

CALIFORNIA COASTAL COMMISSION

SOUTH CENTRAL COAST AREA
89 SOUTH CALIFORNIA ST., SUITE 200
VENTURA, CA 93001
(805) 585-1800

Filed: 2/28/03
49th Day: 4/18/03
180th Day: 8/27/03
Staff: LKF-V
Staff Report: 7/23/03
Hearing Date: 8/06/03
Commission Action:

**RECORD PACKET COPY****STAFF REPORT: REGULAR CALENDAR**

APPLICATION NO.: 4-03-017

APPLICANT: John and Ann Matise

AGENT: Schmitz & Associates

PROJECT LOCATION: 24738 W. Saddlepeak Road, Malibu, Los Angeles County

PROJECT DESCRIPTION: Construction of a two story, 29.5 foot high, 5,379 sq. ft. single family residence, with two detached 704 sq. ft. garages, driveway, turnaround, 750 sq. ft. guest house, swimming pool, patio, stairs, retaining walls, septic system, and approximately 3,400 cu. yds. of grading (3,200 cu. yds. cut, 200 cu. yds. fill).

| | |
|---------------------------|-----------------|
| Lot area: | 6.92 acres |
| Building coverage: | 5,438 sq. ft. |
| Pavement coverage: | 2,360 sq. ft. |
| Unimproved area: | 286,966 sq. ft. |
| Maximum height: | 29.5 ft. |

LOCAL APPROVALS RECEIVED: County of Los Angeles Regional Planning, Approval In Concept, dated December 17, 2001; County of Los Angeles Geology and Geotechnical Engineering Review Sheet, Approval In-Concept dated November 27, 2000; County of Los Angeles Environmental Health, Conceptual Approval, dated September 28, 2001; County of Los Angeles Fire Department (Access), Approval in Concept, dated August 6, 2001; County of Los Angeles Fire Department, Preliminary Fuel Modification Plan, Approval in Concept, dated September 20, 2001.

SUBSTANTIVE FILE DOCUMENTS: Update Geotechnical Engineering Letter, Proposed Residential Development, A.P.N. 4453-002-045, 24738 W. Saddle Peak Road, Malibu, County of Los Angeles, California, by West Coast Geotechnical, dated June 5, 2003; Engineering Geologic Update Letter, Proposed Residential Development, A.P.N. 4453-002-045, 24738 W. Saddle Peak Road, County of Los Angeles, California, by Mountain Geology, Inc., dated June 2, 2003; Engineering Geologic Update Letter, Proposed Residential Development, A.P.N. 4453-002-045, 24738 W. Saddle Peak Road, County of Los Angeles, California, by Mountain Geology, Inc., dated September 17, 2001; Update Geotechnical Engineering Report, Proposed Residential Development, 24738 W. Saddle Peak Road, A.P.N. 4453-002-045, Malibu, County of Los Angeles, California, by West Coast Geotechnical, dated October 1, 2001.

SUMMARY OF STAFF RECOMMENDATION

Staff recommends **approval** of the proposed project with **thirteen (13) special conditions** regarding conformance with geologic recommendations, landscaping and erosion control plans, drainage and polluted runoff control plan, wildfire waiver of liability, removal of natural vegetation, removal of excess graded material, lighting restrictions, structural appearance, future development restriction, evidence of legal right to construct driveway, deed restriction, revised plans, and habitat impact mitigation .

I. STAFF RECOMMENDATION

MOTION: *I move that the Commission approve Coastal Development Permit No. 4-03-017 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 permittees 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 permittees to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. Plans Conforming to Geologic Recommendations

All recommendations contained in the reports prepared by Mountain Geology, Inc. and West Coast Geotechnical (Update Geotechnical Engineering Letter, Proposed Residential Development, A.P.N. 4453-002-045, 24738 W. Saddle Peak Road, Malibu, County of Los Angeles, California, by West Coast Geotechnical, dated June 5, 2003; Engineering Geologic Update Letter, Proposed Residential Development, A.P.N. 4453-002-045, 24738 W. Saddle Peak Road, County of Los Angeles, California, by Mountain Geology, Inc., dated June 2, 2003; Engineering Geologic Update Letter, Proposed Residential Development, A.P.N. 4453-002-045, 24738 W. Saddle Peak Road, County of Los Angeles, California, by Mountain Geology, Inc., dated September 17, 2001; and Update Geotechnical Engineering Report, Proposed Residential Development, 24738 W. Saddle Peak Road, A.P.N. 4453-002-045, Malibu, County of Los Angeles, California, by West Coast Geotechnical, dated October 1, 2001) shall be incorporated into all final design and construction including foundations, grading, setbacks, compaction, settlement, lateral design, site preparation, temporary excavations, slabs on grade, retaining walls, backfilling, expansive soils, site observation, plan review, sewage disposal, swimming pool, and drainage. Final plans must be reviewed and approved by the project's consulting geotechnical engineer. Prior to the issuance of the Coastal Development Permit, the applicants shall submit, for review and approval by the Executive Director, evidence of the consultant's review and approval of all project plans.

The final plans approved by the consultant shall be in substantial conformance with the plans approved by the Commission relative to construction, grading, sewage disposal, and drainage. Any substantial changes in the proposed development approved by the Commission that may be required by the consultant shall require an amendment to the permit or a new Coastal Development Permit.

2. Landscaping and Erosion Control Plans

Prior to issuance of the Coastal Development Permit, the applicants shall submit landscaping, erosion control, and fuel modification plans prepared by a licensed landscape architect or qualified resource specialist for review and approval by the Executive Director. The landscaping and erosion control plans shall be reviewed and approved by the consulting geologist to ensure

that the plans are in conformance with the consultant's recommendations. The plans 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 sixty (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, compatible with the surrounding habitat, 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 that tend to supplant native species shall not be used.
- 2) All cut and fill slopes shall be stabilized with planting at the completion of final grading. Planting 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 ninety (90) percent coverage within two (2) years, and this requirement shall apply to all disturbed soils.
- 4) 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.
- 5) The Permittees 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.
- 6) Vegetation removal 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. The final fuel modification plan shall minimize the removal of native vegetation while providing for fire safety. Irrigated lawn, turf, and ground cover planted within Zone A shall be selected from the most drought tolerant species or subspecies, or varieties suited to the Mediterranean climate of the Santa Monica Mountains. Prior to issuance of the Coastal Development Permit, the applicants shall submit evidence that the final fuel modification plan has been reviewed and approved by the Forestry Department of Los Angeles County.
- 7) Fencing on the property shall extend no further than the area identified as zone B (irrigated zone) on the final fuel modification plan. The fencing type and location shall be illustrated on the landscape plan. Fencing shall also be subject to the color requirements outlined in Special Condition Eight (8) below.

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 excavation or grading take place during the rainy season (November 1 – March 31), the applicants shall install or construct temporary sediment basins (including debris basins, desilting basins, or silt traps), temporary drains and swales, sand bag barriers, silt fencing, and shall 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 control measures shall be required on the project site prior to or concurrent with the initial grading operations and maintained throughout 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 of the coastal zone or within the coastal zone to a site 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 thirty (30) days, including but not limited to: stabilization of all stockpiled fill, access roads, disturbed soils, and cut and fill slopes with geotextiles, mats, sand bag barriers, and/or silt fencing; and temporary drains, 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 applicants 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 applicants (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 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.

3. Drainage and Polluted Runoff Control Plan

Prior to issuance of the Coastal Development Permit, the applicants shall submit, for the review and approval of the Executive Director, 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 engineering geologist to ensure the plan is in conformance with engineering geologist's recommendations. In addition to the above specifications, the plan shall be in substantial conformance with the following requirements:

- (a) Selected BMPs (or suites of BMPs) shall be designed to treat, infiltrate, 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, one (1) hour runoff event, with an appropriate safety factor, for flow-based BMPs.
- (b) Runoff shall be conveyed off site in a non-erosive manner.
- (c) Energy dissipating measures shall be installed at the terminus of outflow drains.
- (d) 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 applicants, landowner, or successor-in-interest shall be responsible for any necessary repairs to the drainage, filtration system, and BMPs and restoration of any eroded area. Should repairs or restoration become necessary, prior to the commencement of such repair or restoration work, the applicants 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.

4. Wildfire Waiver of Liability

Prior to the issuance of a 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, and expenses of liability arising out of the acquisition, design, construction, operation, 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.

5. 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. Removal of natural vegetation for the purpose of landslide repair shall not occur until commencement of that project.

6. Removal of Excess Graded Material

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

7. Lighting Restrictions

A. The only outdoor night lighting allowed on the subject parcel is limited to the following:

1. The minimum necessary to light walkways used for entry and exit to the structures, including parking areas on the site. This lighting shall be limited to fixtures that do not exceed two feet in height above finished grade, are directed downward and generate the same or less lumens equivalent to those generated by a 60 watt incandescent bulb, unless a greater number of lumens is authorized by the Executive Director.
2. Security lighting attached to the residence and garage shall be controlled by motion detectors and is limited to same or less lumens equivalent to those generated by a 60 watt incandescent bulb.
3. The minimum necessary to light the entry area to the driveway with the same or less lumens equivalent to those generated by a 60-watt incandescent bulb.

B. No lighting around the perimeter of the site and no lighting for aesthetic purposes is allowed.

8. Structural Appearance

Prior to the issuance of the coastal development permit, the applicant shall submit for the review and approval of the Executive Director, a color palette and material specifications for the outer surface of all structures authorized by the approval of coastal development permit 4-03-017. The palette samples shall be presented in a format not to exceed 8½" X 11" X ½" in size. The palette shall include the colors proposed for the roof, trim, exterior surfaces, driveways, retaining walls, or other structures authorized by this permit. Acceptable colors shall be limited to colors compatible with the surrounding environment (earth tones) including shades of green, brown and gray with no white or light shades and no bright tones. All windows shall be comprised of non-glare glass.

The approved structures shall be colored with only the colors and window materials authorized pursuant to this special condition. Alternative colors or materials for future repainting or resurfacing or new windows may only be applied to the structures authorized by coastal development permit 4-03-017 if such changes are specifically authorized by the Executive Director as complying with this special condition.

9. Future Development Restriction

This permit is only for the development described in coastal development permit 4-03-017. Pursuant to Title 14 California Code of Regulations section 13250(b)(6), the exemptions otherwise provided in Public Resources Code section 30610(a) shall not apply to the development governed by coastal development permit 4-03-017. Accordingly, any future improvements to the single family residence authorized by this permit, shall require an amendment to Permit 4-03-017 from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.

10. Evidence of Legal Right to Construct Driveway

Prior to issuance of Permit No. 4-03-017, the applicant shall provide the Executive Director with a copy of a recorded easement or final judicial decision documenting that the owner of the site has the legal right to construct the proposed driveway across Assessor's Parcel No. 4453-002-037, in the location shown on **Exhibit 4**. Should the applicant fail to obtain a legal right to construct the driveway in the location authorized by this permit, construction of the driveway in an alternative location shall require an amendment to the permit or a new Coastal Development Permit.

11. Deed Restriction

Prior to the issuance of the coastal development permit, the applicant shall submit to the Executive Director for review and approval documentation demonstrating that the applicant has executed and recorded a deed restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property (hereinafter referred to as the "Standard and Special Conditions"); and (2) imposing all Standard and Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The deed restriction shall include a legal description of the applicant's entire parcel or parcels. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

12. Revised Plans

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit, for the review and approval of the Executive Director, revised project plans that eliminate all proposed development located below elevation 2316, as shown on the proposed grading plan, including the proposed guest house, swimming pool, patio, stairs, and associated retaining walls.

13. Habitat Impact Mitigation

Prior to the issuance of the coastal development permit, the applicant shall submit for the review and approval of the Executive Director, a map delineating all areas of chaparral habitat that are "environmentally sensitive habitat area" (ESHA), that will be disturbed by the proposed development, including by fuel modification and brush clearance requirements on the project site and adjacent property. The chaparral ESHA areas on the site and adjacent property shall be delineated on a detailed map, to scale, illustrating the subject parcel boundaries and adjacent parcel boundaries if the fuel modification/brush clearance zones extend onto adjacent property. The delineation map shall indicate the total acreage for all chaparral ESHA both on and offsite, that will be impacted by the proposed development, including the fuel modification/brush clearance areas. The delineation shall be prepared by a qualified resource specialist or biologist familiar with the ecology of the Santa Monica Mountains.

Mitigation shall be provided for impacts to the chaparral ESHA from the proposed development and fuel modification requirements by one of the three following habitat mitigation methods:

A. Habitat Restoration

1) Habitat Restoration Plan

Prior to the issuance of the coastal development permit, the applicant shall submit a habitat restoration plan, for the review and approval of the Executive Director, for an area of degraded chaparral habitat equivalent to the area of chaparral ESHA impacted by the proposed development and fuel modification area. The habitat restoration area may either be onsite or offsite within the coastal zone in the City of Malibu or in the Santa Monica Mountains. The habitat restoration area shall be delineated on a detailed site plan, to scale, that illustrates the parcel boundaries and topographic contours of the site. The habitat restoration plan shall be prepared by a qualified resource specialist or biologist familiar with the ecology of the Santa Monica Mountains, and shall be designed to restore the area in question for habitat function, species diversity and vegetation cover. The restoration plan shall include a statement of goals and performance standards, revegetation and restoration methodology, and maintenance and monitoring provisions. If the restoration site is offsite the applicant shall submit written evidence to the Executive Director that the property owner agrees to the restoration work, maintenance and monitoring required by this condition and agrees not to disturb any native vegetation in the restoration area.

The applicant shall submit, on an annual basis for five years, a written report, for the review and approval of the Executive Director, prepared by a qualified resource specialist, evaluating compliance with the performance standards outlined in the restoration plan and describing the revegetation, maintenance and monitoring that was conducted during the prior year. The annual report shall include recommendations for mid-course corrective measures. At the end of the five-year period, a final detailed report shall be submitted for the review and approval of the Executive Director. If this report indicates that the restoration project has been in part, or in whole, unsuccessful, based on the approved goals and performance standards, the applicant shall submit a revised or supplemental restoration plan with maintenance and monitoring provisions, for the review and approval of the Executive Director, to compensate for those portions of the original restoration plan that were not successful. A report shall be submitted evaluating

whether the supplemental restoration plan has achieved compliance with the goals and performance standards for the restoration area. If the goals and performance standards are not met within 10 years, the applicant shall submit an amendment to the coastal development permit for an alternative mitigation program.

The habitat restoration plan shall be implemented prior to occupancy of the residence.

2) Open Space Deed Restriction

No development, as defined in section 30106 of the Coastal Act shall occur in the habitat restoration area, as shown on the habitat restoration site plan, required pursuant to (A)(1) above.

Prior to the issuance of the coastal development permit, the owner of the habitat restoration area shall execute and record a deed restriction in a form and content acceptable to the Executive Director, reflecting the above restriction on development and designating the habitat restoration area as open space. The deed restriction shall include a graphic depiction and narrative legal descriptions of both the parcel and the open space area/habitat restoration area. The deed restriction shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens that the Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without a Commission amendment to this coastal development permit.

3) Performance Bond

Prior to the issuance of the permit, the applicant shall post performance bonds to guarantee implementation of the restoration plan as follows: a) one equal to the value of the labor and materials; and b) one equal to the value of the maintenance and monitoring for a period of 5 years. Each performance bond shall be released upon satisfactory completion of items (a) and (b) above. If the applicant fails to either restore or maintain and monitor according to the approved plans, the Coastal Commission may collect the security and complete the work on the property.

B. Habitat Conservation

Prior to issuance of the coastal development permit, the applicant shall execute and record an open space deed restriction in a form and content acceptable to the Executive Director, over a parcel or parcels containing chaparral ESHA. The chaparral ESHA located on the mitigation parcel or parcels must be of equal or greater area than the ESHA area impacted by the proposed development, including the fuel modification/brush clearance areas. No development, as defined in section 30106 of the Coastal Act, shall occur on the mitigation parcel(s) and the parcel(s) shall be preserved as permanent open space. The deed restriction shall include a graphic depiction and narrative legal descriptions of the parcel or 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.

Prior to occupancy of the residence the applicant shall submit evidence, for the review and approval of the Executive Director, that the recorded documents have been reflected in the Los Angeles County Tax Assessor Records.

If the mitigation parcel is larger in size than the impacted habitat area, the excess acreage may be used to provide habitat impact mitigation for other development projects that impact like ESHA.

C. Habitat Impact Mitigation Fund

Prior to the issuance of the coastal development permit, the applicant shall submit evidence, for the review and approval of the Executive Director, that compensatory mitigation, in the form of an in-lieu fee, has been paid to the Santa Monica Mountains Conservancy to mitigate adverse impacts to chaparral habitat. The fee shall be based on the cost per acre to restore or create comparable habitat type, and the acreage of habitat affected. The fee shall be used for the acquisition or permanent preservation of chaparral habitat in the Santa Monica Mountains coastal zone.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. Project Description and Background

The applicant is proposing to construct a two story, 29.5 foot high, 5,379 sq. ft. single family residence, with two detached 704 sq. ft. garages, driveway, turnaround, 750 sq. ft. guest house, swimming pool, patio, stairs, retaining walls, septic system, and approximately 3,400 cu. yds. of grading (3,200 cu. yds. cut, 200 cu. yds. fill) in an unincorporated area of Los Angeles County (**Exhibits 3 - 14**).

The project site is located on the crest and southeastern slopes of a prominent ridgeline west of Carbon Canyon, at the end of West Saddlepeak Road (**Exhibits 1 and 18**). The project site is surrounded on three sides by undeveloped hillside. Several single family residences are located along the ridgeline to the north of the project site and on the slopes behind the ridge, northwest of the subject site (**Exhibits 16 - 18**).

The hillside lot slopes moderately near the crest then drops at near vertical gradients from the ridgeline to Piuma Road, a vertical distance of approximately 200 feet. The steep rocky slope contains a thin and discontinuous layer of soil supporting chaparral vegetation. Commission staff has identified the slopes on site (outside of the existing brush clearance area) as an environmentally sensitive habitat area (ESHA). The project site is visible from public viewing areas along Rambla Pacifico, Piuma Road, and the Saddle Peak Trail (which runs along Piuma Road) and is located within a scenic element identified in the Commission-certified 1986 Malibu-Santa Monica Mountains Land Use Plan (LUP). (**Exhibits 2 and 18**).

The proposed development extends from the crest of the ridge down the southeast slope. The proposed main residence will be constructed on a level grade achieved by cutting into the slope

below the crest and placing a narrow wedge of fill, up to six feet in height, on the lower portion of the slope. Similarly, the lower level of proposed development, including the proposed swimming pool and guest house, will be cut into the slope and supported by an additional wedge of fill, up to eight feet in height. The applicants propose to support the areas of fill with retaining walls of up to 8 feet high (**Exhibits 5, 6, and 12**).

Proposed structural development extends from elevation 2351.5 (top of the roof), approximately 15 feet above the ridgeline, to elevation 2304 (bottom of retaining wall surrounding pool). The proposed development consists of a driveway, two 704 sq. ft. three-car garages and a 100-foot wide turnaround at the crest, a two-story 29.5 ft. high main residence just below the crest, and a guest house and swimming pool area below the main residence. The southeast face of the proposed development is approximately 48 feet high (**Exhibit 10**). Fuel modification, as currently proposed, will extend up to 90 vertical feet further down the slope. While existing brush clearance radii to the north overlap with the brush clearance radius established by the proposed project, the new brush clearance radius will extend onto the vacant parcel immediately west of the subject site, resulting in additional clearance on steep slopes containing chaparral vegetation (**Exhibits 14 - 15**).

An earlier version of the proposed development was the subject of a previous coastal permit application [CDP Application No. 4-01-235 (Matisse)]. Staff reviewed the application and recommended denial of the proposed project as inconsistent with the requirements of Coastal Act Sections 30231, 30240, 30251, and 30253 for the minimization of erosion and landform alteration and the protection of ESHA and visual resources. The applicants subsequently submitted, on October 3, 2002, a revised proposal that eliminated the gazebo, reduced the height of the lower retaining wall (and therefore the development façade) by three feet, reduced the distance between the main residence and the pool by eight feet, and reduced the amount of grading to 2,860 cu. yds. (1,740 cu. yds. cut, 1,020 cu. yds. fill). The staff recommendation did not change upon review of the revised plans, because the revision failed to implement numerous modifications or to substantially reduce the scale of the development to minimize impacts to coastal resources. The applicants withdrew the application, without prejudice, at the October 8, 2002 Commission hearing on the proposal.

