sand bag barriers, silt fencing; temporary drains and swales and sediment basins. The plans shall also specify that all disturbed areas shall be seeded with native grass species and include the technical specifications for seeding the disturbed areas. These temporary erosion control measures shall be monitored and maintained until grading or construction operations resume.

C. Monitoring

Five years from the date of the receipt of the Certificate of Occupancy for the residence the applicant shall submit for the review and approval of the Executive Director, a landscape monitoring report, prepared by a licensed Landscape Architect or qualified Resource Specialist, that certifies the on-site landscaping is in conformance with the landscape plan approved pursuant to this Special Condition. The monitoring report shall include photographic documentation of plant species and plant coverage.

If the landscape monitoring report indicates the landscaping is not in conformance with or has failed to meet the performance standards specified in the landscaping plan approved pursuant to this permit, the applicant, or successors in interest, shall submit a revised or supplemental landscape plan for the review and approval of the Executive Director. The revised landscaping plan must be prepared by a licensed Landscape Architect or a qualified Resource Specialist and shall specify measures to remediate those portions of the original plan that have failed or are not in conformance with the original approved plan.

4. Removal of Natural Vegetation

Removal of natural vegetation for the purpose of fuel modification within the 50 foot zone surrounding the proposed structure(s) shall not commence until the local government has issued a building or grading permit for the development approved pursuant to this permit. Vegetation thinning within the 50-200 foot fuel modification zone shall not occur until commencement of construction of the structure(s) approved pursuant to this permit.

5. Removal of Excavated Material

Prior to issuance of the coastal development permit, the applicant shall provide evidence to the Executive Director of the location of the disposal site for all excavated material from the site. Should the dumpsite be located in the Coastal Zone, a coastal development permit shall be required.

6. Future Improvements

This permit is only for the development described in Coastal Development Permit No. 4-01-051. Pursuant to Title 14 California Code of Regulations Sections 13250(b)(6) the exemptions otherwise provided in Public Resources Code Section 30610(a) shall not apply to the entire parcel. Accordingly, any future structures, future improvements, or change of use to the permitted structures approved under Coastal Development Permit No. 4-01-051, including any fencing, grading, clearing, or other disturbance of vegetation, other than as provided for in the approved fuel modification/landscape plan prepared pursuant to **Special Condition 3**, shall require an amendment to Permit No. 4-01-051 from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.

Prior to the 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 legal description of the applicant's entire parcels. The deed restriction shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without a Commission amendment to this coastal development permit.

7. Wildfire Waiver of Liability

Prior to issuance of the coastal development permit, the applicant shall submit a signed document which shall indemnify and hold harmless the California Coastal Commission, its officers, agents, and employees against any and all claims, demands, damages, costs, expenses, and liability arising out of the acquisition, design, construction, operations, maintenance, existence, or failure of the permitted project in an area where an extraordinary potential for damage or destruction from wildfire exists as an inherent risk to life and property.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. Project Description and Background

The subject site is located at 6164 Galahad Drive, approximately one-fourth mile south of the intersection of Galahad Drive and Kanan Dume Road, in the City of Malibu. Access to the property is via Galahad Drive, a paved private road/cul-de-sac, which extends along the western boundary of the subject parcel. Galahad Drive is accessed off of Kanan Dume Road, approximately one-half mile north of its intersection with Pacific Coast Highway (Exhibit 1 and 2). The 1-acre site is located inland of Pacific Coast Highway in an area moderately developed with single family residences. The proposed project will not be visible from any public viewing areas, or from Pacific Coast Highway.

The applicant is proposing to construct a two-story, 25 ft. above existing grade, 3,529 sq. ft. single-family residence with 524 sq. ft. attached garage, driveway, retaining walls, septic system, and drainage system. Additionally, the applicant is proposing 660 cu. yds. of grading (615 cu.yds cut, 45 cu. yds fill) primarily to "step" the residence into the contour of the hillside. (Exhibits 3-9)

Topography of the subject parcel consists of a small, approximately level, area directly adjacent to Galahad Drive, transitioning to a relatively steep, east-facing hillside, sloping down to Walnut Canyon, a U.S. Geological Survey (USGS) mapped blueline stream (Exhibit 3). Slope gradients at the subject site range from nearly level to 3:1 (Horizonal:Vertical). Maximum topographic relief at the subject site, from Galahad Drive to the drainage at the eastern property boundary, is approximately 100 ft.

Site drainage is comprised of topographically controlled sheetflow runoff of precipitation which flows to Walnut Canyon at the east portion of the site. The USGS blueline stream flows southerly through the parcel, approximately 40 to 60 linear feet within the eastern parcel boundary (see Exhibit 4). A Los Angeles County flood hazard easement, approximately 80 feet in width, aligns Walnut Canyon, with the centerline of the steam bisecting this corridor (Exhibit 4). At its closest point, the residence is setback approximately 240 feet from the centerline of the blueline stream. Walnut Canyon reaches the Pacific Ocean approximately one mile downgradient of the subject site.

Vegetation on the western portion of the project site is highly degraded due to fuel modification clearance associated with the paving and maintenance of Galahad Drive. The steeper slopes on the eastern portion of the project site, however, are vegetated with mature coastal sage scrub and both annual exotic and native grasses. No designated environmentally sensitive habitat area exists at the site; however, as mentioned above, a USGS mapped blueline stream traverses the eastern portion of the project site.

In 1997, the Commission approved a subdivision creating the subject lot. The subdivision (Coastal Permit No. 4-96-095, Sauter) divided one 8.02-acre parcel into eight, 1-acre single family residential lots. In addition, the Commission approved the construction of seven building pads near the street requiring 2,460 cubic yards of grading. The Commission approved the subdivision with special conditions addressing cumulative impact mitigation, plans conforming to geologic recommendations, and revegetation and landscaping plan. The special conditions required prior to issuance were complied with and the permit was issued.

The subject site is currently vacant, and is bordered by other vacant parcels to the north and south that are part of the original Commission-approved subdivision (CDP 4-96-095). The proposed building site is consistent with the approximate building pad site approved in the underlying subdivision permit. A coastal development permit application (CDP 4-01-101) for a single family residence, similar in size and scope to the proposed project, was approved by the Commission in November 2001 on the adjoining parcel to the south.

The applicant has submitted Fuel Modification Plans with Preliminary Approval by the County of Los Angeles Fire Department, Fuel Modification Unit, dated 6/11/01, for the proposed residence which indicate the extent of vegetation removal and/or thinning requirements required to reduce fire hazard for the proposed residence. The area will overlap significantly with areas previously disturbed by fuel modification completed for adjacent development, and with that proposed for the development under CDP 4-01-101 (Exhibit 9). As such, the proposed development will not have an adverse impact on significant natural vegetation.

B. Geology and Fire Hazard

Section 30253 of the Coastal Act states in pertinent part that new development shall:

> ***Minimize risks to life and property in areas of high geologic, flood, and fire hazard.***
>
> ***Assure stability and structural integrity, and neither create nor contribute significantly to erosion, 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.***

The proposed development is located in the Malibu/Santa Monica Mountains area, an area which is generally considered to be subject to an unusually high amount of natural hazards. Geologic hazards common to the Malibu/Santa Monica Mountains area include landslides, erosion, and flooding. In addition, fire is an inherent threat to the indigenous chaparral community of the coastal mountains. Wild fires often denude hillsides in the Santa Monica Mountains of all existing vegetation, thereby contributing to an increased potential for erosion and landslides on property.

1. Geology

Section 30253 of the Coastal Act mandates that new development be sited and designed to provide geologic stability and structural integrity, and minimize risks to life and property in areas of high geologic, flood, and fire hazard. The project site consists of a relatively steep, east-facing hillside parcel. The bulk of the development is proposed to be sited on the western portion of the property, near the top of the descending slope, however, the residence itself will be built over the descending slope.

The applicant has submitted several documents regarding the on-site geologic conditions prepared by the applicant's geoconsultants, including: *Updated Soils and Engineering-Geologic Investigation, Lots 7 and 8, Tract 40860 (GeoSystems, 5/22/00); Response to City of Malibu Geology and Geotechnical Engineering Review Sheet, Lot 7, Tract 40860 (GeoSystems, 9/26/00); Percolation Test Results, Tract 40860 (GeoSystems, 4/9/97); Response to City of Malibu Geology and Geotechnical Engineering Review Sheet reports, (GeoSystems, 11/5/96).* The submitted reports evaluate the geologic conditions of the site and the suitability of the site for the proposed project. The geology consultants specifically address potential geologic hazards associated with an inferred thrust fault mapped by USGS, which is believed to traverse the subject property east of the building site (Exhibit 4), and the potential for downhill creep of fill and soil on the site to adversely affect the proposed development. In evaluating the geologic conditions of the project site and adjacent properties in relation to the proposed development, the geotechnical consultants have determined that the proposed project will be safe from geologic hazards provided their recommendations are incorporated into the proposed development. As a result of the presence of the inferred thrust fault at the site and the potential for downhill creep in the underlying soils, the consulting geologists provide the following recommendations to ensure the safety and stability of the site and proposed development. The Response to City of Malibu Geology and Geotechnical Engineering Review Sheet report, dated 11/5/96, prepared by GeoSystems states:

> ***A restricted use area has been recommended on the eastern portion of the property in the area of the inferred thrust fault. The presence of the thrust fault was inferred based on regional geologic maps by the USGS. No evidence of the fault was encountered in the exploratory trenches excavated in the proposed building area. Additional trenching may be necessary to confirm the presence and location of the fault if future structures are proposed on the eastern portion of the property.***

In order to ensure that any future development proposed on the site is reviewed with regard to the above recommendations concerning the restricted use area and compliance with applicable Coastal Act policies, the Commission requires the applicant, through **Special Condition Six (6),** to record a future development deed restriction on the property.