The current proposal, submitted on January 29, 2003, reduces the height of the proposed structural development envelope by up to nine feet, by cutting the main residence and the swimming pool area further into the slope, thus reducing the height of the fill slopes and retaining walls supporting the structures. In addition, the revised fuel modification plan contains a note that allows for reduction of Zone C, the thinning zone, based on geologic features (such as the sandstone outcrops that occur on the site) and on the nature and density of fuels. However, the design and square footage of the structures, and the overall footprint of development has not been reduced. In addition, the amount of grading currently proposed is 540 cu. yds. greater than the 2,860 cu. yds. included in the October 3, 2002 revision. The applicant has submitted comparative elevations and sections (attached as **Exhibits 10 - 13**) comparing this application with the proposal they originally submitted with CDP Application No. 4-01-235.

Staff met with the applicants on January 22, 2002, and on May 15, 2003 at the project site. At these meetings, staff raised concerns about the visual impacts of the project and the extent of fuel modification that would be required for the proposed development. Staff suggested that while the modifications to the project were positive, additional modifications, as outlined in the

staff report for CDP Application No. 4-01-235, were available to reduce the visual impacts of the project.

The proposed project includes construction of a driveway extending from the end of West Saddle Peak Road to the proposed turnaround for the residence. The driveway as proposed crosses a neighboring property, for a distance of approximately 60 feet, without benefit of a legal easement. The owners of the neighboring property, Bala and Mae Chandran, oppose construction of the driveway as proposed, noting that the proposed location is in close proximity (within 5 to 10 feet) to their residence. The Chandrans suggest that the applicants construct the driveway within their existing legal easement, which is located approximately 30 feet east and downslope from the proposed driveway location and which is much steeper. The applicants claim that they have a prescriptive right to use the proposed driveway route. The Commission cannot resolve, and does not take any position regarding, the respective claims of the property owners. Further findings on the matter are included in Section C (Visual Resources).

B. Visual Resources

Section 30251 of the Coastal Act states:

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

Section 30251 of the Coastal Act requires scenic and visual qualities to be considered and preserved. To assess potential visual impacts of projects to the public, the Commission typically investigates publicly accessible locations from which the proposed development is visible, such as beaches, parks, trails, and scenic highways. The Commission also examines the building site and the size of the proposed structure(s), and the compatibility of the proposed project with surrounding development.

In addition, the Malibu-Santa Monica Mountains LUP, which is used as guidance in Commission review of development, provides the following policies for new development in highly scenic areas and along scenic roadways:

(P130) New development shall:

- be sited and designed to protect views to and along the ocean and to and along other scenic features, as defined and identified in the Malibu LCP.
- minimize the alteration of natural landforms
- be designed so as not to significantly intrude into the skyline as seen from public viewing places

- (P131) Where feasible, prohibit placement of structures that will break the ridgeline view, as seen from public places.

The Malibu-Santa Monica Mountains LUP also provides the following guidelines for siting of structures in visual resource areas:

- (P134) Structures shall be sited to conform to the natural topography, as feasible. Massive grading and reconfiguration of the site shall be discouraged.
- (P135) Clustering of development in suitable areas shall be encouraged as a means to facilitate greater view protection

As noted above, the project site is located in a rural area characterized by expansive, naturally vegetated mountains and hillsides. In its immediate vicinity, the project site is surrounded on three sides by undeveloped hillside, and by single family residences located along the ridgeline to the north of the project site and behind the ridgeline to the northwest of the subject site.

The proposed development extends from the crest of the ridge down the southeast slope. Proposed structural development extends from elevation 2351.5 (top of the roof), approximately 15 feet above the ridgeline, to elevation 2304 (bottom of retaining wall surrounding pool). Fuel modification extends 120 to 200 feet further down slope. The proposed development consists of a driveway, two 704 sq. ft. three-car garages and a 100-foot wide turnaround at the crest, a two-story 29.5 ft. high main residence just below the crest, and a guest house and swimming pool area below the main residence. The southeast face of the proposed development is approximately 48 feet high. Fuel modification, as currently proposed, will extend up to 90 vertical feet further down the slope.

The proposed project includes 3,400 cu. yds. of grading (3,200 cu. yds. cut, 200 cu. yds. fill) to construct three level pad areas. The topmost pad involves a small amount of cut on the crest of the ridge for construction of the driveway and two detached garages. Below the driveway, the main residence will be constructed on a level grade achieved by cutting into the slope below the crest and placing a narrow wedge of fill, up to six feet in height, on the lower portion of the slope. Similarly, the lower level of proposed development, including the proposed swimming pool and guest house, will be cut into the slope and supported by an additional wedge of fill, up to eight feet in height. The applicants propose to support the areas of fill with retaining walls ranging from 0 to 8 feet high.

As proposed, the finished floor level of the main residence is at 2,322 ft. above sea level, approximately 15 feet below the crest of the ridge. The main residence, measuring 29.5 feet above finished grade, would extend approximately 15 feet above the crest of the ridge behind it. The remainder of the development, consisting of a maximum six foot high retaining wall for the main residence and the guesthouse/pool level supported by a maximum eight foot high retaining wall topped with a four foot high patio wall would extend approximately 18 vertical feet below the floor level of the main residence, thus creating an approximately 48 foot high development face as viewed from the southeast (**Exhibit 10**). The width of the development envelope is approximately 150 feet.

In summary, the proposed development results in the addition of a substantial development façade extending from approximately 33 feet below the ridgeline to 15 feet above it. The

proposed project design results in a southeast elevation that is the equivalent massing and height of a three story structure with a development face of 48 feet in height (measured from the top of the roof to the bottom of the lower retaining wall below the guesthouse and pool area. The large southeastern face of the development will adversely impact views of this ridgeline as seen from scenic viewpoints along Rambla Pacifico, Piuma Road, and the Saddle Peak Trail. In addition, the proposed development is not visually compatible with the surrounding residences that are a maximum two stories in height.

According to assessment data¹ for the area, the square footages of the two residences immediately north of the project site (24736 West Saddle Peak Road and 24740 West Saddle Peak Road) are 2,446 sq. ft. and 2,742 sq. ft. respectively. Other houses visible on the ridgeline include 24730 West Saddle Peak Road and 24734 West Saddle Peak Road. The largest of these, 24734 West Saddle Peak Road, was determined to be an exempt fire rebuild in 2000 [CDP Exemption Determination No. 4-00-012-X (Platler)]. This residence includes a 4,371 sq. ft. main residence and 806 sq. ft. attached garage, resulting in a total square footage of 5,177 sq. ft. The height of the residence, and of the façade visible from Rambla Pacifico, Piuma Road, and the Saddle Peak Trail, is 33 feet. Thus the façade of development is comparable to that of the 5,379 sq. ft. main residence (minus garages, guesthouse, and pool area) proposed by the applicants. The residence at 24730 West Saddle Peak Road, just north of the Platler residence, is 2,690 sq. ft. in size.

Thus the proposed residence, with a square footage of 7,537 sq. ft. (including garages and guesthouse) would be the largest on the ridge, and over twice the size of three of the four adjacent residences. Furthermore, the proposed 48 foot high development façade would be significantly greater than those of adjacent residences on the ridgeline, resulting in a development that is even more prominent than the already existing homes on the ridgeline, and that poses even greater impacts to views from public viewing areas along Rambla Pacifico, Piuma Road, and the Saddle Peak Trail (which runs along Piuma Road).

As noted above, the proposed project includes the construction of an approximately 2200 sq. ft. patio area with a swimming pool, nine to twelve foot high retaining wall/decorative wall, and a 750 sq. ft. guest house in front of and below the proposed main residence. This lower level of development extends structural development on the site downslope by approximately 12 vertical feet, or approximately 25% of the entire development façade. Furthermore, construction of these amenities is not necessary in order to allow for residential development to occur on the subject site. Therefore, in order to reduce the visual prominence of the proposed project, **Special Condition Twelve (12)** requires the applicants to submit revised plans that eliminate all structural development below elevation 2316, including the proposed guest house, swimming pools, stairs, patio, and retaining walls. Elimination of this lower level of development will result in a less visually intrusive development façade that is more consistent with those of adjacent residences.

Design restrictions can also reduce the visual impacts of the proposed project. The use of non-glare glass and colors compatible with the natural background, as well as the minimal use of outdoor night lighting, will help to ensure that the proposed project blends with its surroundings to the maximum extent feasible. Therefore, **Special Condition Eight (8)** restricts the use of colors to a natural background palette and requires the use of non-glare glass on site.

¹ Win2Data database, Los Angeles County, California, First American Real Estate Solutions (FARES), July 2003.

Furthermore, **Special Condition Seven (7)** restricts the use of outdoor night lighting to the minimum necessary for safety purposes.

The Commission notes that visual impacts can be further minimized by the implementation of a landscape plan that employs a native plant palette and vertical elements. The Commission also notes that visual impacts will be further mitigated by the implementation of erosion control measures, as in **Special Conditions Two (2), Three (3), Five (5), and Six (6)**. Implementation of the requirements of these conditions will ensure that the adverse visual effects of obtrusive non-native landscaping, denuded slopes, and uncontrolled erosion are avoided.

In order to ensure that future development of the site is reviewed for potentially adverse effects on coastal visual resources, the Commission finds it necessary to impose **Special Condition Nine (9)**, which requires the applicants to obtain a coastal development permit for any future development of the site, including improvements that might otherwise be exempt from coastal permit requirements. In addition, **Special Condition Eleven (11)** requires the applicant to record a deed restriction that imposes the terms and conditions of this permit as restrictions on use and enjoyment of the property and provides any prospective purchaser of the site with recorded notice that the restrictions are imposed on the subject property.

Lastly, the proposed project includes construction of a driveway extending from the end of West Saddle Peak Road to the proposed turnaround for the residence. The driveway as proposed crosses a neighboring property, for a distance of approximately 60 feet, without benefit of a legal easement. The owners of the neighboring property, Bala and Mae Chandran, oppose construction of the driveway as proposed, noting that the proposed location is in close proximity (within 5 to 10 feet) to their residence. The Chandrans suggest that the applicants construct the driveway within their existing legal easement, which is located approximately 30 feet east and downslope from the proposed driveway location. The applicants claim that they have a prescriptive right to use the proposed driveway route. The Commission cannot resolve, and does not take any position regarding, the respective claims of the property owners.

The proposed driveway is located on the crest of the ridge, on a gentler grade than found in the existing legal easement. Construction of the driveway within the legal easement would entail additional grading, and the construction of a large fill slope and/or large, highly visible retaining wall(s) to support its downslope side. Construction of the driveway in the existing legal easement would therefore increase the visual impacts of the project. Although construction of the driveway in the proposed location would reduce impacts to coastal resources, the Commission cannot permit development on the Chandrans' property without their permission. Therefore, **Special Condition Ten (10)** requires the applicants to provide a copy of a recorded easement or final judicial decision documenting their legal right to construct the driveway in the proposed location. If the applicants are unable to acquire the legal right to construct the driveway as proposed, they can apply for an amendment to this permit in order to construct the driveway within their existing legal easement. The Chandrans also assert that the legal easement only allows construction of a 15 foot wide driveway. The applicants propose a 20 foot wide driveway, to comply with current fire safety standards. Similarly, if the applicants are no able to obtain the right to construct the driveway to the proposed width, they will have to apply for an amendment to reduce the driveway width.

For all of the reasons set forth above, the Commission finds that the proposed project, as conditioned, is consistent with Section 30251 of the Coastal Act.

C. Hazards and Geologic Stability

Section 30253 of the Coastal Act 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, 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 applicant has submitted several geologic reports prepared by Mountain Geology, Inc. and West Coast Geotechnical (Update Geotechnical Engineering Letter, Proposed Residential Development, A.P.N. 4453-002-045, 24738 W. Saddle Peak Road, Malibu, County of Los Angeles, California, by West Coast Geotechnical, dated June 5, 2003; Engineering Geologic Update Letter, Proposed Residential Development, A.P.N. 4453-002-045, 24738 W. Saddle Peak Road, County of Los Angeles, California, by Mountain Geology, Inc., dated June 2, 2003; Engineering Geologic Update Letter, Proposed Residential Development, A.P.N. 4453-002-045, 24738 W. Saddle Peak Road, County of Los Angeles, California, by Mountain Geology, Inc., dated September 17, 2001; and Update Geotechnical Engineering Report, Proposed Residential Development, 24738 W. Saddle Peak Road, A.P.N. 4453-002-045, Malibu, County of Los Angeles, California, by West Coast Geotechnical, dated October 1, 2001.) The reports make numerous recommendations regarding foundations, grading, setbacks, retaining walls, settlement, sewage disposal, excavations, and drainage.

The West Coast Geotechnical report dated June 5, 2003 concludes:

It is the opinion of West Coast Geotechnical that the proposed development will be safe against hazard from landslide, settlement or slippage, and that the proposed development will not have an adverse affect on the stability of the subject site or immediate vicinity, provided our recommendations are made part of the development plans and are implemented during construction.

Therefore, based on the recommendations of the applicant's geologic consultants, the proposed development is consistent with the requirements of Section 30253 of the Coastal Act, so long as the geologic consultant's recommendations are incorporated into the final project plans and designs. Therefore, it is necessary to require the applicant to submit final project plans that have been certified in writing by the geologic consultant as conforming to all recommendations of the consultant, in accordance with **Special Condition One (1)**.

The Commission finds that, as conditioned by **Special Condition One (1)**, the proposed project is consistent with the geologic stability requirements of Coastal Act Section 30253.

Erosion

Section 30253 of the Coastal Act requires that new development neither create nor contribute significantly to erosion. The site of the proposed project contains slopes that descend, at gradients up to 1:1, approximately 200 vertical feet from the crest of a ridge to Piuma Road,

approximately 1000 feet west of Carbon Creek. The slopes consist of sandstone bedrock covered with a thin, discontinuous layer of soil and native chaparral vegetation. The September 26, 2000 report by Mountain Geology Inc. notes that the slopes on the site are subject to downhill creep and erosion. Incorporating adequate erosion control, drainage provisions and appropriate landscaping into the proposed development will serve to minimize erosion at the site.

As noted above, the applicant's proposal includes construction of a new single-family residence, two detached garages, guest house, swimming pool, stairs, patio, retaining walls, driveway, turnaround, and septic system. The site is considered a "hillside" development, as it involves steeply to moderately sloping terrain with soils that are susceptible to erosion.

In total, the project will result in additional impervious surface area on the site, increasing both the volume and velocity of storm water runoff. Unless surface water is controlled and conveyed off of the site in a non-erosive manner, this runoff will result in increased erosion on and off the site.

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.

In order to ensure that erosion and sedimentation from site runoff are minimized, the Commission requires the applicant to submit a drainage plan, as defined by **Special Condition Three (3)**. **Special Condition Three (3)** requires the implementation and maintenance of 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. Fully implemented, the drainage plan will reduce or eliminate the resultant adverse impacts to the water quality and biota of coastal streams. This drainage plan is fundamental to reducing on-site erosion and the potential impacts to coastal streams. Additionally, the applicant 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.

In addition, the Commission finds that temporary erosion control measures implemented during construction and excavation on the slope will also minimize erosion and enhance site stability. **Special Condition Two (2)** therefore requires the applicant to implement interim erosion control measures should grading take place during the rainy season. Such measures include stabilizing any stockpiled fill with geofabric covers or other erosion-controlling materials, installing geotextiles or mats on all cut and fill slopes, and closing and stabilizing open trenches to minimize potential erosion from wind and runoff water.

The Commission also finds that landscaping of disturbed areas on the subject site will reduce erosion and serve to enhance and maintain the geologic stability of the site, provided that minimal surface irrigation is required. Therefore, **Special Condition Two (2)** requires the applicant to submit landscaping plans, including irrigation plans, certified by the consulting geologists as in conformance with their recommendations for landscaping of the project site.

Special Condition Two (2) 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/foilage weight. The Commission finds that non-native and invasive plant species with high surface/foilage weight and shallow root structures do not serve to stabilize slopes and that the use of such vegetation results in potential adverse effects to the stability of the project site. Native species, alternatively, tend to have a deeper root structure than non-native, invasive species and therefore aid in preventing erosion.

In addition, the use of invasive, non-indigenous plant species tends to supplant species that are native to the Malibu/Santa Monica Mountains area. Increasing urbanization in this area has caused the loss or degradation of major portions of the native habitat and loss of native plant seed banks through grading and removal of topsoil. Moreover, invasive groundcovers and fast growing trees that originate from other continents that have been used as landscaping in this area have invaded and seriously degraded native plant communities adjacent to development. Such changes have resulted in the loss of native plant species and the soil retention benefits they offer. Therefore, in order to ensure site stability and erosion control, **Special Condition Two (2)** requires the disturbed and graded areas of the site to be landscaped with appropriate native plant species, and the removal of native vegetation to be minimized consistent with fire safety standards.

The applicants have submitted a fuel modification plan that establishes three zones on the slopes below the proposed residence. Zone A, the setback zone, extends 20 feet from the proposed residence, garages, and guest house, and Zone B, the irrigated zone, extends 80 feet further from these structures, or in the areas of the proposed garages, to the property line. Zone C, the thinning zone, extends up to 100 feet further down the slope, although the plan allows for reduction of the width of Zone C based on geologic features, such as the sandstone outcrops that occur on the slope, and on the nature and density of fuels.

The submitted fuel modification plan thus includes the clearing and thinning of native chaparral vegetation and the introduction of irrigation on the steep slopes of the project site. The proposed irrigated fuel modification zones extend 100 feet down the hillside, and include areas of native vegetation on slopes ranging from near vertical (northeast and east of the proposed development) to 4:1 (south of the proposed development). Approximately half of the irrigated area would be on slopes with gradients less than 1.5:1. In addition, Fuel Modification Zone C, which would extend an additional 20 to 100 feet down the slope would result in the implementation of thinning requirements, including the removal of native species including chamise, buckwheat and several varieties of sage. In summary, the proposed project would result in significant clearing and irrigation of much of the steep slope below the project site.

In addition to fuel modification on the project site, the proposed project will establish a 200 foot brush clearance radius from all combustible structures. Existing brush clearance radii to the north overlap with the brush clearance radius established by the proposed project. However, the new brush clearance radius will extend onto the vacant parcel immediately west of the subject site, resulting in additional clearance on steep slopes containing chaparral vegetation.

Removal of native species and introduction of irrigation on the steep slopes and thin soils of the subject site increases the potential for erosion. Native vegetation tends to have a relatively low surface/foilage weight and deeper root structures than non-native species and therefore aids in

preventing erosion. Conversely, maintenance of native chaparral habitat would serve to reduce erosion and enhance the geologic stability of the site. In order to reduce the potential for erosion on the site consistent with Section 30253 of the Coastal Act, it is necessary to minimize the removal of native chaparral vegetation on the site.

Therefore, **Special Condition Two (2)** requires that the applicants submit a final fuel modification plan that minimizes the removal of native vegetation to the maximum extent feasible, consistent with fire safety standards. In addition, **Special Condition Twelve (12)** requires the applicants to submit revised plans that eliminate all structural development below elevation 2316, including the proposed guest house. Elimination of the proposed guest house will eliminate the additional area of fuel modification and brush clearance required to ensure its safety, thus reducing the removal of native vegetation and the introduction of irrigated vegetation.

In addition, to ensure that vegetation clearance for fire protection purposes does not occur prior to commencement of grading or construction activities, the Commission finds that it is necessary to impose a restriction on the removal of natural vegetation as specified in **Special Condition Five (5)**. In the absence of adequately constructed drainage and run-off control devices and implementation of the landscape and interim erosion control plans, loss of natural vegetative cover may result in unnecessary erosion. **Special Condition Five (5)** 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 proposed project involves 3,200 cu. yds. of cut and 200 cu. yds. of fill, as well as excavation for foundations, producing excess graded material. The Commission finds that stockpiling excavated material may contribute to increased erosion at the site. The Commission also notes that landform alteration would result if the excavated material were to be collected and retained on site. In order to ensure that excavated material will not be stockpiled on site and that landform alteration is minimized, **Special Condition Six (6)** requires the applicant to remove all excess graded material from the site to an appropriate location and provide evidence to the Executive Director of the location of the disposal site prior to the issuance of the permit.

Finally, in order to ensure that any future site development is reviewed for its potential to create or contribute to erosion, the Commission finds it necessary to impose **Special Condition Nine (9)**, which requires the applicants to obtain a coastal development permit for any future development on the site, including improvements that might otherwise be exempt from permit requirements. In addition, **Special Condition Eleven (11)** requires the applicant to record a deed restriction that imposes the terms and conditions of this permit as restrictions on use and enjoyment of the property and provides any prospective purchaser of the site with recorded notice that the restrictions are imposed on the subject property.

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.

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 can only approve the project if the applicants assume the liability from these associated risks. Through **Special Condition Four (4)**, the wildfire waiver of liability, the applicants acknowledge the nature of the fire hazard which exists on the site and which may affect the safety of the proposed development. Moreover, through acceptance of **Special Condition Four (4)**, the applicants also agree to indemnify the Commission, its officers, agents and employees against any and all expenses or liability arising out of the acquisition, design, construction, operation, maintenance, existence, or failure of the permitted project.

In summary, the Commission finds that, as conditioned, the proposed project is consistent with Section 30253 of the Coastal Act.

D. 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, increase of 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 noted above, the applicant's proposal includes construction of a new single-family residence, two detached garages, guest house, swimming pool, patio, stairs, retaining walls, driveway, turnaround, and septic system. The site is considered a "hillside" development, as it involves steeply to moderately sloping terrain with soils that are susceptible to erosion. The project site overlooks Carbon Creek, located approximately 1,000 feet west of the site.

The proposed development will result in an increase in impervious surface at the subject site, which in turn decreases the infiltrative function and capacity of existing permeable land on site. 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.

Therefore, 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.

For design purposes, with case-by-case considerations, post-construction structural BMPs (or suites of BMPs) should be designed to treat, infiltrate or filter the amount of stormwater runoff produced by all storms up to and including the 85th percentile, 24-hour storm event for volume-based BMPs, and/or the 85th percentile, 1-hour storm event, with an appropriate safety factor (i.e., 2 or greater), for flow-based BMPs. 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 Three (3)**, and finds 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 policies of the Coastal Act.

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 Two (2)** is necessary to ensure the proposed development will not adversely impact water quality or coastal resources.

Removal of native habitat on steep, erosion-prone slopes contributes to sedimentation of downslope surface waters. Therefore, **Special Condition Two (2)** also requires the applicants to submit a fuel modification plan that minimizes the removal of native habitat on the project site, in order to help prevent erosion of the steep slopes.

Finally, the proposed development includes the installation of an on-site private sewage disposal system to serve the residence. The County of Los Angeles, Department of Health Services, 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.

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

E. Environmentally Sensitive Habitat

Section 30240 of the Coastal Act 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.

Section 30107.5 of the Coastal Act, defines an environmentally sensitive area as:

"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Sections 30107.5 and 30240 of the Coastal Act state that environmentally sensitive habitat areas must be protected against disruption of habitat values. Therefore, when considering any area, such as the Santa Monica Mountains, with regard to an ESHA determination, one must focus on three main questions:

- 1) Is a habitat or species rare?
- 2) Is the habitat or species especially valuable because of its special nature or role in the ecosystem?
- 3) Is the habitat or species easily disturbed or degraded by human activities and developments?

The Coastal Commission has found that the Mediterranean Ecosystem in the Santa Mountains is itself rare, and valuable because of its relatively pristine character, physical complexity, and resultant biological diversity. Therefore, habitat areas that provide important roles in that ecosystem are especially valuable and meet the second criterion for the ESHA designation. In the Santa Monica Mountains, coastal sage scrub and chaparral have many important roles in the ecosystem, including the provision of critical linkages between riparian corridors, the provision of essential habitat for species that require several habitat types during the course of their life histories, the provision of essential habitat for local endemics, the support of rare species, and the reduction of erosion, thereby protecting the water quality of coastal streams.

For these and other reasons discussed in **Exhibit 19**, which is incorporated herein, the Commission finds that large contiguous, relatively pristine stands of coastal sage scrub and chaparral in the Santa Monica Mountains meet the definition of ESHA. This is consistent with the Commission's past findings on the Malibu LCP².

For any specific property within the Santa Monica Mountains, it is necessary to meet three tests in order to assign the ESHA designation. First, is the habitat properly identified, for example as coastal sage scrub or chaparral? Second, is the habitat undeveloped and otherwise relatively pristine? Third, is the habitat part of a large, contiguous block of relatively pristine native vegetation?

Commission staff visited the subject properties on July 26, 2002 and May 15, 2003 and confirmed that the slopes descending from the building site consist primarily of chaparral vegetation. In addition, this chaparral vegetation is undisturbed and is part of a large contiguous area of chaparral habitat that extends into undeveloped Carbon Canyon southeast of the subject site (**Exhibit 22**). The designation of habitat types follows Holland (1986) and the list given in the NPS General Management Plan & Environmental Impact Statement for the Malibu/SMM area. Therefore, due to the important ecosystem roles of coastal sage scrub and chaparral in the Santa Monica Mountains (detailed in **Exhibit 19**), and the fact that the subject site is relatively undisturbed and part of a large, unfragmented block of habitat (**Exhibit 16**), the Commission finds that the chaparral habitat on the site meets the definition of ESHA under the Coastal Act.

As previously mentioned, the project site is located on a partially developed ridgeline overlooking Carbon Canyon in the Santa Monica Mountains. The building site is located on a disturbed portion of the subject property that has been cleared for many years for fire protection purposes for the adjacent residential developments. The actual building site is not considered ESHA. However, the area downslope of the building site contains undisturbed chaparral habitat that is contiguous with a vast area of undisturbed habitat that extends into Carbon Canyon and beyond. As discussed above, this chaparral habitat meets the definition of ESHA as defined in the Coastal Act. The fuel modification and brush clearance zones extending around the proposed development will require the removal and thinning of chaparral ESHA.

As explained above, the slopes on the project site constitute an environmentally sensitive habitat area (ESHA) pursuant to Section 30107.5. Section 30240 requires that "environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas." Section 30240 restricts development on the parcel to only those uses that are dependent on the resource. The applicant proposes to construct a single family residence on the parcel which will require the removal of chaparral ESHA as a result of fuel modification and brush clearance for fire protection purposes. As single family residences do not have to be located within ESHAs to function, the Commission does not consider single-family residences to be a use dependent on ESHA resources. Application of Section 30240, by itself, would require denial of the project, because the project would result in significant disruption of habitat values and is not a use dependent on those sensitive habitat resources.

² Revised Findings for the City of Malibu Local Coastal Program (as adopted on September 13, 2002) adopted on February 6, 2003.

However, the Commission must also consider Section 30010, and the Supreme Court decision in *Lucas v. South Carolina Coastal Council* (1992) 505 U.S. 1003, 112 S.Ct. 2886. Section 30010 of the Coastal Act provides that the Coastal Act shall not be construed as authorizing the Commission to exercise its power to grant or deny a permit in a manner which will take private property for public use. Application of Section 30010 may overcome the presumption of denial in some instances. The subject of what government action results in a "taking" was addressed by the U.S. Supreme Court in *Lucas v. South Carolina Coastal Council*. In *Lucas*, the Court identified several factors that should be considered in determining whether a proposed government action would result in a taking. For instance, the Court held that where a permit applicant has demonstrated that he or she has a sufficient real property interest in the property to allow the proposed project, and that project denial would deprive his or her property of all economically viable use, then denial of the project by a regulatory agency might result in a taking of the property for public use unless the proposed project would constitute a nuisance under State law. Another factor that should be considered is the extent to which a project denial would interfere with reasonable investment-backed expectations.

The Commission interprets Section 30010, together with the *Lucas* decision, to mean that if Commission denial of the project would deprive an applicant's property of all reasonable economic use, the Commission may be required to allow some development even where a Coastal Act policy would otherwise prohibit it, unless the proposed project would constitute a nuisance under state law. In other words, Section 30240 of the Coastal Act cannot be read to deny all economically beneficial or productive use of land because Section 30240 cannot be interpreted to require the Commission to act in an unconstitutional manner.

In the subject case, the applicant purchased the property in November 2000 for \$375,000. The parcel was designated in the County's certified Land Use Plan in 1986 for residential use. Residential development has previously been approved by the Commission on other parcels in the near vicinity that generally contained the same type of habitat as the applicant's parcel. At the time the applicant purchased the parcel, the County's certified Land Use Plan did not designate the vegetation on the site as ESHA. Based on this fact, along with the presence of existing and approved residential development on nearby parcels, the applicant had reason to believe that they had purchased a parcel on which they would be able to build a residence.

The Commission finds that in this particular case, other allowable uses for the subject site, such as a recreational park or a nature preserve, are not feasible and would not provide the owner an economic return on the investment. The parcel is 6.92 acres, and is surrounded by other residentially zoned parcels, several of which have been developed. Public parkland has been acquired in the general vicinity, the Santa Monica Mountains National Recreation Area. However, there is currently not an offer to purchase the property from any public park agency. The Commission thus concludes that in this particular case there is no viable alternative use for the site other than residential development. The Commission finds, therefore, that outright denial of all residential use on the property would interfere with reasonable investment-backed expectations and deprive the property of all reasonable economic use.

Next the Commission turns to the question of nuisance. There is no evidence that construction of a residence on the subject property would create a nuisance under California law. Other houses have been constructed in similar situations in chaparral habitat in Los Angeles County, apparently without the creation of nuisances. The County's Health Department has not reported evidence of septic system failures. In addition, the County has reviewed and approved the applicant's proposed septic system, ensuring that the system will not create public health

problems. Furthermore, the use that is proposed is residential, rather than, for example, industrial, which might create noise or odors or otherwise create a public nuisance. In conclusion, the Commission finds that a residential project can be allowed to permit the applicant a reasonable economic use of their property consistent with Section 30010 of the Coastal Act.

While the applicant is entitled under Section 30010 to an assurance that the Commission will not act in such a way as to take their property, this section does not authorize the Commission to avoid application of the policies of the Coastal Act, including Section 30240, altogether. Instead, the Commission is only directed to avoid construing these policies in a way that would take property. Aside from this instruction, the Commission is still otherwise directed to enforce the requirements of the Act. Therefore, in this situation, the Commission must still comply with Section 30240 by avoiding impacts that would disrupt and/or degrade environmentally sensitive habitat, to the extent this can be done without taking the property.

As noted above, the applicants propose to construct three level pad areas for the turnaround and garage area, the main residence, and a lower level containing a swimming pool/patio and guesthouse. The upper pad areas (less the area for the turnaround) total approximately 7,400 sq. ft. of building area. The lower pool level is approximately 3,000 sq. ft. in area. The proposed building pad areas are located outside of ESHA, but require fuel modification that extends into ESHA.

Commission staff has considered whether alternative proposals for residential development on the subject parcel exist that would minimize adverse impacts to ESHA. The proposed residence is located adjacent to an existing access road, and utilizes the relatively gentle topography of the ridge crest and the slightly less steep gradient of the upper slope. The proposed building site is also closer to existing development and thus the required brush clearance will partly overlap with established radii for existing development. Location of a residence elsewhere on the property would require construction of a longer driveway on the steep slopes, and would involve additional amounts of grading, as well as additional removal of native vegetation on the steep slopes. There is no alternative location for the residence on the parcel that could reduce adverse impacts to ESHA.

However, revisions to the proposed development can be made that would reduce impacts to ESHA. As noted above, the proposed project includes the construction of a swimming pool/patio area and 750 sq. ft. guesthouse in front of and below the proposed main residence. The proposed guesthouse extends the fuel modification and brush clearance radii for the proposed development approximately 60 feet down the slopes to the southeast and southwest. Therefore, in order to minimize impacts to ESHA on and off the project site, **Special Condition Twelve (12)** requires the applicants to submit revised plans that eliminate all structural development below elevation 2316, including the proposed guest house. Elimination of the proposed guest house will eliminate the additional area of fuel modification and brush clearance required to ensure its safety, thus reducing the removal of native vegetation in ESHA and the introduction of irrigated vegetation. Eliminating the lower pad area will reduce the building area to approximately 7,400 sq. ft.

Fuel modification is the removal or modification of combustible native or ornamental vegetation. It may include replacement with drought tolerant, fire resistant plants. The amount and location of required fuel modification would vary according to the fire history of the area, the amount and

type of plant species on the site, topography, weather patterns, construction design, and siting of structures. There are typically three fuel modification zones applied by the Fire Department:

Zone A (Setback Zone) is required to be a minimum of 20 feet beyond the edge of protected structures. In this area native vegetation is cleared and only ground cover, green lawn, and a limited number of ornamental plant species are allowed. This zone must be irrigated to maintain a high moisture content.

Zone B (Irrigated Zone) is required to extend from the outermost edge of Zone A to a maximum of 80 feet. In this area ground covers may not extend over 18 inches in height. Some native vegetation may remain in this zone if they are adequately spaced, maintained free of dead wood and individual plants are thinned. This zone must be irrigated to maintain a high moisture content.

Zone C (Thinning Zone) is required to extend from the outermost edge of Zone B up to 100 feet. This zone would primarily retain existing native vegetation, with the exception of high fuel species such as chamise, red shank, California sagebrush, common buckwheat and sage. Dead or dying vegetation must be removed and the fuel in existing vegetation reduced by thinning individual plants.

Thus, the combined required fuel modification area around structures can extend up to a maximum of 200 feet. If there is not adequate area on the project site to provide the required fuel modification for structures, then brush clearance may also be required on adjacent parcels. In this case, required fuel modification will extend from the approved structures as generally shown on **Exhibits 14 and 15**, into chaparral ESHA both on and off site.

Notwithstanding the need to protect structures from the risk of wildfire, fuel modification results in significant adverse impacts that are in excess of those directly related to the development itself. Within the area next to approved structures (Zone A), all native vegetation must be removed and ornamental, low-fuel plants substituted. In Zone B, most native vegetation will be removed or widely spaced. Finally, in Zone C, native vegetation may be retained if thinned, although particular high-fuel plant species must be removed (Several of the high fuel species are important components of the coastal sage scrub community). In this way, for a large area around any permitted structures, native vegetation will be cleared, selectively removed to provide wider spacing, and thinned.

Obviously, native vegetation that is cleared and replaced with ornamental species, or substantially removed and widely spaced will be lost as habitat and watershed cover. Additionally, thinned areas will be greatly reduced in habitat value. Even where complete clearance of vegetation is not required, the natural habitat can be significantly impacted, and ultimately lost. For instance, in coastal sage scrub habitat, the natural soil coverage of the canopies of individual plants provides shading and reduced soil temperatures. When these plants are thinned, the microclimate of the area will be affected, increasing soil temperatures, which can lead to loss of individual plants and the eventual conversion of the area to a dominance of different non-native plant species. The areas created by thinning between shrubs can be invaded by non-native grasses that will over time out-compete native species.

For example, undisturbed coastal sage scrub vegetation typical of coastal canyon slopes, and the downslope riparian corridors of the canyon bottoms, ordinarily contains a variety of tree and shrub species with established root systems. Depending on the canopy coverage, these

species may be accompanied by understory species of lower profile. The established vegetative cover, including the leaf detritus and other mulch contributed by the native plants, slows rainfall runoff from canyon slopes and staunches silt flows that result from ordinary erosional processes. The native vegetation thereby limits the intrusion of sediments into downslope creeks. Accordingly, disturbed slopes where vegetation is either cleared or thinned are more directly exposed to rainfall runoff that can therefore wash canyon soils into down-gradient creeks. The resultant erosion reduces topsoil and steepens slopes, making revegetation increasingly difficult or creating ideal conditions for colonization by invasive, non-native species that supplant the native populations.

The cumulative loss of habitat cover also reduces the value of the sensitive resource areas as a refuge for birds and animals, for example by making them—or their nests and burrows—more readily apparent to predators. The impacts of fuel clearance on bird communities was studied by Stralberg who identified three ecological categories of birds in the Santa Monica Mountains: 1) local and long distance migrators (ash-throated flycatcher, Pacific-slope flycatcher, phainopepla, black-headed grosbeak), 2) chaparral-associated species (Bewick's wren, wrentit, blue-gray gnatcatcher, California thrasher, orange-crowned warbler, rufous-crowned sparrow, spotted towhee, California towhee) and 3) urban-associated species (mourning dove, American crow, Western scrub-jay, Northern mockingbird)³. It was found in this study that the number of migrators and chaparral-associated species decreased due to habitat fragmentation while the abundance of urban-associated species increased. The impact of fuel clearance is to greatly increase this edge-effect of fragmentation by expanding the amount of cleared area and "edge" many-fold. Similar results of decreases in fragmentation-sensitive bird species are reported from the work of Bolger et al. in southern California chaparral⁴.

Fuel clearance and habitat modification may also disrupt native arthropod communities, and this can have surprising effects far beyond the cleared area on species seemingly unrelated to the direct impacts. A particularly interesting and well-documented example with ants and lizards illustrates this point. When non-native landscaping with intensive irrigation is introduced, the area becomes favorable for the invasive and non-native Argentine ant. This ant forms "super colonies" that can forage more than 650 feet out into the surrounding native chaparral or coastal sage scrub around the landscaped area⁵. The Argentine ant competes with native harvester ants and carpenter ants displacing them from the habitat⁶. These native ants are the primary food resource for the native coast horned lizard, a California "Species of Special Concern." As a result of Argentine ant invasion, the coast horned lizard and its native ant food resources are diminished in areas near landscaped and irrigated developments⁷. In addition to

³ Stralberg, D. 2000. Landscape-level urbanization effects on chaparral birds: a Santa Monica Mountains case study. Pp. 125–136 in Keeley, J.E., M. Baer-Keeley, and C.J. Fotheringham (eds.). *2nd interface between ecology and land development in California*. U.S. Geological Survey, Sacramento, California.

⁴ Bolger, D. T., T. A. Scott and J. T. Rotenberry. 1997. Breeding bird abundance in an urbanizing landscape in coastal Southern California. *Conserv. Biol.* 11:406-421.

⁵ Suarez, A.V., D.T. Bolger and T.J. Case. 1998. Effects of fragmentation and invasion on native ant communities in coastal southern California. *Ecology* 79(6):2041-2056.

⁶ Holway, D.A. 1995. The distribution of the Argentine ant (*Linepithema humile*) in central California: a twenty-year record of invasion. *Conservation Biology* 9:1634-1637. Human, K.G. and D.M. Gordon. 1996. Exploitation and interference competition between the invasive Argentine ant, (*Linepithema humile*), and native ant species. *Oecologia* 105:405-412.

⁷ Fisher, R.N., A.V. Suarez and T.J. Case. 2002. Spatial patterns in the abundance of the coastal horned lizard. *Conservation Biology* 16(1):205-215. Suarez, A.V. J.Q. Richmond and T.J. Case. 2000. Prey selection in horned lizards following the invasion of Argentine ants in southern California. *Ecological Applications* 10(3):711-725.

specific effects on the coast horned lizard, there are other Mediterranean habitat ecosystem processes that are impacted by Argentine ant invasion through impacts on long-evolved native ant-plant mutualisms⁸. The composition of the whole arthropod community changes and biodiversity decreases when habitats are subjected to fuel modification. In coastal sage scrub disturbed by fuel modification, fewer arthropod predator species are seen and more exotic arthropod species are present than in undisturbed habitats⁹.

Studies in the Mediterranean vegetation of South Africa (equivalent to California shrubland with similar plant species) have shown how the invasive Argentine ant can disrupt the whole ecosystem.¹⁰ In South Africa the Argentine ant displaces native ants as they do in California. Because the native ants are no longer present to collect and bury seeds, the seeds of the native plants are exposed to predation, and consumed by seed eating insects, birds and mammals. When this habitat burns after Argentine ant invasion the large-seeded plants that were protected by the native ants all but disappear. So the invasion of a non-native ant species drives out native ants, and this can cause a dramatic change in the species composition of the plant community by disrupting long-established seed dispersal mutualisms. In California, some insect eggs are adapted to being buried by native ants in a manner similar to plant seeds¹¹.

While these impacts resulting from fuel modification can be reduced through siting and designing alternatives for new development, they cannot be completely avoided, given the high fire risk and the location of ESHA on the subject site. The Commission finds that the loss of chaparral ESHA resulting from the removal, conversion, or modification of natural habitat for new development including fuel modification and brush clearance must be mitigated. The acreage of habitat that is impacted must be determined based on the size of the required fuel modification and brush clearance. Therefore, the Commission finds that it is necessary to require the applicant to delineate the ESHA both on and offsite that will be impacted by the proposed development, including the areas affected by fuel modification and brushing activities, as required by **Special Condition Thirteen (13)**.

In the certification of the Malibu LCP the Commission approved three methods for providing mitigation for the unavoidable loss of ESHA resulting from development, including habitat restoration, habitat conservation, and an in-lieu fee for habitat conservation. The Commission finds that these measures are appropriate in this case to mitigate the loss of chaparral habitat on the subject site. These three mitigation methods are provided as three available options for compliance with **Special Condition Thirteen (13)**. The first method is to provide mitigation through the restoration of an area of degraded habitat (either on the project site, or at an off-site location) that is equivalent in size to the area of habitat impacted by the development. A restoration plan must be prepared by a biologist or qualified resource specialist and must provide performance standards, and provisions for maintenance and monitoring. The restored

⁸ Suarez, A.V., D.T. Bolger and T.J. Case. 1998. Effects of fragmentation and invasion on native ant communities in coastal southern California. *Ecology* 79(6):2041-2056. Bond, W. and P. Slingsby. Collapse of an Ant-Plant Mutualism: The Argentine Ant (*Iridomyrmex humilis*) and Myrmecochorous Proteaceae. *Ecology* 65(4):1031-1037.

⁹ Longcore, T.R. 1999. Terrestrial arthropods as indicators of restoration success in coastal sage scrub. Ph.D. Dissertation, University of California, Los Angeles.