The *Updated Soils and Engineering-Geologic Investigation* dated 5/22/00 prepared by GeoSystems provides the following additional recommendation:

> ***It appears that a deepened, friction pile, foundation system will be necessary in order to penetrate existing fill and soil on the slope and to meet minimum foundation setback requirements. ...Fill and soil on the site is subject to downhill creep. Pile shafts are subject to lateral loads due to creep forces. Pile shafts should be designed for a lateral load of 1000 pounds per linear foot for each foot of shaft exposed to fill or soil.***

Based on their investigation and recommendations the geotechnical consultants have determined that the project site is appropriate for the proposed project. The *Updated Soils and Engineering-Geologic Investigation* dated 5/22/00 prepared by GeoSystems states:

> ***It is the finding of this firm that the proposed building and/or grading will be safe and that the site will not be affected by any hazard from landslide, settlement, or slippage and the completed work will not adversely affect adjacent property in compliance with the Malibu City code, provided our recommendations are followed.***

The *Response to City of Malibu Geology and Geotechnical Engineering Review Sheet reports, dated 11/5/96 and 9/26/00, and the Updated Soils and Engineering-Geologic Investigation dated 5/22/00* prepared by GeoSystems include numerous recommendations to be incorporated into the project's construction, design, and drainage to ensure stability and geologic safety of the project site. To ensure that the recommendations of the geotechnical consultants are incorporated into all proposed development the Commission, as specified in **Special Condition One (1),** requires the applicant to submit project plans certified by the consulting geotechnical engineer as conforming to all structural and site stability recommendations for the proposed project. Final plans approved by the consultants shall be in substantial conformance with the plans approved by the Commission. Any substantial changes to the proposed development, as approved by the Commission, which may be recommended by the consultants shall require an amendment to the permit or a new coastal development permit.

The Commission finds that minimizing site erosion will aid in maintaining the geologic stability of the project site, and that erosion will be minimized by incorporating adequate drainage, erosion control, and appropriate landscaping into the proposed development. To ensure that adequate drainage and erosion control is included in the proposed development the Commission requires the applicant to submit drainage and interim erosion control plans certified by the consulting geotechnical engineer, as specified in **Special Condition Two (2) and Special Condition Three (3)**. Special Condition 2 also requires the applicant to maintain a functional drainage system at the subject site to insure that run-off from the project site is diverted in a non-erosive manner to minimize erosion at the site for the life of the proposed development. Should the drainage system of the project site fail at any time, the applicant will be responsible for any repairs or restoration of eroded areas as consistent with the terms of Special Condition 2.

The Commission has found that minimization of grading and exposed earth on-site can reduce the potential impacts of sedimentation in nearby creeks, stormwater conveyances, and the ocean. Therefore, **Special Condition Five (5)** has been required to ensure that all excavated or cut material in excess of material proposed to be used for fill on the project site be removed and properly disposed.

The Commission also finds that appropriate landscaping of slopes and graded or disturbed areas on the project site will minimize erosion and serve to enhance and maintain the geologic stability of the proposed development. Therefore, **Special Condition Three (3)** requires the applicant to submit landscaping plans certified by the consulting geotechnical engineer as in conformance with their recommendations for landscaping of the project site. Special Condition 3 also requires the applicant to utilize and maintain native and noninvasive plant species compatible with the surrounding area for landscaping the project site.

Invasive and non-native plant species are generally characterized as having a shallow root structure in comparison with their high surface/foliage weight. The Commission finds that non-native and invasive plant species with high surface/foliage weight and shallow root structures do not serve to stabilize slopes and that such vegetation results in potential adverse effects to the stability of the project site. Alternatively, native plant species tend to have a deeper root structure than non-native, invasive species and aid in preventing erosion. Therefore, the Commission finds that in order to ensure site stability, all slopes and disturbed and graded areas of the site shall be landscaped with appropriate native plant species, as specified in **Special Condition Three (3)**.

In addition, in order to ensure that vegetation clearance for fire protection purposes does not occur prior to commencement of grading or construction of the proposed structures, the Commission finds that it is necessary to impose a restriction on the removal of natural vegetation as specified in **Special Condition Four (4)**. This restriction specifies that natural vegetation shall not be removed until grading or building permits have been secured and construction of the permitted structures has commenced. The limitation imposed by Special Condition 4 avoids loss of natural vegetative coverage resulting in unnecessary erosion in the absence of adequately constructed drainage and run-off control devices and implementation of the landscape and interim erosion control plans.

2. Wild Fire

The proposed project is located in the Santa Monica Mountains, an area subject to an extraordinary potential for damage or destruction from wild fire. Typical vegetation in the Santa Monica Mountains consists mostly of coastal sage scrub and chaparral. Many plant species common to these communities produce and store terpenes, which are highly flammable substances (Mooney in Barbour, Terrestrial Vegetation of California, 1988). Chaparral and sage scrub communities have evolved in concert with, and continue to produce the potential for, frequent wild fires. The typical warm, dry summer conditions of the Mediterranean climate combine with the natural

characteristics of the native vegetation to pose a risk of wild fire damage to development that cannot be completely avoided or mitigated.

As a result of the hazardous conditions that exist for wildfires in the Santa Monica Mountains area, the Los Angeles County Fire Department requires the submittal of fuel modification plans for all new construction to reduce the threat of fires in high hazard areas. Typical fuel modification plans for development within the Santa Monica Mountains require setback, irrigation, and thinning zones that extend 200 feet from combustible structures. A 200-foot fuel modification zone around the proposed house site would overlap onto the neighboring properties to the north, south, and west (see Exhibit 9). Section D, Environmentally Sensitive Resources, addresses potential fuel modification impacts to the surrounding habitat in more detail.

Due to the fact that the proposed project is located in an area subject to an extraordinary potential for damage or destruction from wildfire, the Commission can only approve the project if the applicant assumes the liability from these associated risks. Through the wildfire waiver of liability, as incorporated in **Special Condition Seven (7)**, the applicant acknowledges and appreciates the nature of the fire hazard which exists on the site and which may affect the safety of the proposed development. For fire suppression, and to protect residences, the Fire Department requires the reduction of fuel through the removal and thinning of vegetation for up to 200 feet from any structure.

Therefore, Commission finds that the proposed project, as conditioned, is consistent with Sections 30250 and 30253 of the Coastal Act.

C. Water Quality

The Commission recognizes that new development in the Santa Monica Mountains has the potential to adversely impact coastal water quality through the removal of native vegetation, increase of impervious surfaces, runoff, erosion, and sedimentation, and introduction of pollutants such as petroleum, cleaning products, pesticides, and other pollutant sources, as well as effluent from septic systems. Section 30231 of the Coastal Act states:

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

As described, the proposed project includes construction of a 3,529 sq. ft., 25 ft. high above existing grade, two-story, single family with 524 sq. ft. attached garage, driveway, retaining walls, septic system, drainage system, and 660 cu. yds. of grading (615 cu.yds cut, 45 cu. yds fill). The site is considered a hillside development, as it involves moderately steep sloping terrain with soils that are susceptible to erosion, and creep forces. As noted previously, the applicants' parcel drains easterly into a USGS blueline stream which cuts through the property, roughly parallel to the eastern property boundary. At its closest point, the residence is setback approximately 240 feet from the blueline stream.

The proposed development of the site will result in an increase in impervious surface, which in turn decreases the infiltrative function and capacity of existing permeable land on site. The reduction in permeable space therefore leads to an increase in the volume and velocity of stormwater runoff that can be expected to leave the site. Further, pollutants commonly found in runoff associated with residential use include petroleum hydrocarbons including oil and grease from vehicles; heavy metals; synthetic organic chemicals including paint and household cleaners; soap and dirt from washing vehicles; dirt and vegetation from yard maintenance; litter; fertilizers, herbicides, and pesticides; and bacteria and pathogens from animal waste. The discharge of these pollutants to coastal waters can cause cumulative impacts such as: eutrophication and anoxic conditions resulting in fish kills and diseases and the alteration of aquatic habitat, including adverse changes to species composition and size; excess nutrients causing algae blooms and sedimentation increasing turbidity which both reduce the penetration of sunlight needed by aquatic vegetation which provide food and cover for aquatic species; disruptions to the reproductive cycle of aquatic species; and acute and sublethal toxicity in marine organisms leading to adverse changes in reproduction and feeding behavior. These impacts reduce the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes and reduce optimum populations of marine organisms and have adverse impacts on human health.