¹⁰ Christian, C. 2001. Consequences of a biological invasion reveal the importance of mutualism for plant communities. *Nature* 413:635-639.

¹¹ Hughes, L. and M. Westoby. 1992. Capitula on stick insect eggs and elaiosomes on seeds: convergent adaptations for burial by ants. *Functional Ecology* 6:642-648.

habitat must be permanently preserved through the recordation of an open space easement. This mitigation method is provided for in Special Condition Thirteen (13), subpart A.

The second habitat impact mitigation method is habitat conservation. This includes the conservation of an area of intact habitat equivalent to the area of the impacted habitat. The parcel containing the habitat conservation area must be restricted from future development and permanently preserved. If the mitigation parcel is larger in size than the impacted habitat area, the excess acreage could be used to provide habitat impact mitigation for other development projects that impact ESHA. This mitigation method is provided for in Special Condition Thirteen (13), subpart B.

The third habitat impact mitigation option is an in-lieu fee for habitat conservation. The fee will be based on the habitat type(s) in question, the cost per acre to restore or create the comparable habitat type, and the acreage of habitat affected by the project. The fee shall be provided to the Santa Monica Mountains Conservancy for the acquisition or permanent preservation of natural habitat areas within the coastal zone. This mitigation method is provided for in Special Condition Thirteen (13), subpart C.

The Commission has determined that in conjunction with siting new development to minimize impacts to ESHA, additional actions can be taken to minimize adverse impacts to ESHA. The Commission finds that the use of non-native and/or invasive plant species for residential landscaping results in both direct and indirect adverse effects to native plants species indigenous to the Malibu/Santa Monica Mountains area. Adverse effects from such landscaping result from the direct occupation or displacement of native plant communities by new development and associated non-native landscaping. Indirect adverse effects include offsite migration and colonization of native plant habitat by non-native/invasive plant species (which tend to outcompete native species) adjacent to new development. The Commission notes that the use of exotic plant species for residential landscaping has already resulted in significant adverse effects to native plant communities in the Malibu/Santa Monica Mountains area. Therefore, in order to minimize adverse effects to the indigenous plant communities of the Malibu/Santa Monica Mountains area, **Special Condition Two (2)** requires that all landscaping consist primarily of native plant species and that invasive plant species shall not be used. In addition, **Special Condition Two (2)** requires that the applicants submit a final fuel modification plan that minimizes the removal of native vegetation to the maximum extent feasible, consistent with fire safety standards.

In addition, the Commission has found that night lighting of areas in the Malibu/Santa Monica Mountains area creates a visual impact to nearby scenic beaches, scenic roads, parks, and trails. In addition, night lighting may alter or disrupt feeding, nesting, and roosting activities of native wildlife species. The subject site contains environmentally sensitive habitat. Therefore, **Special Condition Seven (7)** limits night lighting of the site in general; limits lighting to the developed area of the site; and specifies that lighting be shielded downward. The restriction on night lighting is necessary to protect the night time rural character of this portion of the Santa Monica Mountains consistent with the scenic and visual qualities of this coastal area. In addition, low intensity security lighting will assist in minimizing the disruption of wildlife traversing this area at night that are commonly found in this rural and relatively undisturbed area. Thus, the proposed setback from the sensitive habitat area and natural topography in concert with the lighting restrictions will attenuate the impacts of unnatural light sources and will not impact sensitive wildlife species.

Furthermore, fencing of the property would adversely impact the movement of wildlife through the chaparral ESHA on this 6.92 acre parcel. Therefore, the Commission finds it is necessary to limit fencing to the perimeter of Zone B (irrigated zone) of the fuel modification plan as required in **Special Condition Two (2)**.

Finally, the Commission finds that the amount and location of any new development that may be proposed in the future on the subject site is significantly limited by the unique nature of the site and the environmental constraints discussed above. Therefore, to ensure that any future structures, additions, change in landscaping or intensity of use at the project site, that may otherwise be exempt from coastal permit requirements, are reviewed by the Commission for consistency with the resource protection policies of the Coastal Act, **Special Condition Nine (9)**, the future development restriction, has been required. Finally, **Special Condition Eleven (11)** requires the applicant to record a deed restriction that imposes the terms and conditions of this permit as restrictions on use and enjoyment of the property and provides any prospective purchaser of the site with recorded notice that the restrictions are imposed on the subject property.

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

F. Local Coastal Program

Section 30604 of the Coastal Act states:

- 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 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 that conforms to 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 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 County of Los Angeles' ability to prepare a Local Coastal Program for the Malibu/Santa Monica Mountains area that is also consistent with the policies of Chapter 3 of the Coastal Act as required by Section 30604(a).

G. 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.

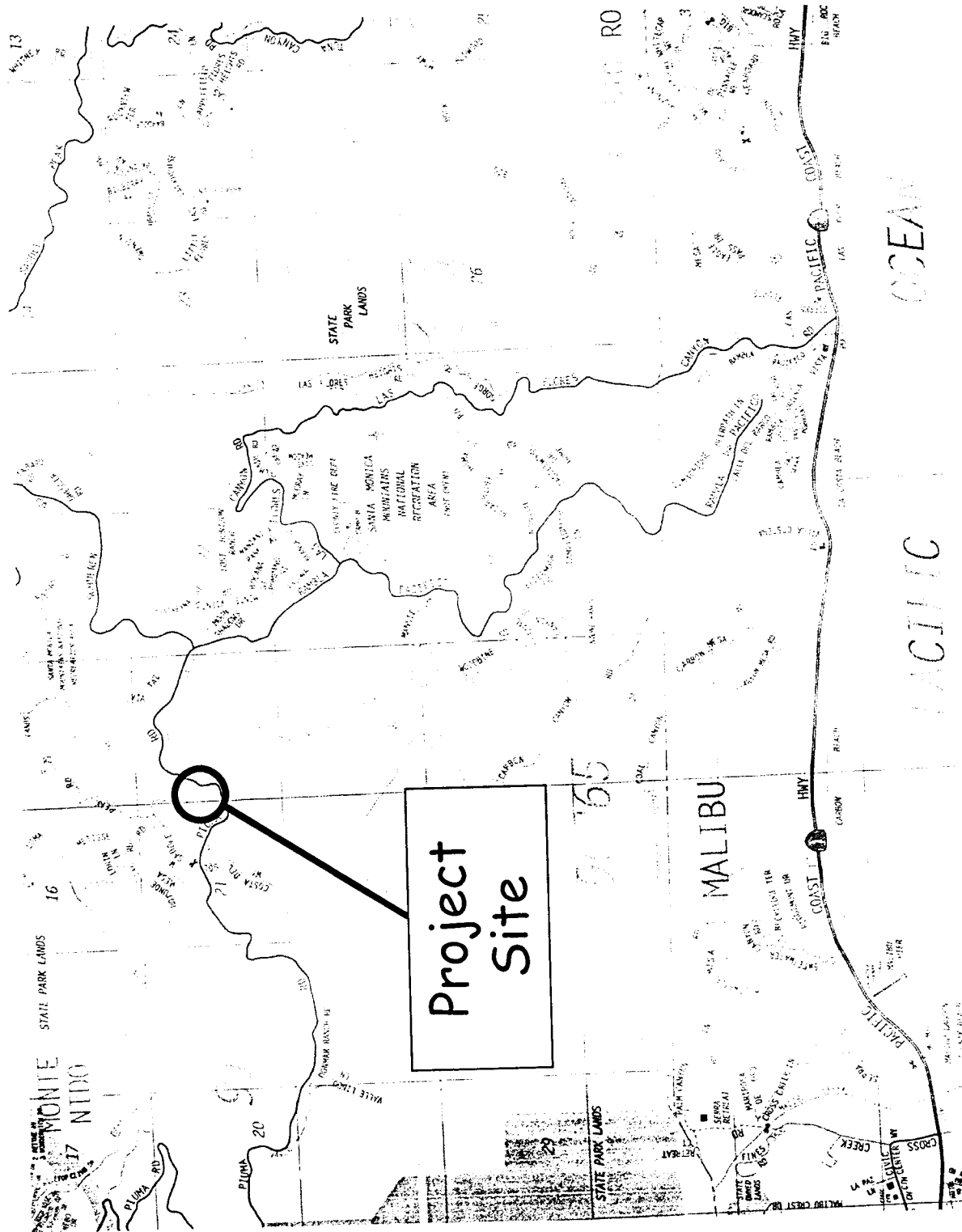


EXHIBIT NO. 1

APPLICATION NO.

4-03-017

VICINITY MAP

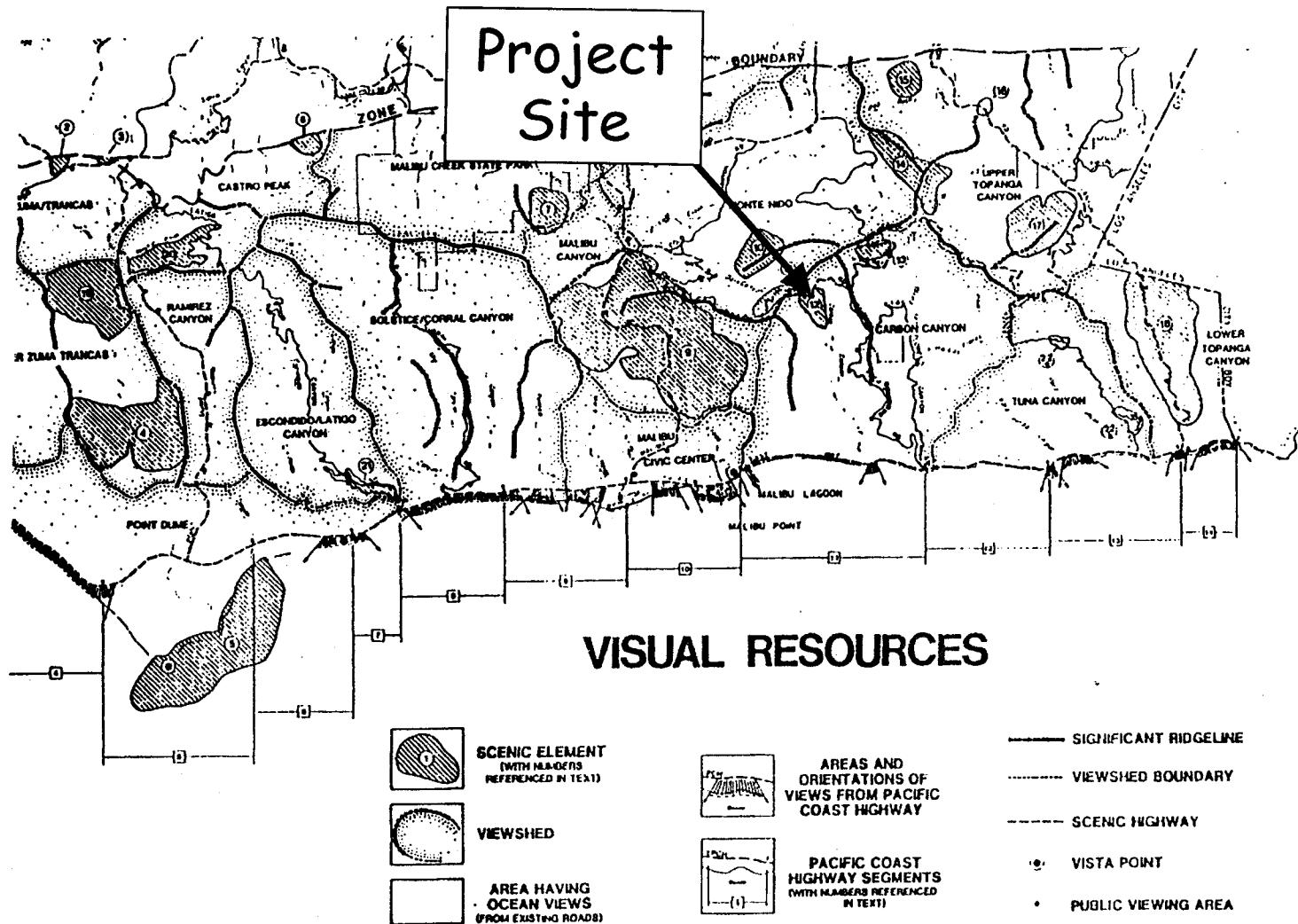


FIGURE 8

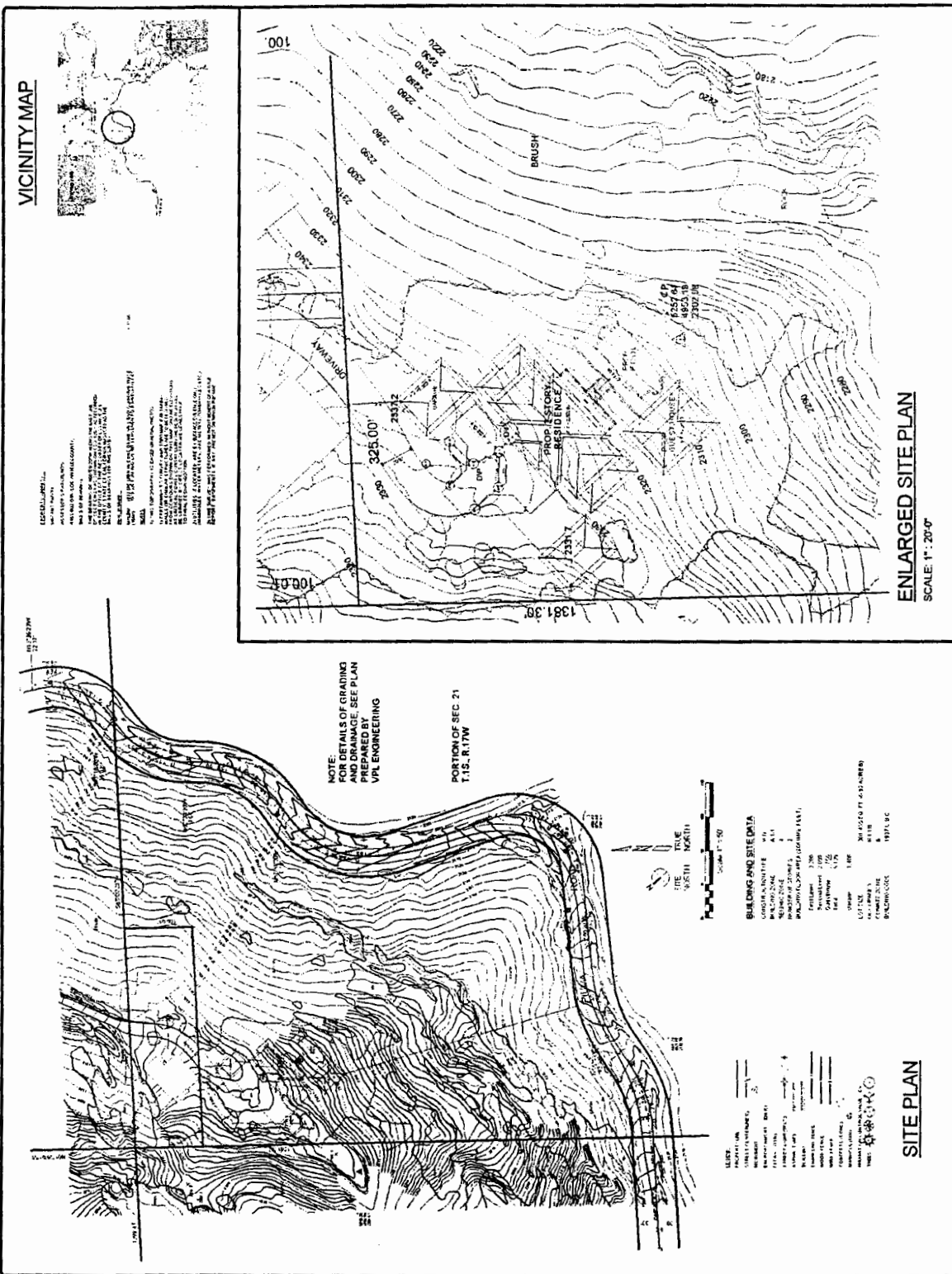
PORATION

EXHIBIT NO. 2

APPLICATION NO.

4-03-017

VISUAL RESOURCES

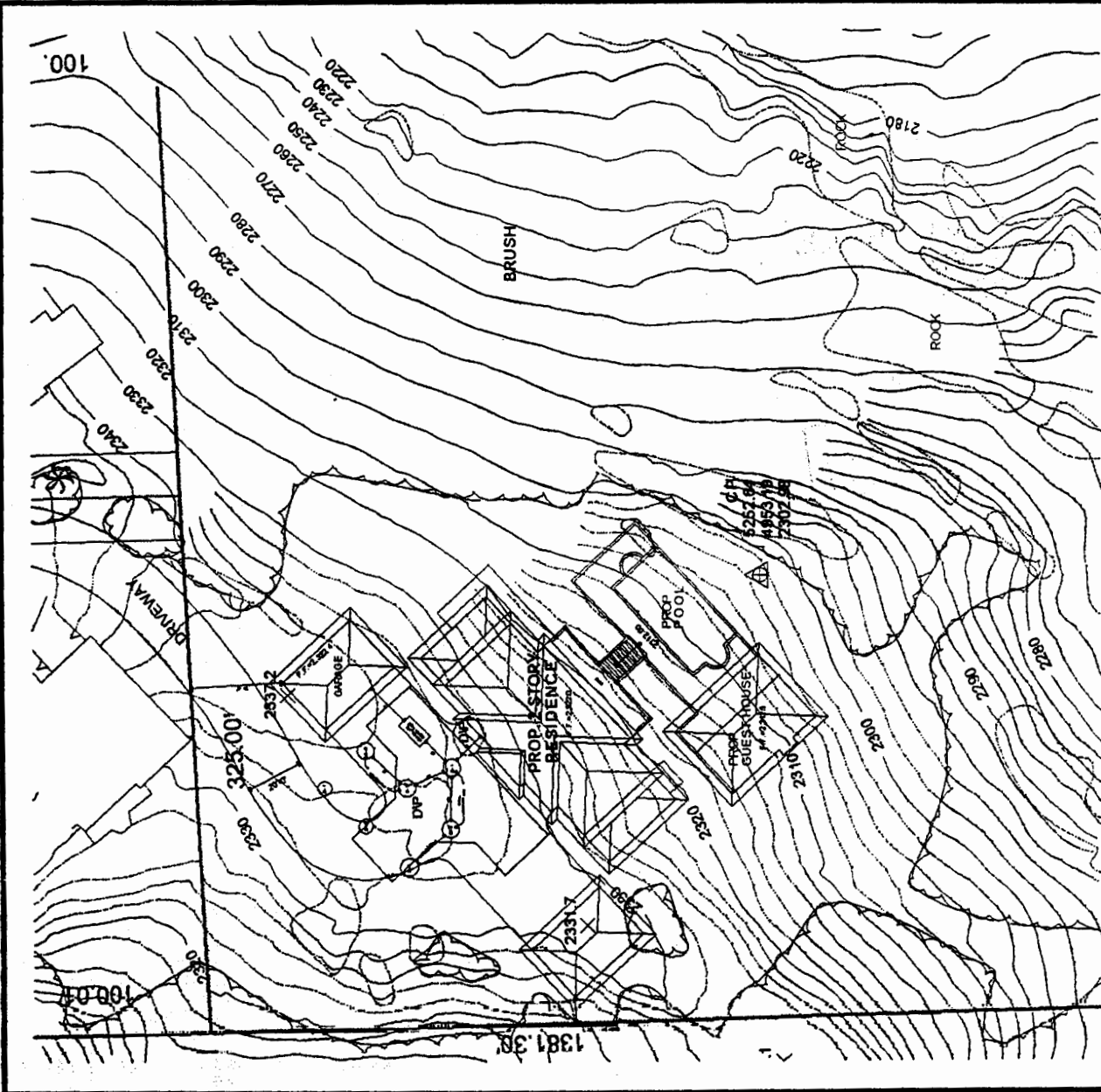


PROPOSED SINGLE FAMILY RESIDENCE,
GUESTHOUSE AND GARAGE STRUCTURES FOR:
JOHN AND ANN MATISE
24738 SADDLE PEAK ROAD
MALIBU, CA 90265

CLIVE DAWSON A.I.A.
architecture and planning
25925 Pacific Coast Highway, Malibu, California 90265 310.589.1921

| | |
|---------|--------------|
| DATE | 05/29/00 |
| BY | CLIVE |
| PROJECT | CLIVE |
| DATE | JANUARY 2001 |
| BY | CLIVE |
| PROJECT | CLIVE |
| DATE | 11/25/00 |
| BY | CLIVE |
| PROJECT | CLIVE |
| DATE | 05/29/00 |
| BY | CLIVE |
| PROJECT | CLIVE |

1



ENLARGED SITE PLAN

SCALE: 1" = 20'-0"

EXHIBIT NO. 4
APPLICATION NO.

4-03-017

ENLARGED SITE PLAN

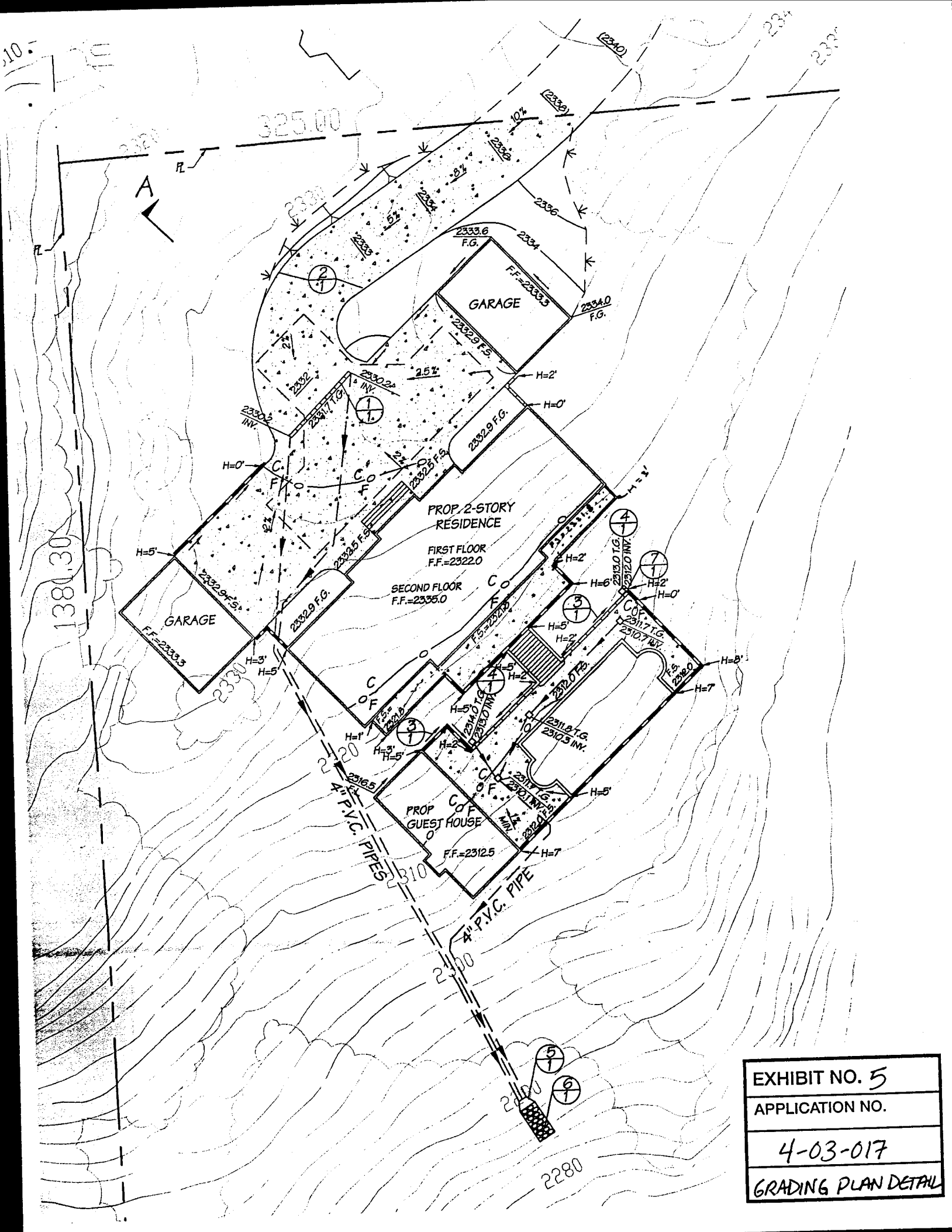


EXHIBIT NO. 5

APPLICATION NO.

4-03-017

GRADING PLAN DETAIL

ITE PLAN

SCALE: 1"=40'



GRAPHIC SCALE

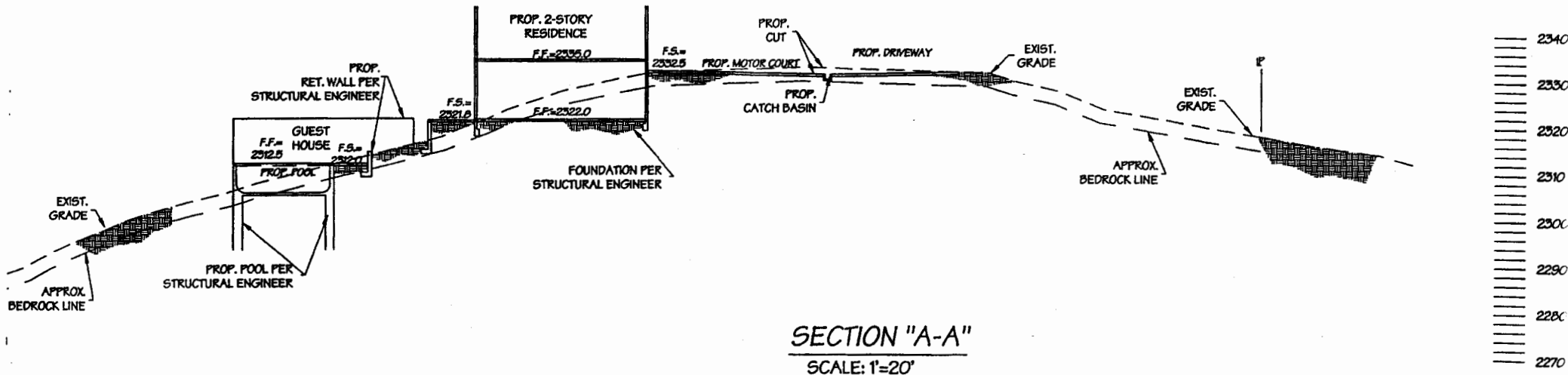


EXHIBIT NO. 6

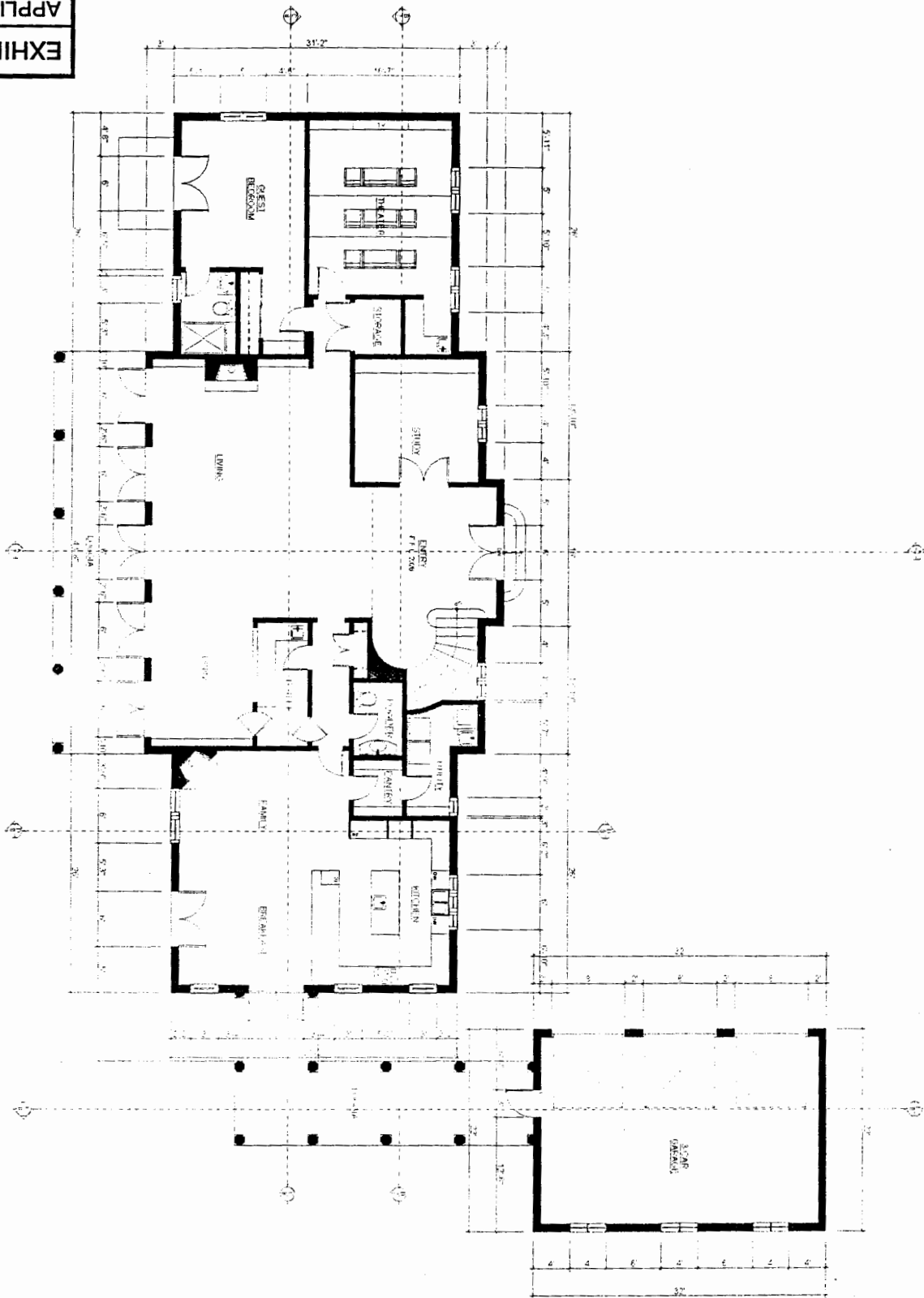
APPLICATION NO.

4-03-017

GRADING PLAN SECTION

FIRST FLOOR PLAN

3,280 SQ. FT.

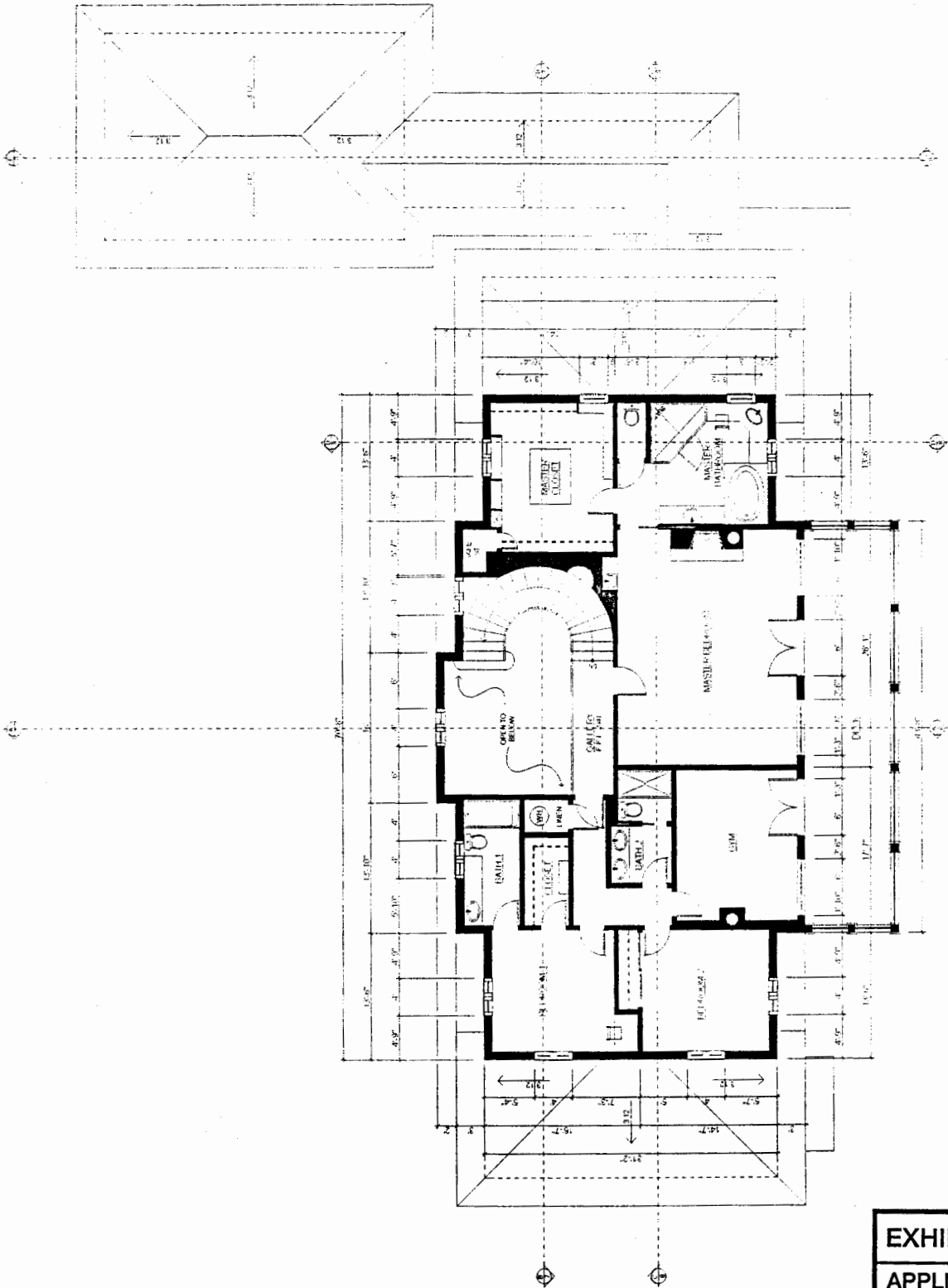


| | |
|----|----------|
| 1 | DATE |
| 2 | REVISION |
| 3 | REVISION |
| 4 | REVISION |
| 5 | REVISION |
| 6 | REVISION |
| 7 | REVISION |
| 8 | REVISION |
| 9 | REVISION |
| 10 | REVISION |

PROPOSED SINGLE FAMILY RESIDENCE
 GUESTHOUSE AND GARAGE STRUCTURES FOR:
 JOHN AND ANN MATISE
 SADDLE PEAK ROAD
 MALIBU, CA 90265

CLIVE DAWSON A.I.A.
 architecture and planning
 28925 Pacific Coast Highway, Malibu, California 90265 310.589.1923

| | |
|----|----------|
| 3 | DATE |
| 4 | REVISION |
| 5 | REVISION |
| 6 | REVISION |
| 7 | REVISION |
| 8 | REVISION |
| 9 | REVISION |
| 10 | REVISION |



SECOND FLOOR PLAN
 2,099 SQ. FT.

| |
|--------------------------|
| EXHIBIT NO. 8 |
| APPLICATION NO. |
| 4-03-017 |
| SECOND FLOOR PLAN |

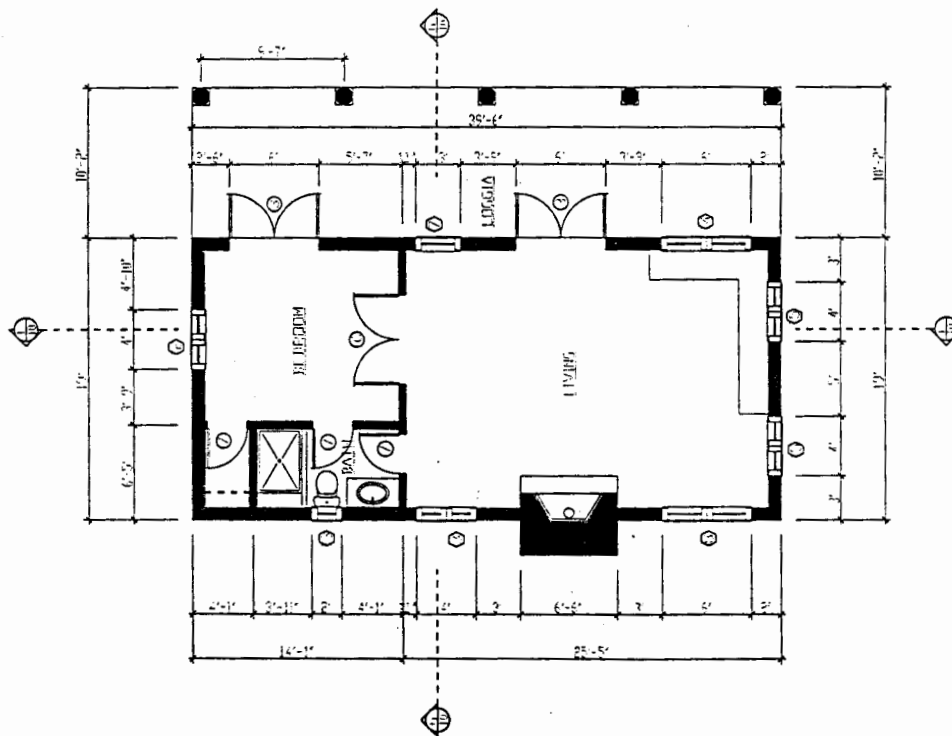
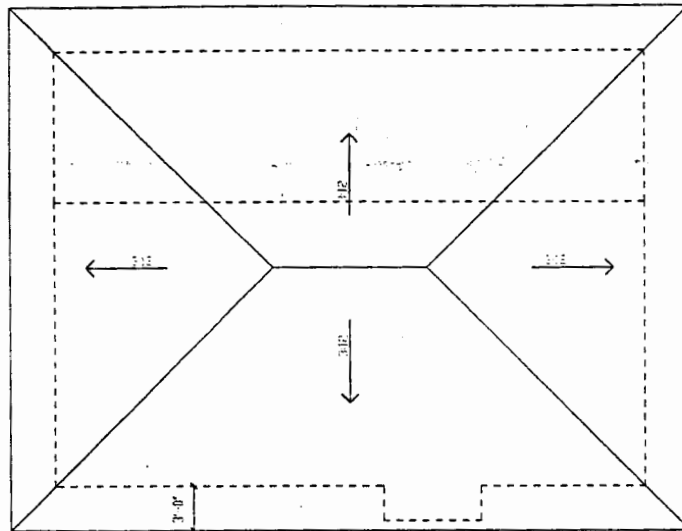


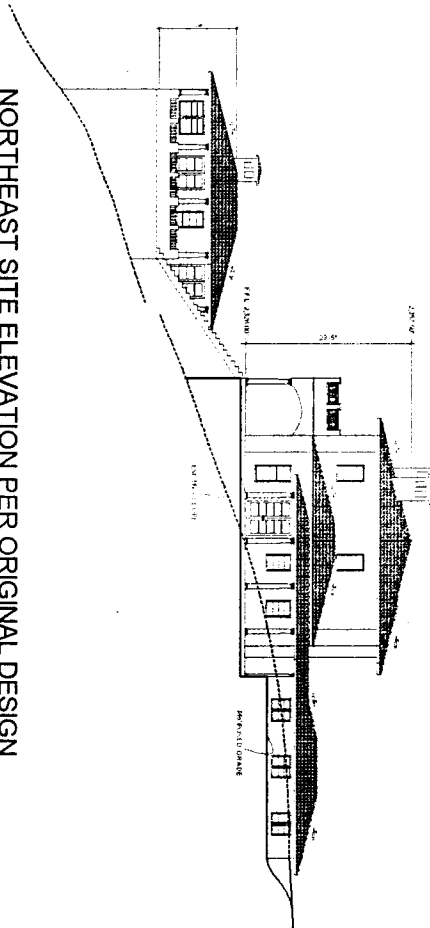
EXHIBIT NO. 9

APPLICATION NO.