Such cumulative impacts can be minimized through the implementation of drainage and polluted runoff control measures. In addition to ensuring that runoff is conveyed from the site in a non-erosive manner, drainage and water pollution control measures should also include opportunities for runoff to infiltrate into the ground. Methods such as vegetated filter strips, gravel filters, and other media filter devices allow for infiltration. Because much of the runoff from the site is returned to the soil, overall runoff volume is reduced. Slow surface flow of runoff allows sediment and other pollutants to settle into the soil where they can be filtered. The reduced volume of runoff takes longer to reach streams and its pollutant load is greatly reduced.

In order to find the proposed development consistent with the water and marine resource policies of the Coastal Act, the Commission finds it necessary to require the incorporation of Best Management Practices designed to control the volume, velocity and pollutant load of stormwater leaving the developed site. Critical to the successful function of post-construction structural BMPs in removing pollutants in stormwater to the Maximum Extent Practicable (MEP), is the application of appropriate design

standards for sizing BMPs. The majority of runoff is generated from small storms because most storms are small. Additionally, storm water runoff typically conveys a disproportionate amount of pollutants in the initial period that runoff is generated during a storm event. Designing BMPs for the small, more frequent storms, rather than for the large infrequent storms, results in improved BMP performance at lower cost.

The project is conditioned, under **Special Condition Two (2)**, to implement and maintain a drainage plan designed to ensure that runoff rates and volumes after development do not exceed pre-development levels and that drainage is conveyed in a non-erosive manner. This drainage plan is required in order to ensure that risks from geologic hazard are minimized and that erosion, sedimentation, and polluted runoff are minimized to reduce potential impacts to coastal streams, natural drainages, and habitat areas. Such a plan will allow for the infiltration and filtering of runoff from the developed areas of the site, most importantly capturing the initial "first flush" flows that occur as a result of the first storms of the season. This flow carries with it the highest concentration of pollutants that have been deposited on impervious surfaces during the dry season. Additionally, the applicants must monitor and maintain the drainage and polluted runoff control system to ensure that it continues to function as intended throughout the life of the development.

As initially proposed, the project included a drainage system involving the collection of all on-site runoff and the channeling of this runoff to a 20 ft. in length storm water dispersal wall located at the bottom of the slope, where it would be released directly into the blueline stream. Commission staff worked with the applicant to revise this portion of the project in order to provide an alternative to the dispersal wall which would result in a less intrusive structure(s), set back as far as feasible from the blueline stream and flood hazard area, and which would allow for filtration and settlement of a portion of the runoff before entry into the blueline stream. This will result in a decrease in the amount of pollutants and other development related toxins being introduced into the water course, and ultimately, the ocean. The revised conceptual drainage system design involves the inclusion of an "filtration trench" and rip-rap splash block (Exhibit 4) which will serve to lessen the velocity of the water, and will allow filtration of the water prior to its release into the stream and off-site. In order to ensure that the proposed changes to the drainage system are incorporated into the final project drainage plans, the Commission requires the applicant, through **Special Condition Two (2)** to submit final drainage plans that reflect the conceptual drainage design (Exhibit 4) and which are sized to accommodate the runoff from an 85th percentile storm event.

The Commission finds that sizing post-construction structural BMPs to accommodate (infiltrate, filter or treat) the runoff from the 85th percentile storm runoff event, in this case, is equivalent to sizing BMPs based on the point of diminishing returns (i.e. the BMP capacity beyond which, insignificant increases in pollutants removal (and hence water quality protection) will occur, relative to the additional costs. Therefore, the Commission requires the selected post-construction structural BMPs be sized based on design criteria specified in Special Condition 2, and finds that this will ensure the proposed development will be designed to minimize adverse impacts to coastal

resources, in a manner consistent with the water and marine resource protection policies of the Coastal Act.

In addition, the Commission notes that the increase in the amount of impervious surfaces on the site will increase both the volume and velocity of storm water runoff. If not controlled and conveyed off of the site in a non-erosive manner, this runoff will result in increased erosion on and off the site which may lead to sedimentation of the adjacent USGS blueline stream. Uncontrolled erosion leads to sediment pollution of downgradient water bodies. Surface soil erosion has been established by the United States Department of Agriculture, Natural Resources Conservation Service, as a principal cause of downstream sedimentation known to adversely affect riparian and marine habitats. Suspended sediments have been shown to absorb nutrients and metals, in addition to other contaminants, and transport them from their source throughout a watershed and ultimately into the Pacific Ocean. The construction of single family residences in sensitive watershed areas has been established as a primary cause of erosion and resultant sediment pollution in coastal streams.

Because of the slope of the site and proximity of the blueline stream in relation to the proposed residence, and the resultant potential for pollutants to enter the coastal drainage which eventually outflows to the Pacific Ocean, it is important to adequately control site drainage to allow velocity reduction, filtration, and/or other best management practices (BMPs). The Commission finds that there are potential adverse effects to the value and quality of the adjacent natural drainage on the subject site as a result of erosion and sedimentation. To minimize erosion, sedimentation, and resultant impacts to water quality in the adjacent drainage, **Special Condition Three (3)** requires that all disturbed areas be stabilized and vegetated with appropriate native plant species. Invasive and non-native plant species are generally characterized as having a shallow root structure in comparison with their high surface/foliage weight. The Commission finds that non-native and invasive plant species with high surface/foliage weight and shallow root structures do not serve to stabilize slopes or riparian areas, and therefore do not prevent erosion in such areas. Native species, alternatively, tend to have a deeper root structure than non-native, invasive species and aid in preventing erosion.

Furthermore, interim erosion control measures implemented during construction and post construction landscaping will serve to minimize the potential for adverse impacts to water quality resulting from drainage runoff during construction and in the post-development stage. Therefore, the Commission finds that **Special Condition Three (3)** is necessary to ensure the proposed development will not adversely impact water quality of the blueline stream and downstream coastal resources.

Finally, the proposed development includes the installation of an on-site septic system with a 2,500-gallon to serve the residence. The applicant's geologic consultants performed percolation tests and evaluated the proposed septic system. The report concludes that the site is suitable for the septic system and there would be no adverse impact to the site or surrounding areas from the use of a septic system. The City of

Malibu Environmental Health Department has given in-concept approval of the proposed septic system, determining that the system meets the requirements of the plumbing code. The Commission has found that conformance with the provisions of the plumbing code is protective of resources.

Therefore, the Commission finds that the proposed project, as conditioned to incorporate and maintain a drainage and polluted runoff control plan, is consistent with Section 30231 of the Coastal Act.

D. Environmentally Sensitive Resources

Section 30230 of the Coastal Act states:

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

Section 30231 of the Coastal Act states 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.***

Section 30240 states:

> ***(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.***
>
> ***(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.***

To assist in the determination of a proposed project's consistency with Sections 30230, 30231, and 30240 of the Coastal Act, the Commission has looked to the certified Malibu/Santa Monica Mountains Land Use Plan (LUP) for guidance. The Land Use

Plan has been found to be consistent with Coastal Act Policies and provides specific standards for development along the Malibu coast and within the Santa Monica Mountains. The LUP offers policies designed to protect environmentally sensitive habitat areas and address stream protection and erosion control, from both the individual and cumulative impacts of development. In its findings regarding the Land Use Plan, the Commission emphasized the importance placed by the Coastal Act on protecting sensitive environmental resources. The Commission found in its action certifying the Land Use Plan in December 1986 that:

> ***Coastal canyons in the Santa Monica Mountains require protection against significant disruption of habitats, including not only the riparian corridors located in the bottoms of the canyons, but also the chaparral and coastal sage biotic communities found on the canyon slopes.***

The applicant proposes to construct a 3,529 sq. ft., 25 ft. high, two-story, single family with 524 sq. ft. attached garage, driveway, retaining walls, septic system, drainage system, and 660 cu. yds. of grading (615 cu.yds cut, 45 cu. yds fill).

As stated previously, there are no designated environmentally sensitive habitat areas (ESHA) at the site. However, as mentioned above, a USGS mapped blueline stream traverses the eastern portion of the project site (see Exhibit 3 and 4). The slopes buffering the blueline stream on the eastern portion of the project site are, however, vegetated with mature coastal sage scrub (see Exhibit 4) and both annual exotic and native grasses.

Stream and Habitat Protection

The Commission notes that seasonal streams and drainages, such as Walnut Canyon on the subject site, in conjunction with primary waterways, provide important habitat for plant and animal species. Section 30231 of the Coastal Act provides that the quality of coastal waters and streams shall be maintained and restored whenever feasible through means such as: controlling runoff, preventing interference with surface water flows and alteration of natural streams, and by maintaining natural vegetation buffer areas.