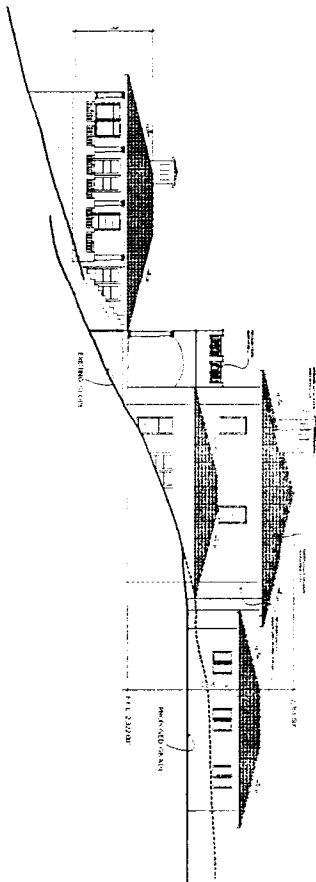
4-03-017

GUESTHOUSE PLAN

NORTHEAST SITE ELEVATION PER ORIGINAL DESIGN



NORTHEAST SITE ELEVATION PER LATEST DESIGN

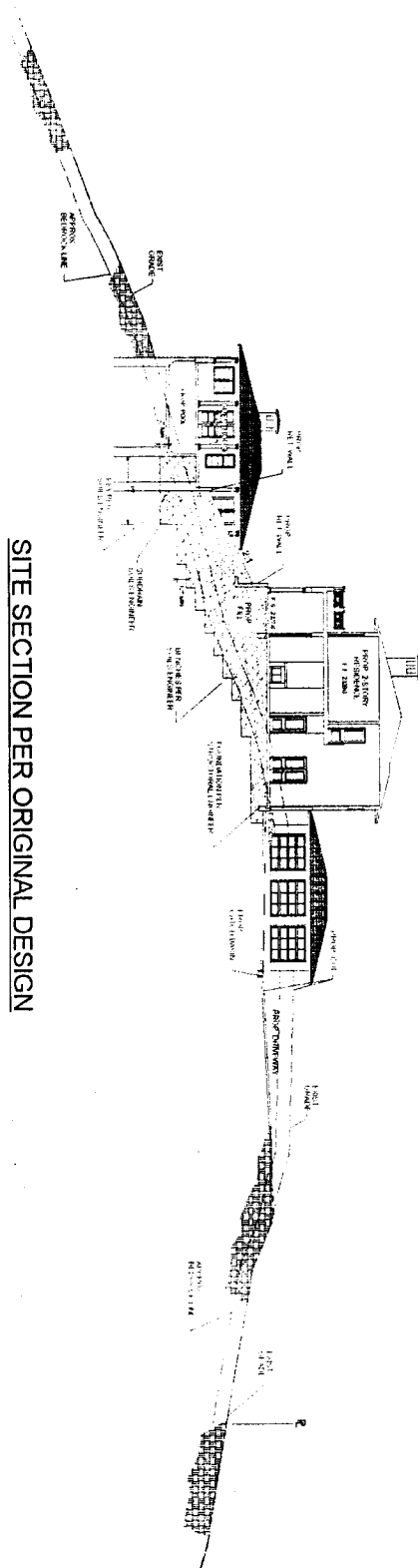


| | |
|---------|------------------------|
| DATE | 2/2/01 |
| BY | CLIVE DAWSON |
| FOR | JOHN AND ANN MATISE |
| PROJECT | 24738 SADDLE PEAK ROAD |
| CITY | MALIBU, CA |

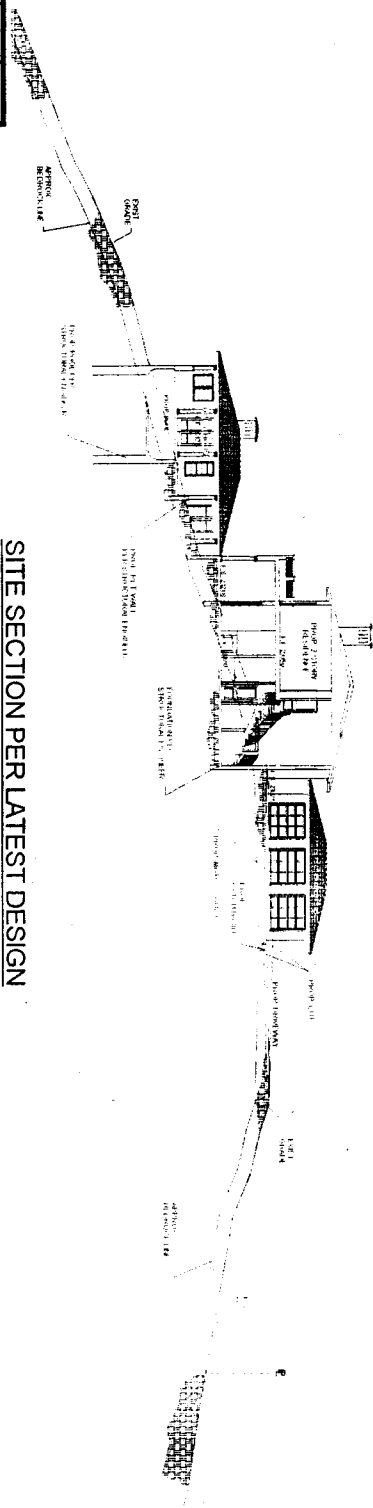
CLIVE DAWSON A.I.A.
architecture and planning
 28025 Pacific Coast Highway, Malibu, California 90265 310.589.1921

PROPOSED SINGLE FAMILY RESIDENCE,
 GUESTHOUSE AND GARAGE STRUCTURES FOR:
 JOHN AND ANN MATISE
 24738 SADDLE PEAK ROAD
 MALIBU, CA 90265

| | |
|---------|------------------------|
| DATE | 2/2/01 |
| BY | CLIVE DAWSON |
| FOR | JOHN AND ANN MATISE |
| PROJECT | 24738 SADDLE PEAK ROAD |
| CITY | MALIBU, CA |



SITE SECTION PER ORIGINAL DESIGN



SITE SECTION PER LATEST DESIGN

2340
2330
2320
2310
2300
2290
2280
2270

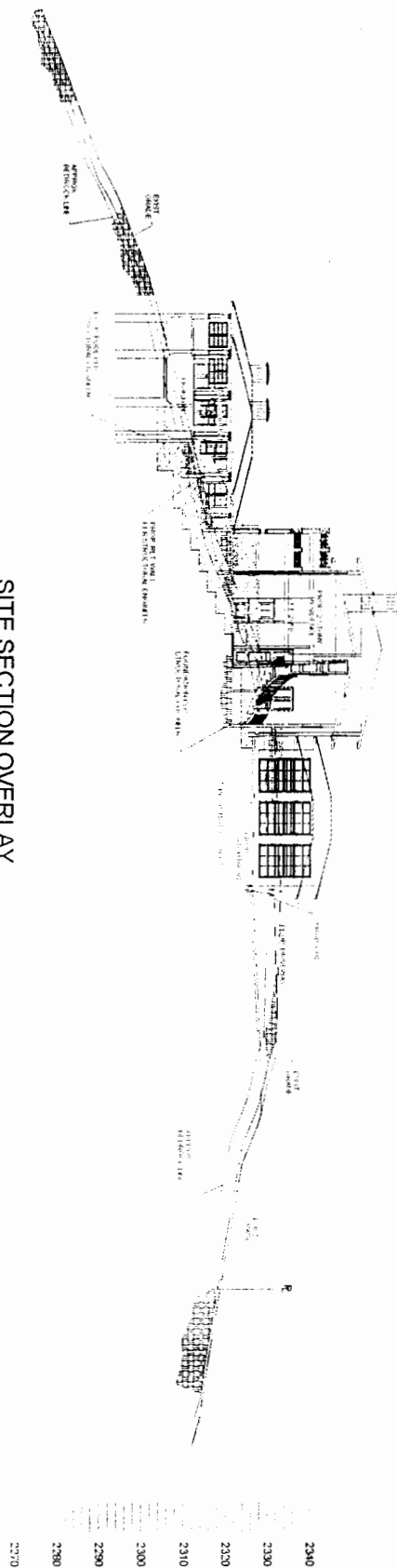
2330
2320
2310
2300
2290
2280
2270

CLIVE DAWSON A.I.A.
architecture and planning

28925 Pacific Coast Highway, Malibu, California 90265 310.589.1921

PROPOSED SINGLE FAMILY RESIDENCE,
GUESTHOUSE AND GARAGE STRUCTURES FOR:
JOHN AND ANN MATISE
24738 SADDLE PEAK ROAD
MALIBU, CA 90265

SITE SECTION OVERLAY

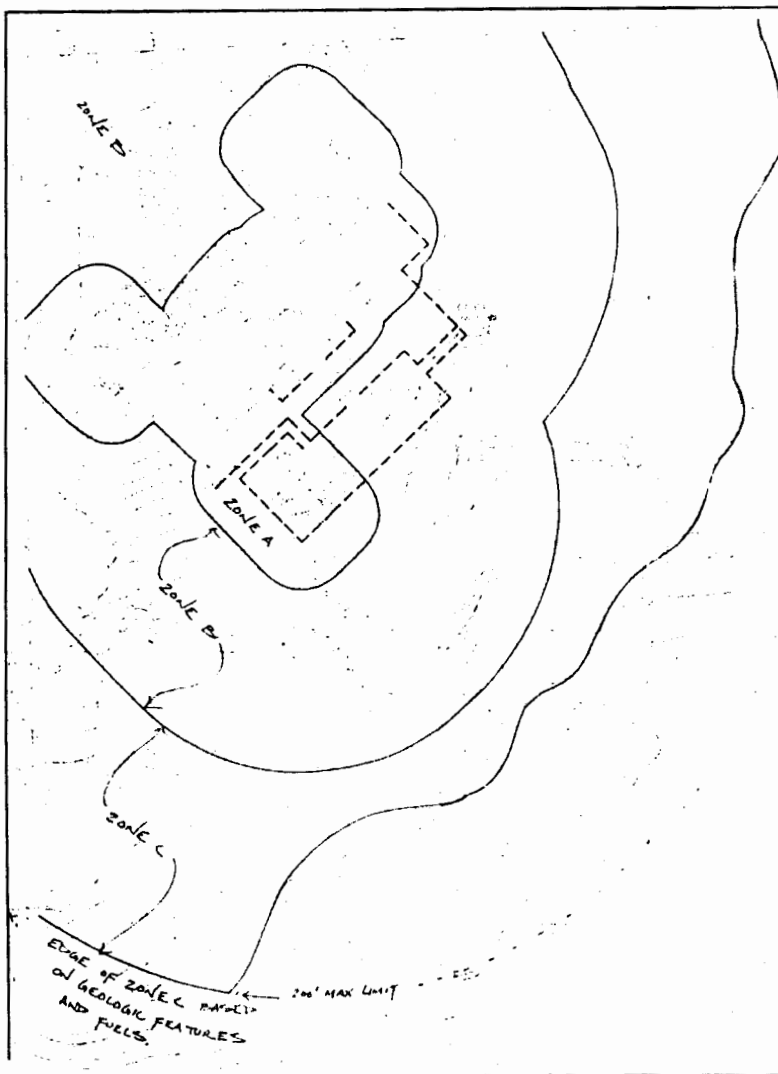


| | |
|----------|--|
| DATE | |
| BY | |
| CHECKED | |
| APPROVED | |

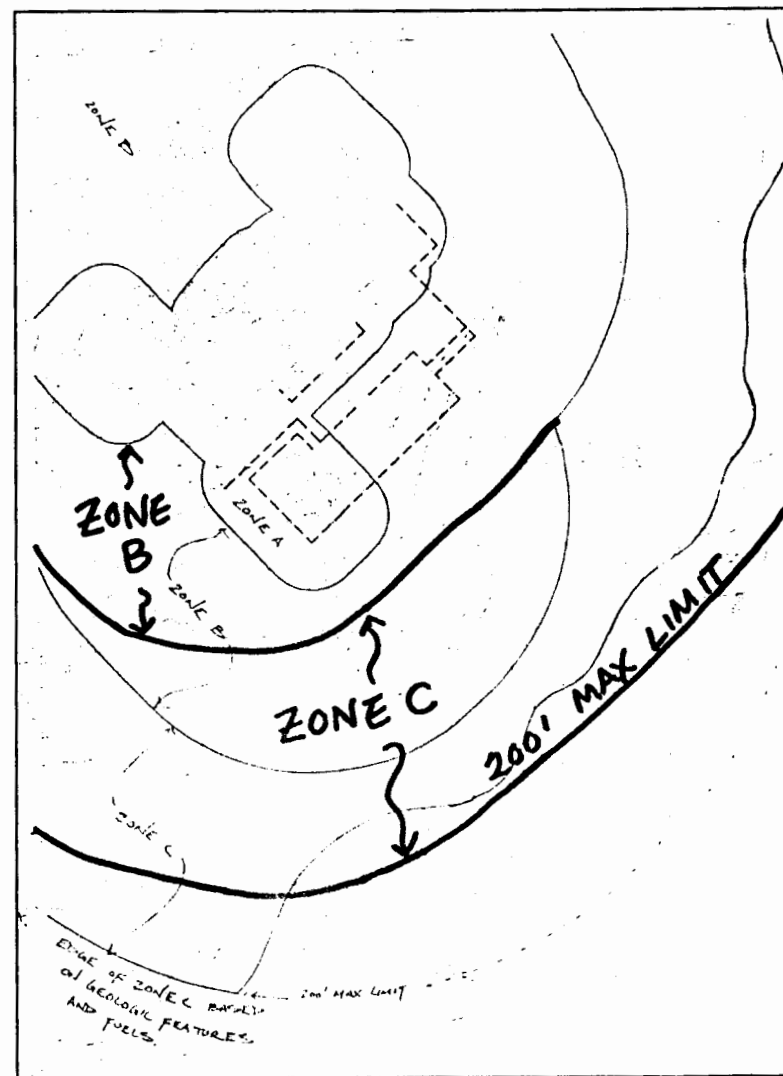
CLIVE DAWSON A.I.A.
architecture and planning
 20925 Pacific Coast Highway, Malibu, California 90265 310.589.1921

PROPOSED SINGLE FAMILY RESIDENCE
 GUESTHOUSE AND GARAGE STRUCTURES FOR:
 JOHN AND ANN MATISE
 24738 SADDLE PEAK ROAD
 MALIBU CA 90265

| | |
|----------|--|
| DATE | |
| BY | |
| CHECKED | |
| APPROVED | |



Proposed Fuel Modification



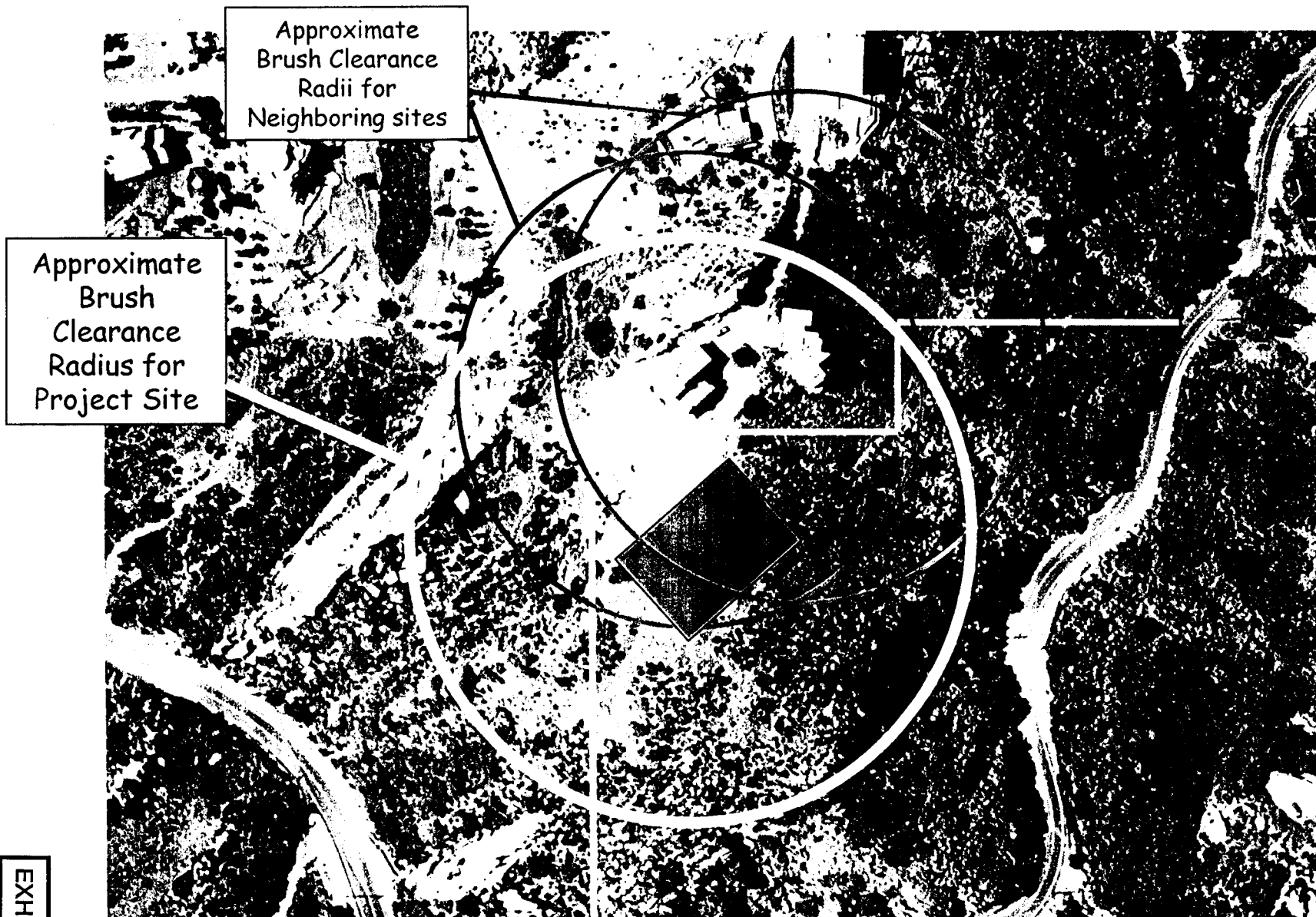
Fuel Modification with Deletion of Guesthouse

EXHIBIT NO. 14

APPLICATION NO.

4-03-017

FUEL MODIFICATION



Approximate
Brush Clearance
Radii for
Neighboring sites

Approximate
Brush
Clearance
Radius for
Project Site

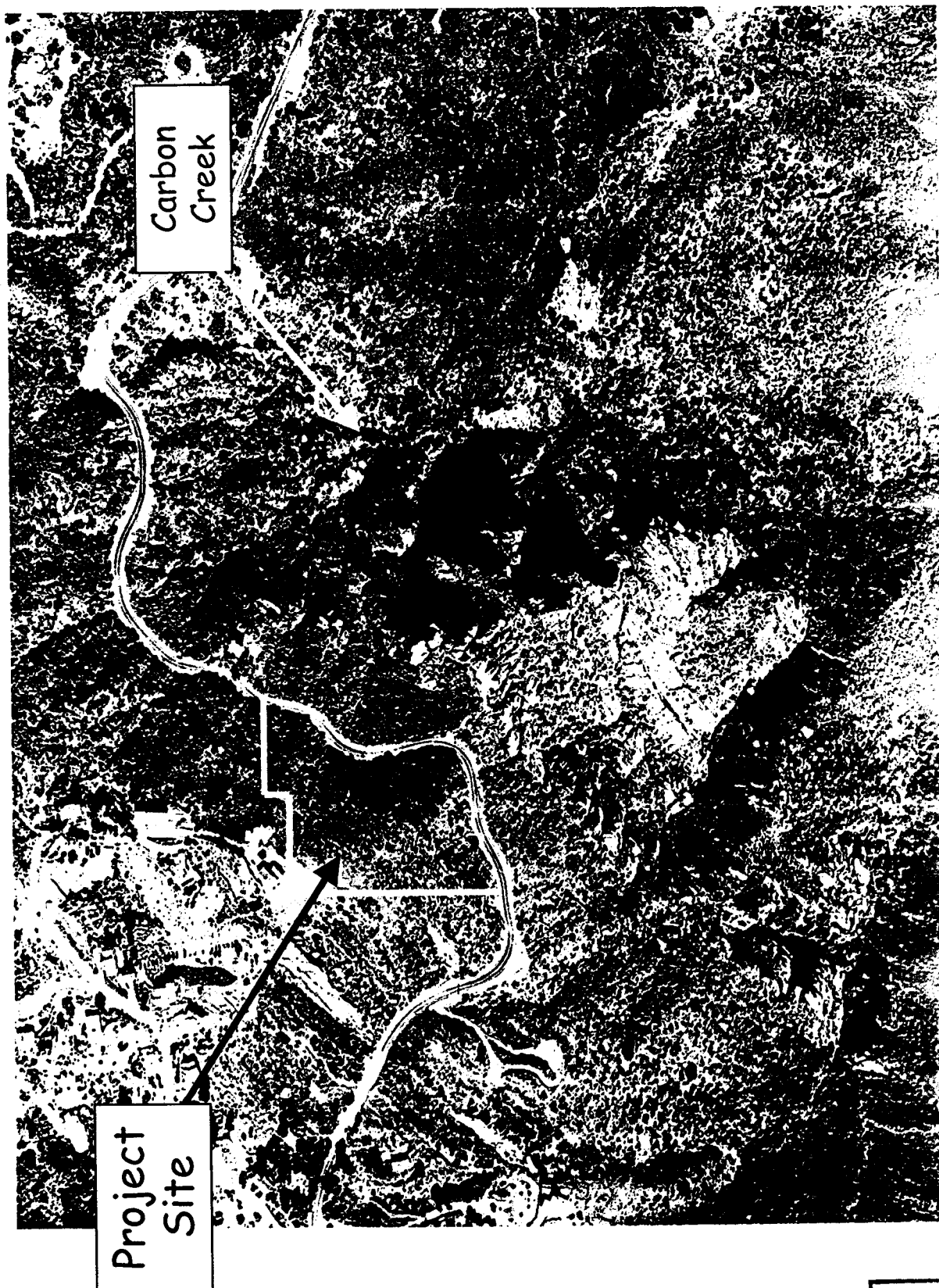
Approximate brush clearance radii for proposed development and surrounding residences.

EXHIBIT NO. 15

APPLICATION NO.

4-03-017

BRUSH CLEARANCE



Carbon
Creek

Project
Site

| |
|-------------|
| EXHIBIT |
| APPLICATION |
| 4-00 |
| AERIAL |

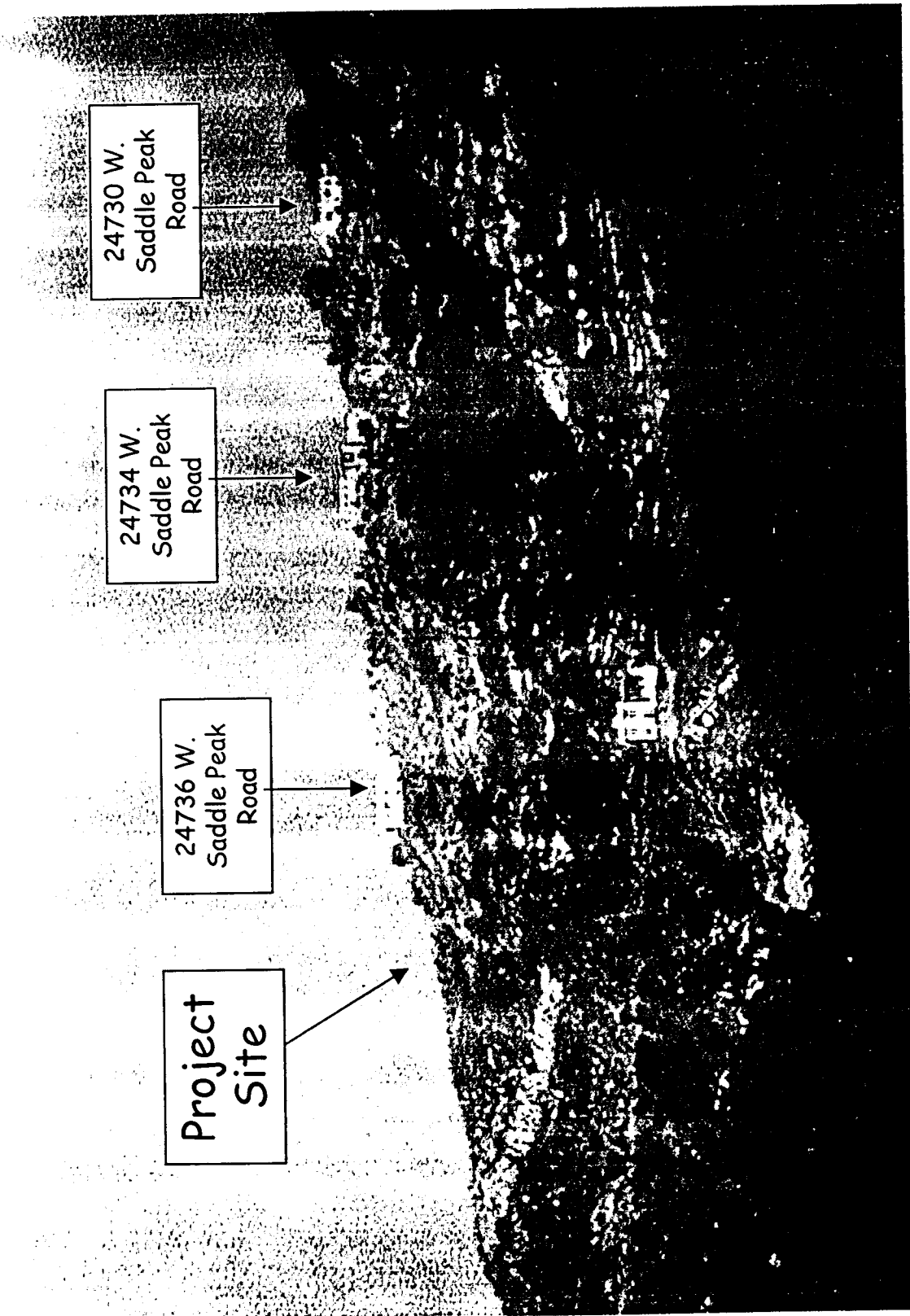


EXHIBIT NO. 17

APPLICATION NO.

4-03-017

RIDGETOP DEVELOPMENT

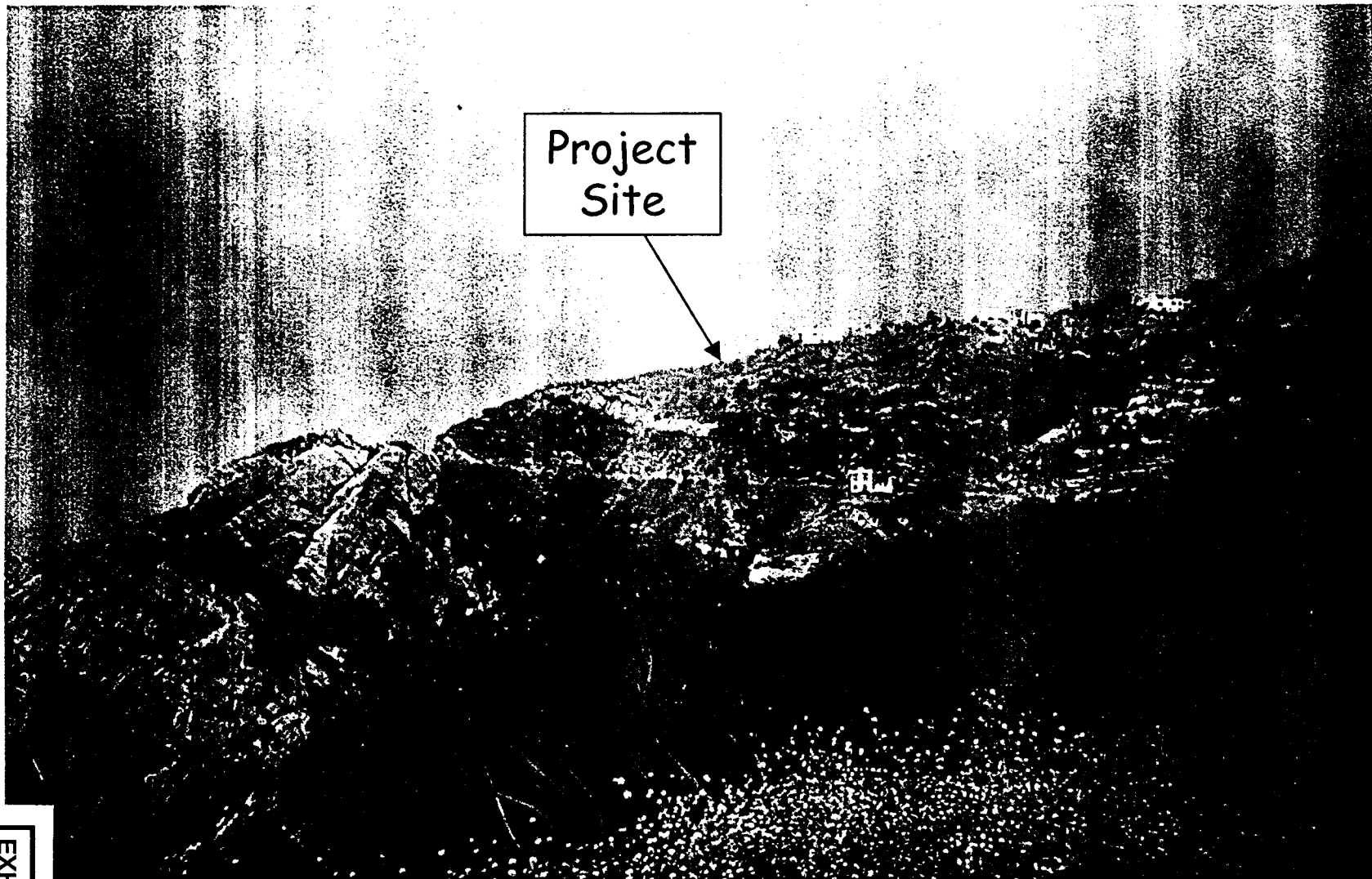


Photo 1: Project site from scenic viewpoint on Rambla Pacifico. View is to the west.

EXHIBIT NO. 18

APPLICATION NO.

4-03-017

PHOTOS (2PP)

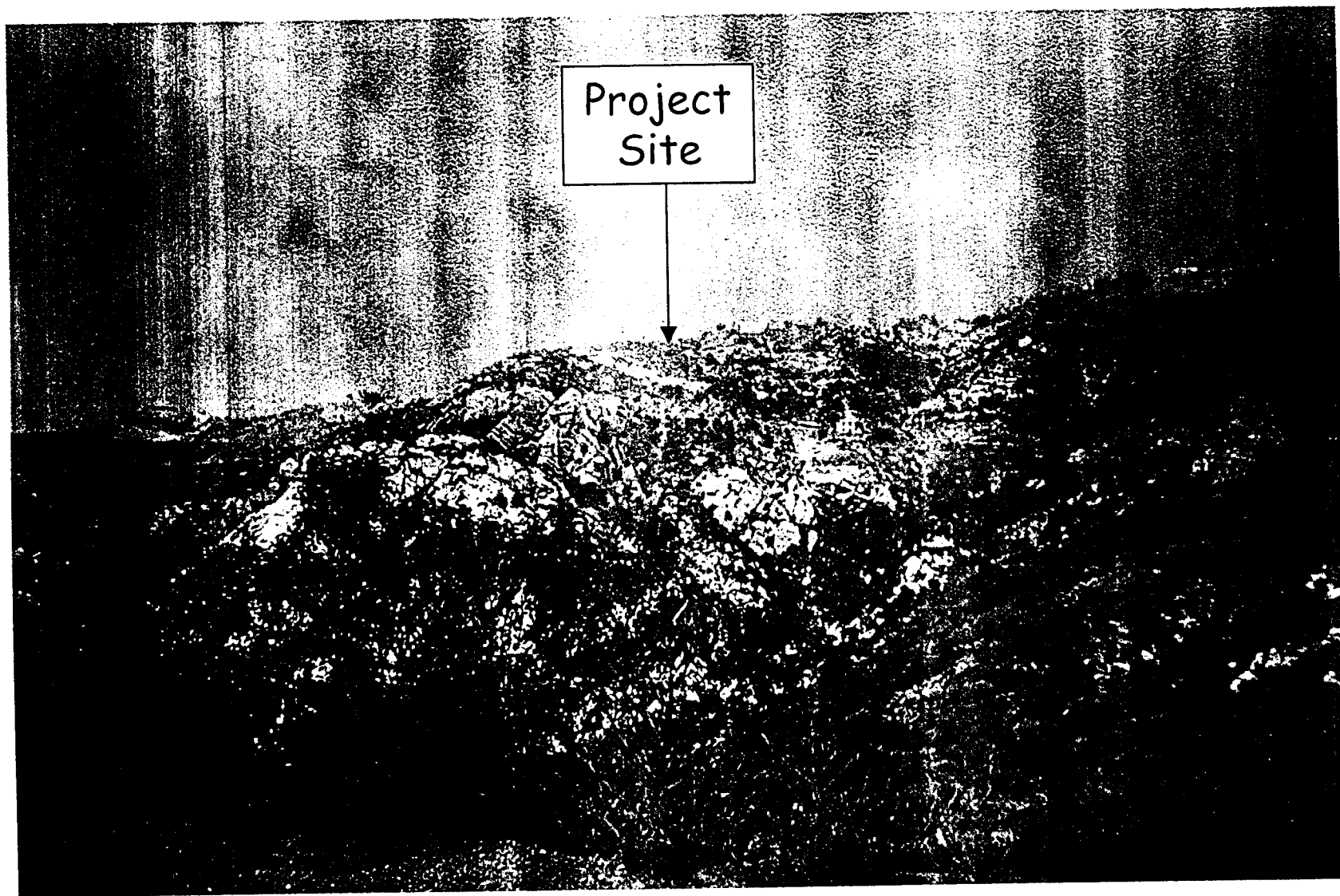


Photo 2: Project site from scenic viewpoint on Rambla Pacifico. View is to the west.

CALIFORNIA COASTAL COMMISSION

45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400



MEMORANDUM

FROM: John Dixon, Ph.D.
Ecologist / Wetland Coordinator

TO: Ventura Staff

SUBJECT: Designation of ESHA in the Santa Monica Mountains

DATE: March 25, 2003

In the context of the Malibu LCP, the Commission found that the Mediterranean Ecosystem in the Santa Mountains is rare, and especially valuable because of its relatively pristine character, physical complexity, and resultant biological diversity. Therefore, areas of undeveloped native habitat in the Santa Monica Mountains that are large and relatively unfragmented may meet the definition of ESHA by virtue of their valuable roles in that ecosystem, regardless of their relative rarity throughout the state. This is the only place in the coastal zone where the Commission has recognized chaparral as meeting the definition of ESHA. The scientific background presented herein for ESHA analysis in the Santa Monica Mountains is adapted from the Revised Findings for the Malibu LCP that the Commission adopted on February 6, 2003.

For habitats in the Santa Monica Mountains, particularly coastal sage scrub and chaparral, there are three site-specific tests to determine whether an area is ESHA because of its especially valuable role in the ecosystem. First, is the habitat properly identified, for example as coastal sage scrub or chaparral? The requisite information for this test generally should be provided by a site-specific biological assessment. Second, is the habitat largely undeveloped and otherwise relatively pristine? Third, is the habitat part of a large, contiguous block of relatively pristine native vegetation? This should be documented with an aerial photograph from our mapping unit (with the site delineated) and should be attached as an exhibit to the staff report. For those habitats that are absolutely rare or that support individual rare species, it is not necessary to find that they are relatively pristine, and are neither isolated nor fragmented.

**Designation of Environmentally Sensitive Habitat in the
Santa Monica Mountains**

The Coastal Act provides a definition of "environmentally sensitive area" as: "Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (Section 30107.5).

EXHIBIT NO. 19

APPLICATION NO.

4-03-017

ESHA MEMO

There are three important elements to the definition of ESHA. First, a geographic area can be designated ESHA either because of the presence of individual species of plants or animals or because of the presence of a particular habitat. Second, in order for an area to be designated as ESHA, the species or habitat must be either rare or it must be especially valuable. Finally, the area must be easily disturbed or degraded by human activities.

The first test of ESHA is whether a habitat or species is rare. Rarity can take several forms, each of which is important. Within the Santa Monica Mountains, rare species and habitats often fall within one of two common categories. Many rare species or habitats are globally rare, but locally abundant. They have suffered severe historical declines in overall abundance and currently are reduced to a small fraction of their original range, but where present may occur in relatively large numbers or cover large local areas. This is probably the most common form of rarity for both species and habitats in California and is characteristic of coastal sage scrub, for example. Some other habitats are geographically widespread, but occur everywhere in low abundance. California's native perennial grasslands fall within this category.

A second test for ESHA is whether a habitat or species is especially valuable. Areas may be valuable because of their "special nature," such as being an unusually pristine example of a habitat type, containing an unusual mix of species, supporting species at the edge of their range, or containing species with extreme variation. For example, reproducing populations of valley oaks are not only increasingly rare, but their southernmost occurrence is in the Santa Monica Mountains. Generally, however, habitats or species are considered valuable because of their special "role in the ecosystem." For example, many areas within the Santa Monica Mountains may meet this test because they provide habitat for endangered species, protect water quality, provide essential corridors linking one sensitive habitat to another, or provide critical ecological linkages such as the provision of pollinators or crucial trophic connections. Of course, all species play a role in their ecosystem that is arguably "special." However, the Coastal Act requires that this role be "especially valuable." This test is met for relatively pristine areas that are integral parts of the Santa Monica Mountains Mediterranean ecosystem because of the demonstrably rare and extraordinarily special nature of that ecosystem as detailed below.

Finally, ESHAs are those areas that could be easily disturbed or degraded by human activities and developments. Within the Santa Monica Mountains, as in most areas of southern California affected by urbanization, all natural habitats are in grave danger of direct loss or significant degradation as a result of many factors related to anthropogenic changes.

Ecosystem Context of the Habitats of the Santa Monica Mountains

The Santa Monica Mountains comprise the largest, most pristine, and ecologically complex example of a Mediterranean ecosystem in coastal southern California.

California's coastal sage scrub, chaparral, oak woodlands, and associated riparian areas have analogues in just a few areas of the world with similar climate. Mediterranean ecosystems with their wet winters and warm dry summers are only found in five localities (the Mediterranean coast, California, Chile, South Africa, and south and southwest Australia). Throughout the world, this ecosystem with its specially adapted vegetation and wildlife has suffered severe loss and degradation from human development. Worldwide, only 18 percent of the Mediterranean community type remains undisturbed¹. However, within the Santa Monica Mountains, this ecosystem is remarkably intact despite the fact that it is closely surrounded by some 17 million people. For example, the 150,000 acres of the Santa Monica Mountains National Recreation Area, which encompasses most of the Santa Monica Mountains, was estimated to be 90 percent free of development in 2000². Therefore, this relatively pristine area is both large and mostly unfragmented, which fulfills a fundamental tenet of conservation biology³. The need for large contiguous areas of natural habitat in order to maintain critical ecological processes has been emphasized by many conservation biologists⁴.

In addition to being a large single expanse of land, the Santa Monica Mountains ecosystem is still connected, albeit somewhat tenuously, to adjacent, more inland ecosystems⁵. Connectivity among habitats within an ecosystem and connectivity among ecosystems is very important for the preservation of species and ecosystem integrity. In a recent statewide report, the California Resources Agency⁶ identified wildlife corridors and habitat connectivity as the top conservation priority. In a letter to governor Gray Davis, sixty leading environmental scientists have endorsed the

¹ National Park Service. 2000. Draft general management plan & environmental impact statement. Santa Monica Mountains National Recreation Area – California.

² Ibid.

³ Harris, L. D. 1988. Edge effects and conservation of biotic diversity. *Conserv. Biol.* 330-332. Soule, M. E., D. T. Bolger, A. C. Alberts, J. Wright, M. Soric and S. Hill. 1988. Reconstructed dynamics of rapid extinctions of chaparral-requiring birds in urban habitat islands. *Conserv. Biol.* 2: 75-92. Yahner, R. H. 1988. Changes in wildlife communities near edges. *Conserv. Biol.* 2:333-339. Murphy, D. D. 1989. Conservation and confusion: Wrong species, wrong scale, wrong conclusions. *Conservation Biol.* 3:82-84.

⁴ Crooks, K. 2000. Mammalian carnivores as target species for conservation in Southern California. p. 105-112 in: Keeley, J. E., M. Baer-Keeley and C. J. Fotheringham (eds), 2nd Interface Between Ecology and Land Development in California, U.S. Geological Survey Open-File Report 00-62. Sauvajot, R. M., E. C. York, T. K. Fuller, H. Sharon Kim, D. A. Kamradt and R. K. Wayne. 2000. Distribution and status of carnivores in the Santa Monica Mountains, California: Preliminary results from radio telemetry and remote camera surveys. p 113-123 in: Keeley, J. E., M. Baer-Keeley and C. J. Fotheringham (eds), 2nd Interface Between Ecology and Land Development in California, U.S. Geological Survey Open-File Report 00-62. Beier, P. and R. F. Noss. 1998. Do habitat corridors provide connectivity? *Conserv. Biol.* 12:1241-1252. Beier, P. 1996. Metapopulation models, tenacious tracking and cougar conservation. In: *Metapopulations and Wildlife Conservation*, ed. D. R. McCullough. Island Press, Covelo, California, 429p.

⁵ The SMM area is linked to larger natural inland areas to the north through two narrow corridors: 1) the Conejo Grade connection at the west end of the Mountains and 2) the Simi Hills connection in the central region of the SMM (from Malibu Creek State Park to the Santa Susanna Mountains).

⁶ California Resources Agency. 2001. Missing Linkages: Restoring Connectivity to the California Landscape. California Wilderness Coalition, Calif. Dept of Parks & Recreation, USGS, San Diego Zoo and The Nature Conservancy. Available at: <http://www.calwild.org/pubs/reports/linkages/index.htm>

conclusions of that report⁷. The chief of natural resources at the California Department of Parks and Recreation has identified the Santa Monica Mountains as an area where maintaining connectivity is particularly important⁸.