In past permit actions the Commission has found that new development adjacent to coastal streams and natural drainages results in potential adverse impacts to riparian habitat and marine resources from increased erosion, contaminated storm runoff, introduction of non-native and invasive plant species, disturbance of wildlife, and loss of riparian plant and animal habitat.

The siting of development in close proximity to streams results in the direct removal of riparian vegetation both for the actual construction of the building, and for fire prevention protection of the structure. The potential impact to the stream and its associated riparian habitat extends far beyond the actual building footprint, as vegetation clearance up to 200 ft. from the structure may be required, pursuant to Los Angeles County Fire Department regulations. Riparian vegetation serves to hold erosive

soils in place by slowing the surface flow of runoff and allowing it to infiltrate into the ground, thereby reducing the volume, velocity, and the potential pollutant load of the runoff prior to its entry into a stream. The removal of this riparian vegetation, in turn, results in an increase in the potential force and flow of rainwater and sheetflow runoff, which leads to increased erosion, nutrient loading, sedimentation, and pollutant loading of the streambed. This degradation of the stream's water quality continues downstream in a domino effect, altering the potential makeup of the organismal community (algae, insects, amphibians, and fish) which can survive within the streambed, and those which rely on the such organisms for their food supply, such as insectivorous birds, and bats.

Development in close proximity to streams, and the removal of riparian vegetation, results in the degradation of riparian habitat essential to the functioning of the stream ecosystem as a whole. Riparian habitats also serve as movement corridors for wildlife, connecting otherwise isolated populations and habitats. Development in close proximity to such streams can disturb the wildlife, disrupting their natural behavioral patterns, and forcing them to search further afield for necessary resources.

Section 30231 of the Coastal Act is designed to protect and enhance, or restore where feasible, marine resources and the biologic productivity and quality of coastal waters, including streams. Specifically, Section 30231 states that biological productivity and quality of coastal waters shall be sustained through maintaining natural vegetation buffer areas that protect riparian habitats and minimizing alteration of natural streams, among other means. This hilltop parcel is upstream of a USGS-designated blueline stream that harbors mature, and primarily undisturbed, coastal sage scrub. For fire suppression, and to protect residences, the Fire Department requires the reduction of fuel through the removal and thinning of vegetation for up to 200 feet from any structure. A 200-foot fuel modification zone around the proposed house site would overlap onto the neighboring properties to the north, south, and west (see Exhibit 9). However, the off-site area within the fuel modification zone is largely disturbed as a result of existing fuel modification requirements for existing residences and maintenance of Galahad Drive. Therefore, off-site fuel modification requirements in this zone would have minimal impact to native habitat. In addition, cumulative onsite fuel modification impacts are minimized since development to the west and south, including existing residences and Galahad Drive, have existing fuel modification zones which overlap the fuel modification of the proposed residence. Additionally, a coastal development permit application (CDP 4-01-101) to construct a single family residence on the adjacent property to the south was approved by the Commission in November 2001. The location of the subject residence, adjacent to the Galahad Drive, serves to cluster development in the area away from the blueline stream and minimizes the potential impacts of fuel modification. To ensure the most minimal disturbance feasible of the native habitat, **Special Condition Three (3)** requires the applicants to submit a final long-term fuel modification plan for the review and approval by the Executive Director.

The Commission finds that there are potential adverse effects to the value and quality of Walnut Canyon and the native habitat on the subject site as a result of erosion and

sedimentation. Erosion and sedimentation can be minimized by requiring the applicant to implement a drainage and polluted runoff control plan (discussed in further detail under Section C. Water Quality), by incorporating interim erosion control methods during construction, and by landscaping disturbed areas of the site with native plants compatible with the surrounding environment.

Non-point source pollution is the pollution of coastal waters (including streams and underground water systems) which enters the waterway from numerous sources which are difficult to identify on an individual basis. Non-point source pollutants include suspended solids, coliform bacteria and nutrients. These pollutants can originate from many different sources such as overflow septic systems, storm drains, runoff from roadways, driveways, rooftops, and horse facilities. The Commission finds that the minimization of non-point source pollutants from new development will help to maintain and enhance the quality of coastal waters, streams, wetlands, estuaries and lakes.

To ensure that drainage is conveyed off site in a non-erosive manner, the Commission finds that it is necessary to require the applicant, as specified by **Special Condition Two (2)**, to incorporate drainage and polluted runoff control measures into development of the project site. This condition also ensures that: the project's drainage and runoff control structures will not contribute to further erosion and sedimentation at the project site or surrounding area; that the project's drainage structures shall be repaired should the structures fail in the future; and that the applicant agree to be responsible for any repairs or restoration of eroded areas should the drainage structures fail or result in erosion.

Special Condition Three (3) requires that an interim erosion control plan be prepared and submitted with proof of review by the project's consulting geotechnical and geologic engineer, as conforming to their recommendations to reduce excess erosion and sedimentation from the project site into Walnut Canyon during construction activities.

To minimize erosion and excess sedimentation into the blueline stream, **Special Condition Three (3)** further requires that all disturbed areas be stabilized and vegetated with appropriate native plant species. Invasive and non-native plant species are generally characterized as having a shallow root structure in comparison with their high surface/foliage weight. The Commission finds that non-native and invasive plant species with high surface/foliage weight and shallow root structures do not serve to stabilize slopes or riparian areas, and therefore do not prevent erosion in such areas. Native species, alternatively, tend to have a deeper root structure than non-native, invasive species and aid in preventing erosion.

Furthermore, **Special Condition Four (4)** requires that no removal or thinning of natural vegetation for fuel modification purposes shall occur until grading or building permits have been secured from the local government and construction of the permitted development has commenced. The limitation imposed avoids loss of natural vegetative coverage resulting in unnecessary erosion in the absence of adequately constructed

drainage and runoff control devices and implementation of the landscaping and interim erosion control plans.

The Commission further finds that the implementation of **Special Condition Five (5)**, removal of excess graded material, will ensure that additional soil and debris are removed from the site, and therefore will not contribute to additional erosion and sedimentation.

For the reasons set forth above, the Commission finds that the proposed project, as conditioned, is consistent with Sections 30230, 30231, and 30240 of the Coastal Act.

E. Local Coastal Program

Section 30604 of the Coastal Act states:

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

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 applicant. As conditioned, the proposed project 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 the Santa Monica Mountains area which is also consistent with the policies of Chapter 3 of the Coastal Act as required by Section 30604(a).

F. California Environmental Quality Act

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 by any conditions of approval, to be consistent with any applicable requirements of the California Environmentally Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The Commission finds that, the proposed project, as conditioned will not have 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 determined to be consistent with CEQA and the policies of the Coastal Act.

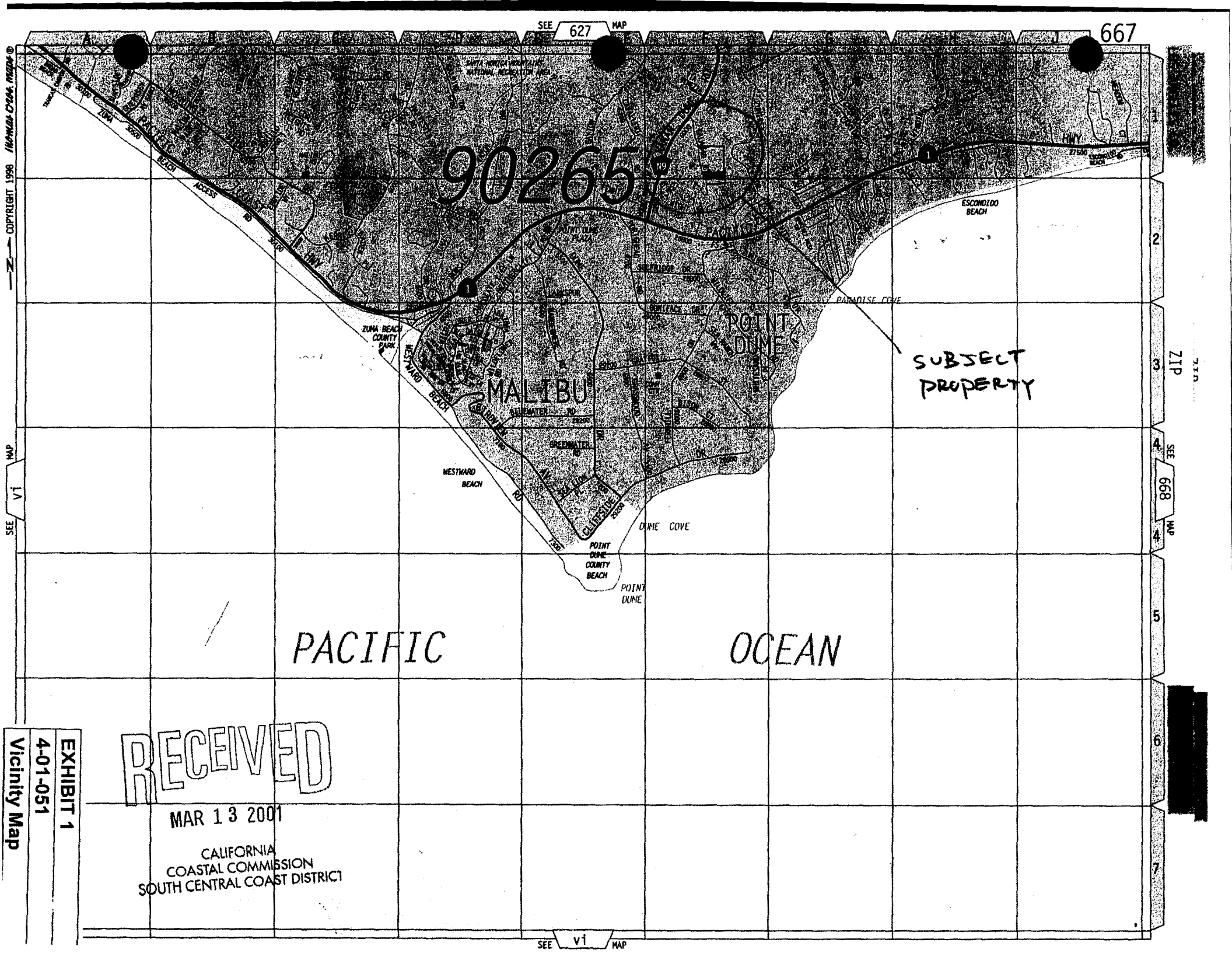

EXHIBIT 1
4-01-051
Vicinity Map

Los Angeles, CA , 2001-2002 - 4467-037-007 (Alt:Parcel :), Sheet: 1 of 1

1-800-345-7334

SCALE IN 1/10 OF AN INCH

4467	37 SHEET	P.A. 4467-15	TRA 10853	REVISED 1998... - 07				SEARCH NO	MAP EXTENTS 4045844-4046784 4121228-4122166	OFFICE OF THE ASSESSOR COUNTY OF LOS ANGELES COPYRIGHT © 1996

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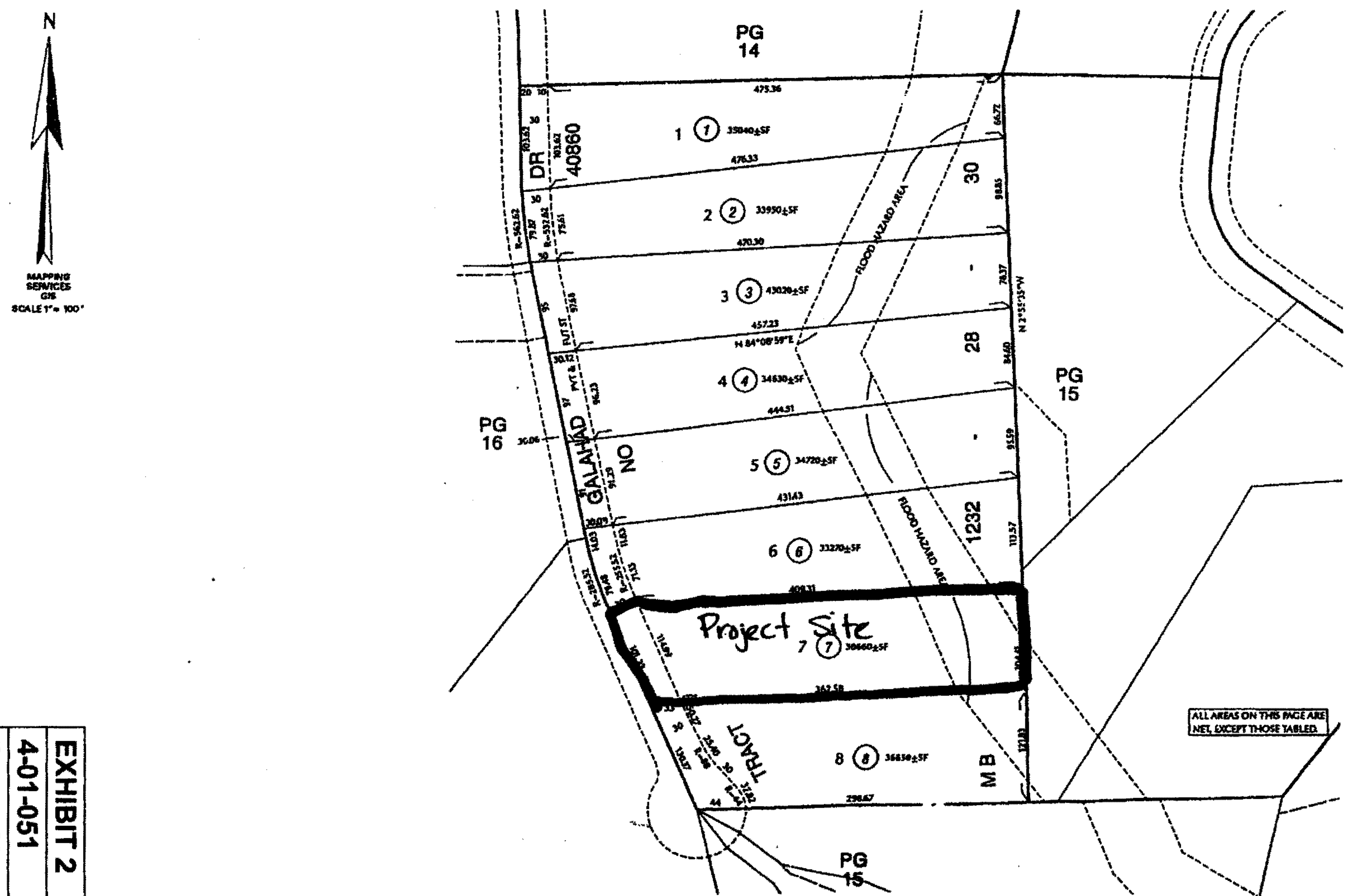

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EXHIBIT 2
4-01-051
Parcel Map

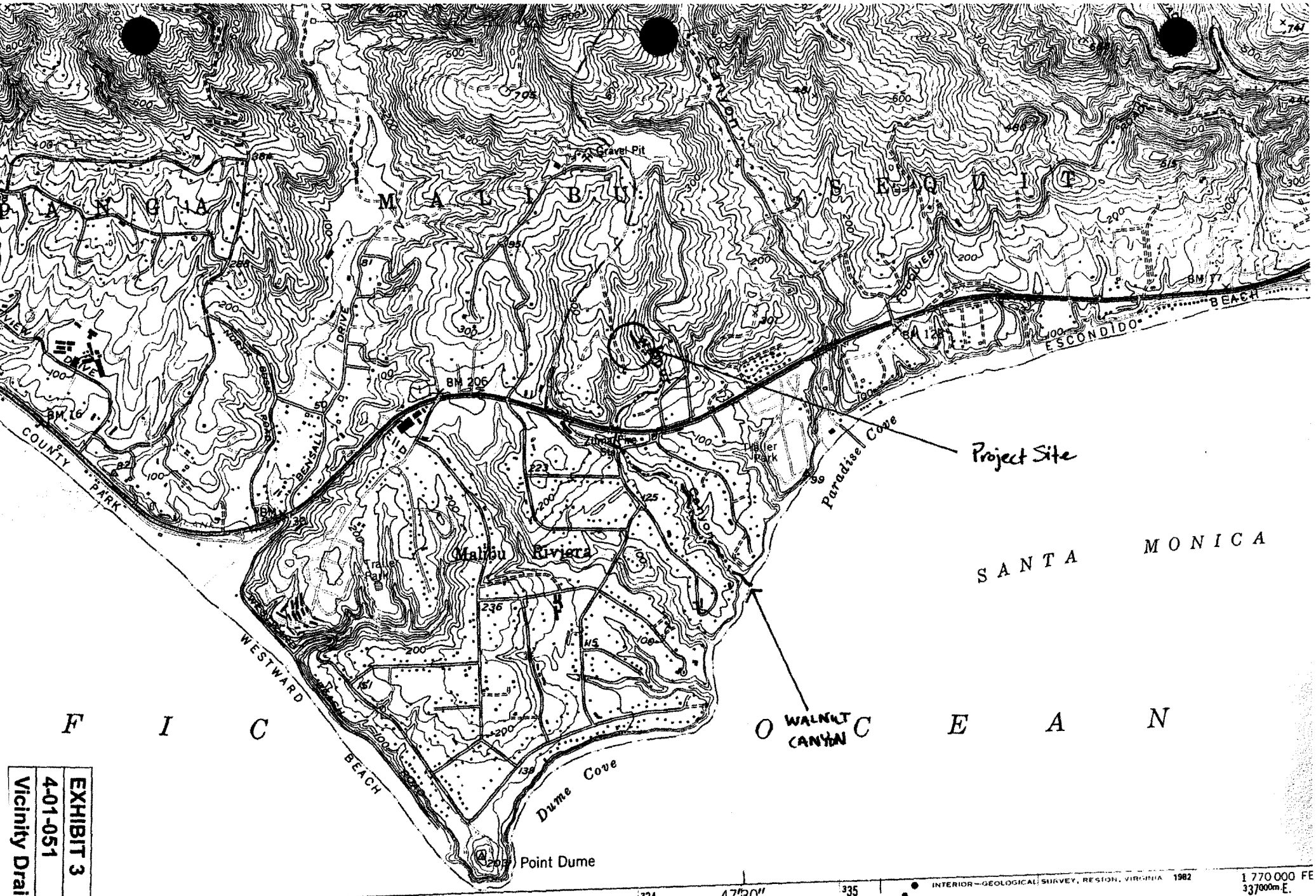


EXHIBIT 3
4-01-051
Vicinity Drainage

ASSESSMENT FOR FUEL MODIFICATION PLAN #850

Zone A - Setback Zone

- Minimum of 20 feet beyond the edge of combustible structure, attached accessory structures, or appendages and projections
- Most vegetation in this zone is limited to ground covers, green lawns, and limited number of selected ornamental species
- Irrigation by automatic or manual systems to maintain healthy vegetation with high moisture content
- Plants in this zone shall be highly fire resistant and selected from the approved plant list for the setback zone and given geographical area (see Appendix II), unless otherwise approved.
- Target trees, including Eucalyptus, Juniper, Cypress and Pine, are not allowed within ten feet of combustible structures. Other tree species may be allowed pursuant to the Fire Code regarding clearance of brush and vegetative growth, but are not recommended
- Except for dwarf varieties or mature trees small in stature, trees are generally not recommended within Zone A for reasons which go beyond fire issues and are therefore not included in the planting guide

Zone B - Irrigated Zone

- Extends from the outermost edge of Zone A to 50' or to property line, whichever is closer.
- Irrigation by automatic or manual systems to maintain healthy vegetation with high moisture content
- Any plants selected for planting in this zone will be chosen from the approved plant list for the setback or irrigated zone and given geographical area (see Appendix II), unless otherwise approved

Zone C - Thinning Zone

- Extends from outermost edge of Zone B to 200' or to property line, whichever is closer
- Predominantly existing vegetation with removal of the majority of undesirable plant species including chamise, red shank, California sage brush, common buckwheat and sage (Appendix I)
- Reduce fuel loading by reducing the fuel in each remaining shrub or tree without substantial decreasing in the canopy cover or removal of soil holding root systems
- Some replacement planting with ornamental or less flammable native species to meet minimum slope coverage requirements of city or county public works, landscape or hillside ordinances
- Natural vegetation is thinned by reduced amounts as the zone moves away from the development.
- Removal of all dead vegetation, all fine fuels reduced to 3 inches in height
- Any plants selected for planting in this zone will be chose from the plant list for the setback, irrigated, or thinning zone and given geographical area (see Appendix II)

Maintenance

1. Requires annual removal and/or thinning of undesirable combustible vegetation, replacement of dead dying fire resistant plantings, maintenance of the operational integrity programming of the irrigation system
2. Pruning of foliage to reduce fuel load, vertical continuity, and removal of plant litter and dead wood
3. Regular trimming to prevent ladder fuels. Prune lower branches of trees and tree-form shrubs up to 1/3 of their height (up to a maximum of 6' above the ground).
4. Debris and trimmings produced by thinning and pruning shall be removed from the site or chipped and evenly dispersed in the same area to a maximum depth of 6 inches
5. Recommended minimum spacing is 20-30 feet between for trees and 15 feet or three times the diameter of the individual crowns for large shrubs
6. Ground covers shall be maintained at a height not to exceed 18 inches
7. All grasses shall be maintained at a height no to exceed 3 inches.
8. Compliance with the Fire Code is a year round responsibility. Enforcement will occur following inspection by the Fire Department annually or as needed. Annual inspections are generally conducted following natural drying of fine fuels. This occurs between the months of April and June.
9. All future plantings shall be in accordance with the County of Los Angeles Fire Department Fuel Modification Guidelines

Fire Access Road

- Clear and remove flammable growth for a minimum of 10 feet on each side of access road (F.C. 1117.10)
- Fire access roads, driveways and turnarounds shall be maintained in accordance with the Fire Code. Fire access roads shall have unobstructed vertical clearance to the sky. (F.C. 902.2.2.1)
- Within the 10 foot clearance zone it is recommended that proposed surface be appropriately spaced and maintained at a height not to exceed 18 inches
- Proposed trees should be planted outside the 10-foot clearance zone.

Long Term Maintenance Agreement

The homeowner(s) agree to be responsible for the long-term maintenance of the fuel modification plan, as described herein

________________ Homeowner(s) ________ Date

________________ Homeowner(s) ________ Date

Provide a minimum, unobstructed 20' width clear to the sky, vehicular access to within 150' of all portions of the exterior walls

All weather vehicular access shall be provided and maintained serviceable prior to construction. Fire Code 901.3

The required fire flow for PUBLIC hydrants at this location is 1250 gallons per minute at 20 PSI for a duration of 2 hours, over and above the maximum daily domestic demand. Fire Code 903.2

All roof coverings shall be Class "A" as specified in Title 24, 1504.1. Wood shingle and wood shake roofs are prohibited regardless of classification under UBC Standard 15-2. Building Code 6403.2

Tile roofs shall be fire-stopped at eave ends to preclude entry of flame or embers under the tile. Building Code 6403.2

Walls forming the enclosure of a building shall be of one-hour fire-resistive construction on the exterior side as approved by the Building Official. Building Code 6403.3

Exterior windows, curtain and window walls, skylights, and exterior doors shall utilize multi-glazed panels. Building Code 6403.4

Openings into attics, floors, or other enclosed areas shall not exceed 144 square inches each. Such openings shall be covered with corrosion-resistant wire mesh with mesh openings of 1/4 inch. Building Code 6403.5

Provide spark arrestors in chimneys used with fireplaces or heating appliances in which solid or liquid fuel is used with openings not to exceed ½ inch. Fire Code 1118.12, Building Code 3102.3.9

Under-floor areas shall be enclosed to the ground with construction as required for exterior walls. Building Code 6403.6

Accessory structures such as carports, decks, or patio covers which are attached to or within 20 [illegible] ture, and of wood construction, shall utilize lumber not less [illegible] depth. Building Code 6403.9

[illegible] be submitted and approved by the forestry Division prior to [illegible] entation of the approved/final fuel modification plan and [illegible] to final approval for occupancy. Submit three copies of the [illegible] the Fuel Modification Unit, Fire Station #32, 605 N. Angeleno [illegible] -969-5205. Fire Code 1117.2.1

[illegible] growth shall be maintained per Fire Code 1117.2.2

[illegible] garding fire warning systems. Smoke detectors shall be hard [illegible] s locations on floor plan.)

[illegible] pancy separation between the R-3 dwelling and the U-1 garage

[illegible] e inside without use of a key or any special knowledge or

[illegible] ways shall comply with Title 24. (Indicate on door

[illegible] vided on front of all buildings and shall be visible and legible [illegible] Numbers shall contrast with their background. Fire Code

[illegible] ent access shall be capable of supporting the weight of a 25 ton vehicle

[illegible] icular access shall be level, unobstructed by landscaping, min. 5'-0" in width [illegible] and rescue uses. Indicate access on site plan.

[illegible] ding fire warning systems. Smoke detectors shall be hardwired with battery [illegible] ote and indicate on the floor plans.

EXHIBIT 4

4-01-051

Site Plan

PROJECT CONSULTANTS

PROJECT ARCHITECT:

KEN STOCKTON ARCHITECT
26500 WEST AGOURA RD. #644
CALABASAS, CA. 91302
(818) 880-5249 FAX (818) 880-1951

STRUCTURAL ENGINEER:

PETERSON AND ASSOC. ENGINEERING
7122 1/2 TOPANGA CANYON BLVD. #8
CANOGA PARK, CA. 91303
(818) 883-7563 FAX (818) 883-7565

ENGINEER CONSULTANT:

ENERGY ETC.
25705 YUCCA VALLEY RD.
SANTA CLARITA, CA. 91355
(800) 690-2090

SOIL AND GEOLOGICAL ENGINEERS:

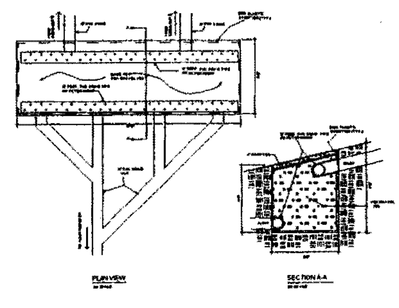
GEOSYSTEMS
312 WESTERN AVE.
GLENDALE, CA. 91201
(818) 500-9533 FAX (818) 500-0134

CIVIL ENGINEER:

WESLEY K. OLSON AND ASSOC.
18760 STAGG ST. #218
VAN NUYS, CA. 91406
(818) 901-0251 FAX (818) 901-1569

PROJECT DESCRIPTION:
SINGLE FAMILY RESIDENCE, TYPE V - NON RATED
R-3 OCCUPANCY, 3,529 SQ. FT. TOTAL FLOOR AREA
WITH ATTACHED GARAGE, U-1 OCCUPANCY, 524 SQ. FT.
NO SPRINKLERS REQUIRED FOR STRUCTURES

DESIGNED IN COMPLIANCE WITH 1999 U.B.C., 1999 C.B.C.
1999 U.M.C., U.P.C., AND N.E.C.



STORM WATER FILTRATION DEVICE

LEGAL DESCRIPTION
APN #4467-031-007
LOT 1 TRACT 40860
CITY OF MALIBU

GRADING NOTE
REFER TO CIVIL ENGINEER'S DRAWINGS FOR ALL EXISTING AND FINISH GRADE ELEV's

NOTES
NO TREES TO BE REMOVED
NO OAK TREES ON THE SITE
NO WETLANDS
NO PUBLIC HIKING OR EQUESTRIAN TRAILS
EASEMENTS ARE FOR STREET AND UTILITIES ONLY
EXISTING HILLSIDE DRAINAGE TO REMAIN

LOT COVERAGE CALCULATION

GROSS LOT AREA	=	43,596	SQ. FT
EASEMENTS (STREETS)	=	3,240	SQ. FT
ADJUSTED LOT AREA	=	40,318	SQ. FT
LOWER LEVEL AND GARAGE	=	2815	SQ. FT

40,318/2815 = 14% LOT COVERAGE
(30% LOT COVERAGE ALLOWED)

GRADED FLAT PAD AREA	=	3875	SQ. FT

SQ. FTG. TABULATION

UPPER LEVEL	=	1569	SQ. FT
LOWER LEVEL	=	1960	SQ. FT
GARAGE	=	524	SQ. FT
TOTAL	=	4043	SQ. FT.

2484 x 67% = 1660 SQ. FT. ALLOWED FOR
UPPER LEVEL (1569 SQ. FT. PROPOSED)

TOTAL LIVING SPACE	=	3529	SQ. FT
TOTAL NON-HABITABLE AREA	=	590	SQ. FT.
TOTAL HABITABLE LIVING AREA	=	2939	SQ. FT

IMPERMEABLE SURFACE TABULATION

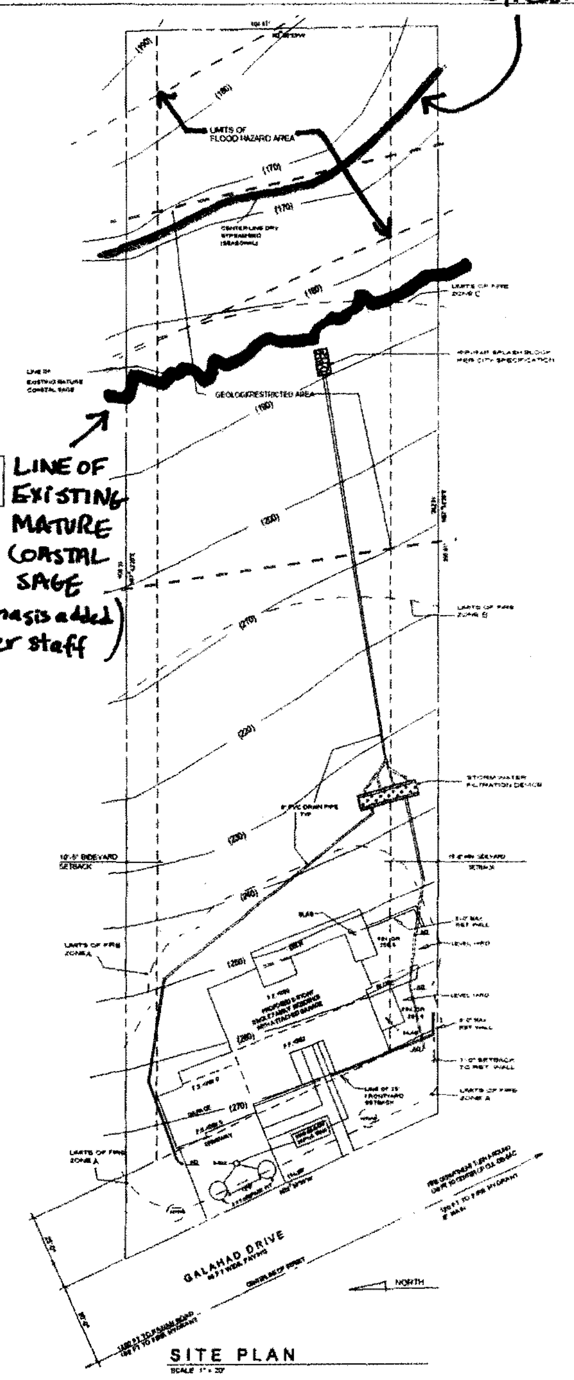
HOUSE FOOTPRINT	= 1960	
GARAGE FOOTPRINT	= 524	SQ. FT
COURTYARD	= 144	SQ. FT
DRIVEWAY PAVING	= 1036	SQ. FT
WALKWAYS AND PATIOS	= 520	SQ. FT.

ALL DECKS AND PATIO'S ARE UNCOVERED

TOTAL AREA OF COVERAGE	= 4184	SQ. FT.

SHEET INDEX:

SHEET No.	DRAWING	SHEET No.	DRAWING
A-1	SITE PLAN / NOTES	S1	STRUCTURAL NOTES / SPECS
SC1	SCHEDULES / NOTES/ TITLE 24	S2	FOUNDATION PLAN
A-2	LOWER LEVEL FLOOR PLAN	S3	LOWER LEVEL FRAMING PLAN
A-3	UPPER LEVEL FLOOR PLAN	S4	UPPER LEVEL FRAMING PLAN
A-4	ROOF PLAN	S5	ROOF FRAMING PLAN
A-5	EXTERIOR ELEVATIONS	D1	STRUCTURAL DETAILS
A-6	EXTERIOR ELEVATIONS	D2	STRUCTURAL DETAILS
A-7	BUILDING SECTIONS	D3	STRUCTURAL DETAILS
		L1	LANDSCAPING PLAN
		L2	IRRIGATION PLAN



SITE PLAN
SCALE 1" = 20'

PROJECT NAME
GALAHAD ESTATES
NEW SINGLE FAMILY RESIDENCE
6164 GALAHAD DRIVE MALIBU, CALIFORNIA

SITE PLAN/ROOF PLAN/NOTES

KEN STOCKTON
ARCHITECT
26500 W. AGOURA RD. #644 CALABASAS, CA 91302
(818) 880-5249 FAX (818) 880-1951

SHEET #
A-1

KEN STOCKTON
ARCHITECT

SHEET NO. A-2

NEW SINGLE FAMILY RESIDENCE
GALAHAD ESTATES

6164 GALAHAD DRIVE MALIBU, CALIFORNIA

PROPOSED LOWER LEVEL FLOOR PLAN

EXHIBIT 5
4-01-051
Lower Level Floor Plan

KEN STOCKTON
ARCHITECT

SHEET NO. A-3

GALAHAD ESTATES
NEW SINGLE FAMILY RESIDENCE
6164 GALAHAD DRIVE MALIBU, CALIFORNIA

PROPOSED UPPER LEVEL FLOOR PLAN

EXHIBIT 6
4-01-051
Upper Level Floor Plan

KEN STOCKTON
ARCHITECT

EXTERIOR ELEVATIONS LOT 7

GALAHAD ESTATES
NEW SINGLE FAMILY RESIDENCE
6164 GALAHAD DRIVE MALIBU, CALIFORNIA

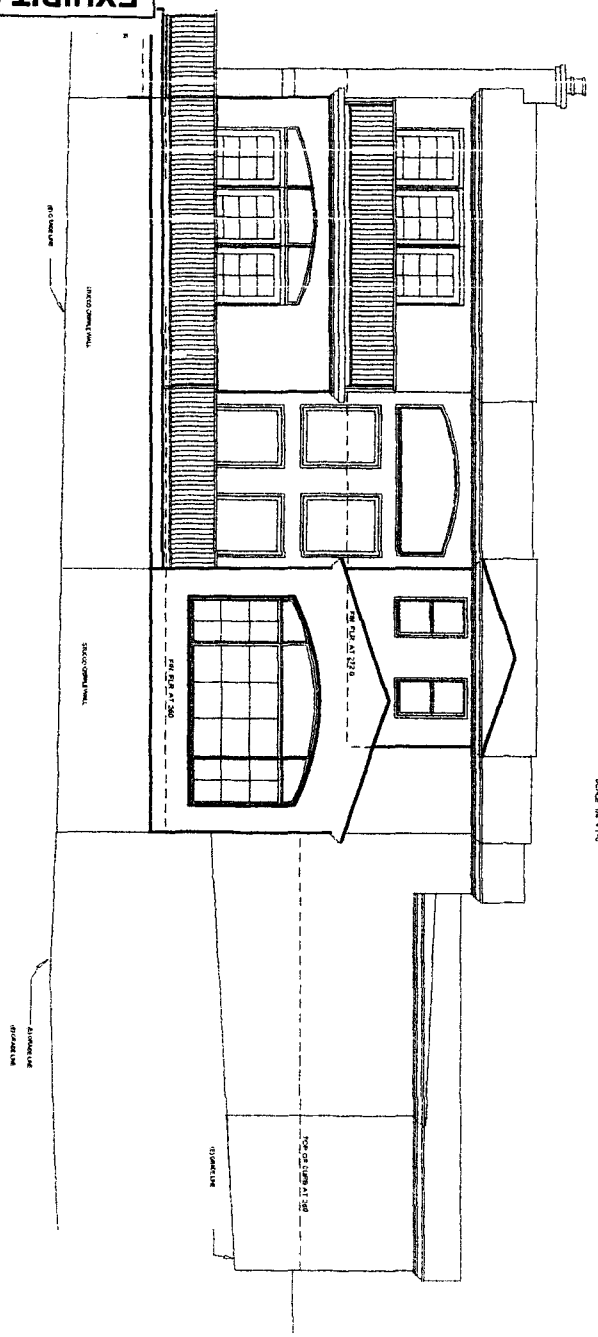
A-4

LEFT SIDE (NORTH) ELEVATION

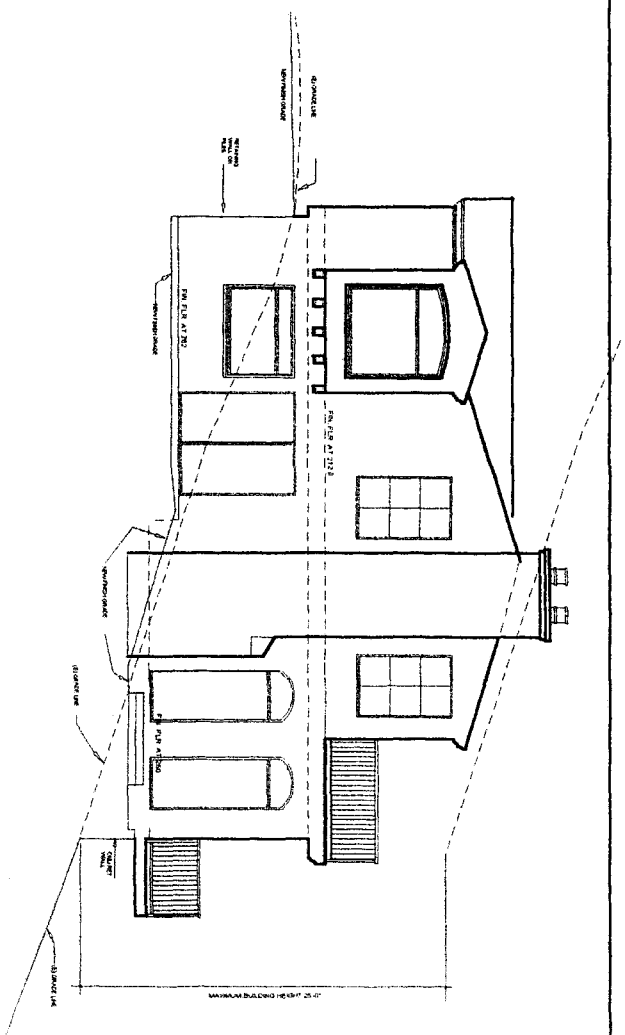
FRONT (WEST) ELEVATION

EXHIBIT 7
4-01-051
Elevations

EXHIBIT 8
4-01-051
Elevations



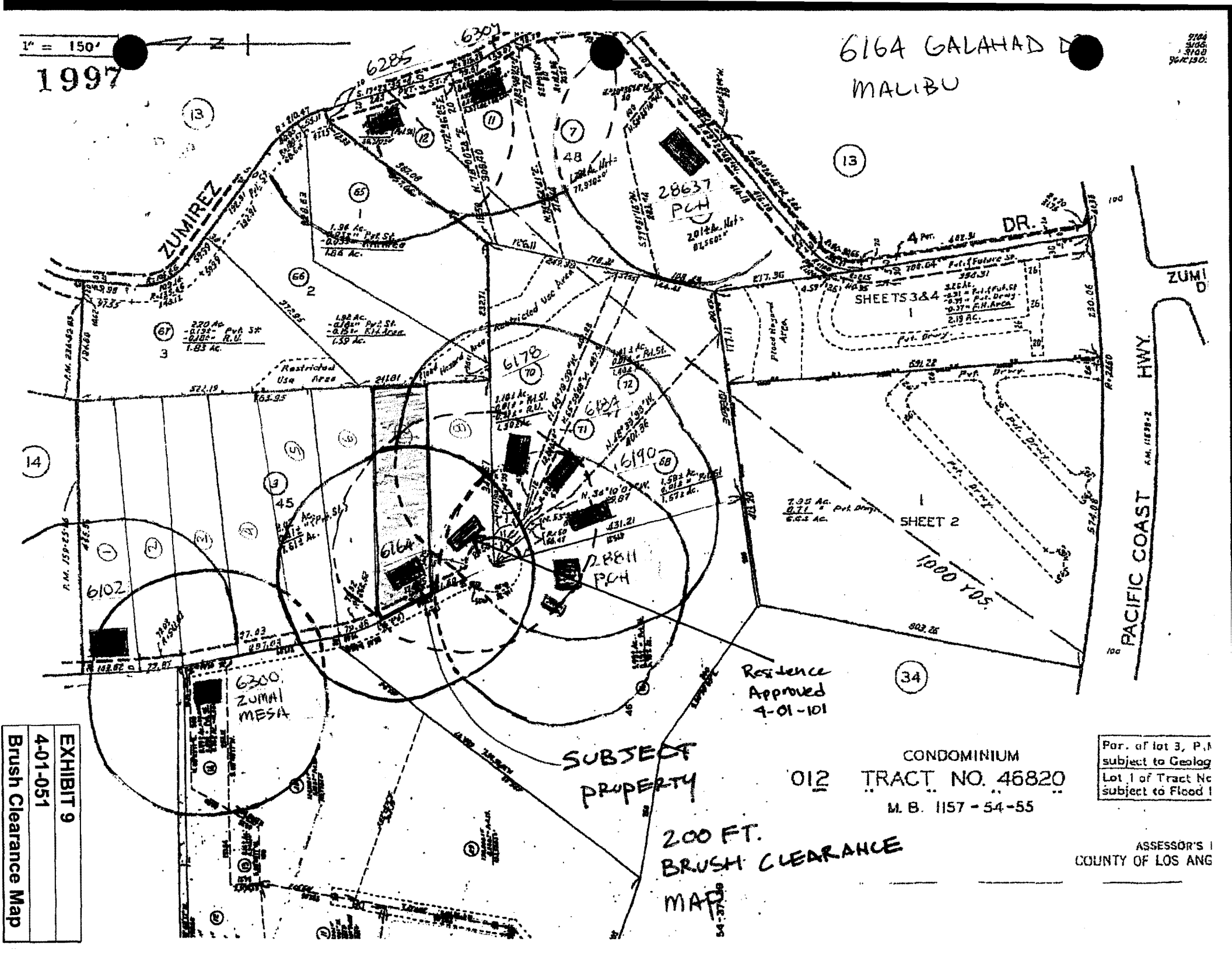
REAR (EAST) ELEVATION
SCALE 1/4" = 1'-0"



RIGHT SIDE (SOUTH) ELEVATION
SCALE 1/4" = 1'-0"

A-5	KEN STOCKTON ARCHITECT	EXTERIOR ELEVATIONS LOT 7
SHEET NO.		

PROJECT NAME
GALAHAD ESTATES
LOT 7
NEW SINGLE FAMILY RESIDENCE
6164 GALAHAD DRIVE MALIBU, CALIFORNIA


1" = 150'
1997
6164 GALAHAD DR.
MALIBU
ZUMIREZ
ZUMI DR.
PACIFIC COAST HWY.
SHEETS 3&4
SHEET 2
1000 YDS.
6178
6164
6190
6102
6300 ZUMA MESA
28637 PCH
28811 PCH
Restricted Use Area
Flood Hazard Area
Residence Approved 4-01-101
SUBJECT PROPERTY
200 FT. BRUSH CLEARANCE
MAP
CONDOMINIUM
012 TRACT NO. 46820
M.B. 1157 - 54 - 55
ASSESSOR'S
COUNTY OF LOS ANG
Por. of lot 3, P.M
subject to Geolog
Lot 1 of Tract No
subject to Flood
EXHIBIT 9
4-01-051
Brush Clearance Map