The species most directly affected by large scale connectivity are those that require large areas or a variety of habitats, e.g., gray fox, cougar, bobcat, badger, steelhead trout, and mule deer⁹. Large terrestrial predators are particularly good indicators of habitat connectivity and of the general health of the ecosystem¹⁰. Recent studies show that the mountain lion, or cougar, is the most sensitive indicator species of habitat fragmentation, followed by the spotted skunk and the bobcat¹¹. Sightings of cougars in both inland and coastal areas of the Santa Monica Mountains¹² demonstrate their continued presence. Like the "canary in the mineshaft," an indicator species like this is good evidence that habitat connectivity and large scale ecological function remains in the Santa Monica Mountains ecosystem.

The habitat integrity and connectivity that is still evident within the Santa Monica Mountains is extremely important to maintain, because both theory and experiments over 75 years in ecology confirm that large spatially connected habitats tend to be more stable and have less frequent extinctions than habitats without extended spatial structure¹³. Beyond simply destabilizing the ecosystem, fragmentation and disturbance

⁷ Letters received and included in the September 2002 staff report for the Malibu LCP.

⁸ Schoch, D. 2001. Survey lists 300 pathways as vital to state wildlife. Los Angeles Times. August 7, 2001.

⁹ Martin, G. 2001. Linking habitat areas called vital for survival of state's wildlife Scientists map main migration corridors. San Francisco Chronicle, August 7, 2001.

¹⁰ Noss, R. F., H. B. Quigley, M. G. Hornocker, T. Merrill and P. C. Paquet. 1996. Conservation biology and carnivore conservation in the Rocky Mountains. *Conserv. Biol.* 10: 949-963. Noss, R. F. 1995. Maintaining ecological integrity in representative reserve networks. World Wildlife Fund Canada.

¹¹ Sauvajot, R. M., E. C. York, T. K. Fuller, H. Sharon Kim, D. A. Kamradt and R. K. Wayne. 2000. Distribution and status of carnivores in the Santa Monica Mountains, California: Preliminary results from radio telemetry and remote camera surveys. p 113-123 in: Keeley, J. E., M. Baer-Keeley and C. J. Fotheringham (eds), 2nd Interface Between Ecology and Land Development in California, U.S. Geological Survey Open-File Report 00-62. Beier, P. 1996. Metapopulation models, tenacious tracking and cougar conservation. In: Metapopulations and Wildlife Conservation, ed. D. R. McCullough. Island Press, Covelo, California, 429p.

¹² Recent sightings of mountain lions include: Temescal Canyon (pers. com., Peter Brown, Facilities Manager, Calvary Church), Topanga Canyon (pers. com., Marti Witter, NPS), Encinal and Trancas Canyons (pers. com., Pat Healy), Stump Ranch Research Center (pers. com., Dr. Robert Wayne, Dept. of Biology, UCLA). In May of 2002, the NPS *photographed* a mountain lion at a trip camera on the Back Bone Trail near Castro Crest – Seth Riley, Eric York and Dr. Ray Sauvajot, National Park Service, SMMNRA.

¹³ Gause, G. F. 1934. The struggle for existence. Baltimore, William and Wilkins 163 p. (also reprinted by Hafner, N.Y. 1964). Gause, G. F., N. P. Smaragdova and A. A. Witt. 1936. Further studies of interaction between predators and their prey. *J. Anim. Ecol.* 5:1-18. Huffaker, C. B. 1958. Experimental studies on predation: dispersion factors and predator-prey oscillations. *Hilgardia* 27:343-383. Luckinbill, L. S. 1973. Coexistence in laboratory populations of *Paramecium aurelia* and its predator *Didinium nasutum*. *Ecology* 54:1320-1327. Allen, J. C., C. C. Brewster and D. H. Slone. 2001. Spatially explicit ecological models: A spatial convolution approach. *Chaos, Solitons and Fractals*. 12:333-347.

can even cause unexpected and irreversible changes to new and completely different kinds of ecosystems (habitat conversion)¹⁴.

As a result of the pristine nature of large areas of the Santa Monica Mountains and the existence of large, unfragmented and interconnected blocks of habitat, this ecosystem continues to support an extremely diverse flora and fauna. The observed diversity is probably a function of the diversity of physical habitats. The Santa Monica Mountains have the greatest geological diversity of all major mountain ranges within the transverse range province. According to the National Park Service, the Santa Monica Mountains contain 40 separate watersheds and over 170 major streams with 49 coastal outlets¹⁵. These streams are somewhat unique along the California coast because of their topographic setting. As a "transverse" range, the Santa Monica Mountains are oriented in an east-west direction. As a result, the south-facing riparian habitats have more variable sun exposure than the east-west riparian corridors of other sections of the coast. This creates a more diverse moisture environment and contributes to the higher biodiversity of the region. The many different physical habitats of the Santa Monica Mountains support at least 17 native vegetation types¹⁶ including the following habitats considered sensitive by the California Department of Fish and Game: native perennial grassland, coastal sage scrub, red-shank chaparral, valley oak woodland, walnut woodland, southern willow scrub, southern cottonwood-willow riparian forest, sycamore-alder woodland, oak riparian forest, coastal salt marsh, and freshwater marsh. Over 400 species of birds, 35 species of reptiles and amphibians, and more than 40 species of mammals have been documented in this diverse ecosystem. More than 80 sensitive species of plants and animals (listed, proposed for listing, or species of concern) are known to occur or have the potential to occur within the Santa Monica Mountains Mediterranean ecosystem.

The Santa Monica Mountains are also important in a larger regional context. Several recent studies have concluded that the area of southern California that includes the Santa Monica Mountains is among the most sensitive in the world in terms of the number of rare endemic species, endangered species and habitat loss. These studies have designated the area to be a local hot-spot of endangerment in need of special protection¹⁷.

Therefore, the Commission finds that the Santa Monica Mountains ecosystem is itself rare and especially valuable because of its special nature as the largest, most pristine,

¹⁴ Scheffer, M., S. Carpenter, J. A. Foley, C. Folke and B. Walker. 2001. Catastrophic shifts in ecosystems. *Nature* 413:591-596.

¹⁵ NPS. 2000. op.cit.

¹⁶ From the NPS report (2000 op. cit.) that is based on the older Holland system of subjective classification. The data-driven system of Sawyer and Keeler-Wolf results in a much larger number of distinct "alliances" or vegetation types.

¹⁷ Myers, N. 1990. The biodiversity challenge: Expanded hot-spots analysis. *Environmentalist* 10:243-256. Myers, N., R. A. Mittermeier, C. G. Mittermeier, G. A. B. da Fonseca and J. A. Kent. 2000. Biodiversity hot-spots for conservation priorities. *Nature* 403:853-858. Dobson, A. P., J. P. Rodriguez, W. M. Roberts and D. S. Wilcove. 1997. Geographic distribution of endangered species in the United States. *Science* 275:550-553.

physically complex, and biologically diverse example of a Mediterranean ecosystem in coastal southern California. The Commission further finds that because of the rare and special nature of the Santa Monica Mountains ecosystem, the ecosystem roles of substantially intact areas of the constituent plant communities discussed below are "especially valuable" under the Coastal Act.

Major Habitats within the Santa Monica Mountains

The most recent vegetation map that is available for the Santa Monica Mountains is the map that was produced for the National Park Service in the mid-1990s using 1993 satellite imagery supplemented with color and color infrared aerial imagery from 1984, 1988, and 1994 and field review¹⁸. The minimum mapping unit was 5 acres. For that map, the vegetation was mapped in very broad categories, generally following a vegetation classification scheme developed by Holland¹⁹. Because of the mapping methods used the degree of plant community complexity in the landscape is not represented. For example, the various types of "ceanothus chaparral" that have been documented were lumped under one vegetation type referred to as "northern mixed chaparral." Dr. Todd Keeler-Wolf of the California Department of Fish and Game is currently conducting a more detailed, quantitative vegetation survey of the Santa Monica Mountains.

The National Park Service map can be used to characterize broadly the types of plant communities present. The main generic plant communities present in the Santa Monica Mountains²⁰ are: coastal sage scrub, chaparral, riparian woodland, coast live oak woodland, and grasslands.

Riparian Woodland

Some 49 streams connect inland areas with the coast, and there are many smaller drainages as well, many of which are "blue line." Riparian woodlands occur along both perennial and intermittent streams in nutrient-rich soils. Partly because of its multi-layered vegetation, the riparian community contains the greatest overall biodiversity of all the plant communities in the area²¹. At least four types of riparian communities are discernable in the Santa Monica Mountains: walnut riparian areas, mulefat-dominated riparian areas, willow riparian areas and sycamore riparian woodlands. Of these, the

¹⁸ Franklin, J. 1997. Forest Service Southern California Mapping Project, Santa Monica Mountains National Recreation Area, Task 11 Description and Results, Final Report. June 13, 1997, Dept. of Geography, San Diego State University, USFS Contract No. 53-91S8-3-TM45.

¹⁹ Holland R. F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, The Resources Agency, Dept. of Fish and Game, Natural Heritage Division, Sacramento, CA. 95814.

²⁰ National Park Service. 2000. Draft: General Management Plan & Environmental Impact Statement, Santa Monica Mountains National Recreation Area, US Dept. of Interior, National Park Service, December 2000. (Fig. 11 in this document.)

²¹ Ibid.

sycamore riparian woodland is the most diverse riparian community in the area. In these habitats, the dominant plant species include arroyo willow, California black walnut, sycamore, coast live oak, Mexican elderberry, California bay laurel, and mule fat. Wildlife species that have been observed in this community include least Bell's vireo (a State and federally listed species), American goldfinches, black phoebes, warbling vireos, bank swallows (State listed threatened species), song sparrows, belted kingfishers, raccoons, and California and Pacific tree frogs.

Riparian communities are the most species-rich to be found in the Santa Monica Mountains. Because of their multi-layered vegetation, available water supply, vegetative cover and adjacency to shrubland habitats, they are attractive to many native wildlife species, and provide essential functions in their lifecycles²². During the long dry summers in this Mediterranean climate, these communities are an essential refuge and oasis for much of the areas' wildlife.

Riparian habitats and their associated streams form important connecting links in the Santa Monica Mountains. These habitats connect all of the biological communities from the highest elevation chaparral to the sea with a unidirectional flowing water system, one function of which is to carry nutrients through the ecosystem to the benefit of many different species along the way.

The streams themselves provide refuge for sensitive species including: the coast range newt, the Pacific pond turtle, and the steelhead trout. The coast range newt and the Pacific pond turtle are California Species of Special Concern and are proposed for federal listing²³, and the steelhead trout is federally endangered. The health of the streams is dependent on the ecological functions provided by the associated riparian woodlands. These functions include the provision of large woody debris for habitat, shading that controls water temperature, and input of leaves that provide the foundation of the stream-based trophic structure.

The importance of the connectivity between riparian areas and adjacent habitats is illustrated by the Pacific pond turtle and the coast range newt, both of which are sensitive and both of which require this connectivity for their survival. The life history of the Pacific pond turtle demonstrates the importance of riparian areas and their associated watersheds for this species. These turtles require the stream habitat during the wet season. However, recent radio tracking work²⁴ has found that although the Pacific pond turtle spends the wet season in streams, it also requires upland habitat for refuge during the dry season. Thus, in coastal southern California, the Pacific pond turtle requires both streams and intact adjacent upland habitats such as coastal sage

²² Walter, Hartmut. Bird use of Mediterranean habitats in the Santa Monica Mountains, Coastal Commission Workshop on the Significance of Native Habitats in the Santa Monica Mountains. CCC Hearing, June 13, 2002, Queen Mary Hotel.

²³ USFWS. 1989. Endangered and threatened wildlife and plants; animal notice of review. Fed. Reg. 54:554-579. USFWS. 1993. Endangered and threatened wildlife and plants; notice of 1-year petition finding on the western pond turtle. Fed. Reg. 58:42717-42718.

²⁴ Rathbun, G.B., N.J. Scott and T.G. Murphy. 2002. Terrestrial habitat use by Pacific pond turtle in a Mediterranean climate. *Southwestern Naturalist*. (in Press).

scrub, woodlands or chaparral as part of their normal life cycle. The turtles spend about four months of the year in upland refuge sites located an average distance of 50 m (but up to 280 m) from the edge of the creek bed. Similarly, nesting sites where the females lay eggs are also located in upland habitats an average of 30 m (but up to 170 m) from the creek. Occasionally, these turtles move up to 2 miles across upland habitat²⁵. Like many species, the pond turtle requires both stream habitats and the upland habitats of the watershed to complete its normal annual cycle of behavior. Similarly, the coast range newt has been observed to travel hundreds of meters into upland habitat and spend about ten months of the year far from the riparian streambed²⁶. They return to the stream to breed in the wet season, and they are therefore another species that requires both riparian habitat and adjacent uplands for their survival.

Riparian habitats in California have suffered serious losses and such habitats in southern California are currently very rare and seriously threatened. In 1989, Faber estimated that 95-97% of riparian habitat in southern California was already lost²⁷. Writing at the same time as Faber, Bowler asserted that, "[t]here is no question that riparian habitat in southern California is endangered."²⁸ In the intervening 13 years, there have been continuing losses of the small amount of riparian woodlands that remain. Today these habitats are, along with native grasslands and wetlands, among the most threatened in California.

In addition to direct habitat loss, streams and riparian areas have been degraded by the effects of development. For example, the coast range newt, a California Species of Special Concern has suffered a variety of impacts from human-related disturbances²⁹. Human-caused increased fire frequency has resulted in increased sedimentation rates, which exacerbates the cannibalistic predation of adult newts on the larval stages.³⁰ In addition impacts from non-native species of crayfish and mosquito fish have also been documented. When these non-native predators are introduced, native prey organisms are exposed to new mortality pressures for which they are not adapted. Coast range newts that breed in the Santa Monica Mountain streams do not appear to have adaptations that permit co-occurrence with introduced mosquito fish and crayfish³¹. These introduced predators have eliminated the newts from streams where they previously occurred by both direct predation and suppression of breeding.

²⁵ Testimony by R. Dagit, Resource Conservation District of the Santa Monica Mountains at the CCC Habitat Workshop on June 13, 2002.

²⁶ Dr. Lee Kats, Pepperdine University, personal communication to Dr J. Allen, CCC.

²⁷ Faber, P.A., E. Keller, A. Sands and B.M. Massey. 1989. The ecology of riparian habitats of the southern California coastal region: a community profile. U.S. Fish and Wildlife Service Biological Report 85(7.27) 152pp.

²⁸ Bowler, P.A. 1989. Riparian woodland: An endangered habitat in southern California. Pp 80-97 in Schoenherr, A.A. (ed.) Endangered plant communities of southern California. Botanists Special Publication No. 3.

²⁹ Gamradt, S.C., L.B. Kats and C.B. Anzalone. 1997. Aggression by non-native crayfish deters breeding in California newts. *Conservation Biology* 11(3):793-796.

³⁰ Kerby, L.J., and L.B. Kats. 1998. Modified interactions between salamander life stages caused by wildfire-induced sedimentation. *Ecology* 79(2):740-745.

³¹ Gamradt, S.C. and L.B. Kats. 1996. Effect of introduced crayfish and mosquitofish on California newts. *Conservation Biology* 10(4):1155-1162.

Therefore, because of the essential role that riparian plant communities play in maintaining the biodiversity of the Santa Monica Mountains, because of the historical losses and current rarity of these habitats in southern California, and because of their extreme sensitivity to disturbance, the native riparian habitats in the Santa Monica Mountains meet the definition of ESHA under the Coastal Act.

Coastal Sage Scrub and Chaparral

Coastal sage scrub and chaparral are often lumped together as "shrublands" because of their roughly similar appearance and occurrence in similar and often adjacent physical habitats. In earlier literature, these vegetation associations were often called soft chaparral and hard chaparral, respectively. "Soft" and "hard" refers to differences in their foliage associated with different adaptations to summer drought. Coastal sage scrub is dominated by soft-leaved, generally low-growing aromatic shrubs that die back and drop their leaves in response to drought. Chaparral is dominated by taller, deeper-rooted evergreen shrubs with hard, waxy leaves that minimize water loss during drought.

The two vegetation types are often found interspersed with each other. Under some circumstances, coastal sage scrub may even be successional to chaparral, meaning that after disturbance, a site may first be covered by coastal sage scrub, which is then replaced with chaparral over long periods of time.³² The existing mosaic of coastal sage scrub and chaparral is the result of a dynamic process that is a function of fire history, recent climatic conditions, soil differences, slope, aspect and moisture regime, and the two habitats should not be thought of as completely separate and unrelated entities but as different phases of the same process³³. The spatial pattern of these vegetation stands at any given time thus depends on both local site conditions and on history (e.g., fire), and is influenced by both natural and human factors.

In lower elevation areas with high fire frequency, chaparral and coastal sage scrub may be in a state of flux, leading one researcher to describe the mix as a "coastal sage-chaparral subclimax."³⁴ Several other researchers have noted the replacement of chaparral by coastal sage scrub, or coastal sage scrub by chaparral depending on fire history.³⁵ In transitional and other settings, the mosaic of chaparral and coastal sage

³² Cooper, W.S. 1922. The broad-sclerophyll vegetation of California. Carnegie Institution of Washington Publication 319. 124 pp.

³³ Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains. The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024. (See attached comment document in Appendix).

³⁴ Hanes, T.L. 1965. Ecological studies on two closely related chaparral shrubs in southern California. Ecological Monographs 41:27-52.

³⁵ Gray, K.L. 1983. Competition for light and dynamic boundary between chaparral and coastal sage scrub. Madrono 30(1):43-49. Zedler, P.H., C.R. Gautier and G.S. McMaster. 1983. Vegetation change in response to extreme events: The effect of a short interval between fires in California chaparral and coastal sage scrub. Ecology 64(4): 809-818.

scrub enriches the seasonal plant resource base and provides additional habitat variability and seasonality for the many species that inhabit the area.

Relationships Among Coastal Sage Scrub, Chaparral and Riparian Communities

Although the constituent communities of the Santa Monica Mountains Mediterranean ecosystem can be defined and distinguished based on species composition, growth habits, and the physical habitats they characteristically occupy, they are not independent entities ecologically. Many species of plants, such as black sage, and laurel sumac, occur in more than one plant community and many animals rely on the predictable mix of communities found in undisturbed Mediterranean ecosystems to sustain them through the seasons and during different portions of their life histories.

Strong evidence for the interconnectedness between chaparral, coastal scrub and other habitats is provided by "opportunistic foragers" (animals that follow the growth and flowering cycles across these habitats). Coastal scrub and chaparral flowering and growth cycles differ in a complimentary and sequential way that many animals have evolved to exploit. Whereas coastal sage scrub is shallow-rooted and responds quickly to seasonal rains, chaparral plants are typically deep-rooted having most of their flowering and growth later in the rainy season after the deeper soil layers have been saturated³⁶. New growth of chaparral evergreen shrubs takes place about four months later than coastal sage scrub plants and it continues later into the summer³⁷. For example, in coastal sage scrub, California sagebrush flowers and grows from August to February and coyote bush flowers from August to November³⁸. In contrast, chamise chaparral and bigpod ceanothus flower from April to June, buck brush ceanothus flowers from February to April, and hoaryleaf ceanothus flowers from March to April.

Many groups of animals exploit these seasonal differences in growth and blooming period. The opportunistic foraging insect community (e.g., honeybees, butterflies and moths) tends to follow these cycles of flowering and new growth, moving from coastal sage scrub in the early rainy season to chaparral in the spring³⁹. The insects in turn are followed by insectivorous birds such as the blue-gray gnatcatcher⁴⁰, bushtit, cactus wren, Bewick's wren and California towhee. At night bats take over the role of daytime insectivores. At least 12 species of bats (all of which are considered sensitive) occur in

³⁶ DeSimone, S. 2000. California's coastal sage scrub. *Fremontia* 23(4):3-8. Mooney, H.A. 1988. Southern coastal scrub. Chap. 13 in Barbour, M.G. and J. Majors; Eds. 1988. *Terrestrial vegetation of California*, 2nd Edition. Calif. Native Plant Soc. Spec. Publ. #9.

³⁷ Schoenherr, A. A. 1992. *A natural history of California*. University of California Press, Berkeley. 772p.

³⁸ Dale, N. 2000. Flowering plants of the Santa Monica Mountains. California Native Plant Society, 1722 J Street, Suite 17, Sacramento, CA 95814.

³⁹ Ballmer, G. R. 1995. What's bugging coastal sage scrub. *Fremontia* 23(4):17-26.

⁴⁰ Root, R. B. 1967. The niche exploitation pattern of the blue-gray gnatcatcher. *Ecol. Monog.* 37:317-350.

the Santa Monica Mountains⁴¹. Five species of hummingbirds also follow the flowering cycle⁴².

Many species of 'opportunistic foragers', which utilize several different community types, perform important ecological roles during their seasonal movements. The scrub jay is a good example of such a species. The scrub jay is an omnivore and forages in coastal sage scrub, chaparral, and oak woodlands for insects, berries and notably acorns. Its foraging behavior includes the habit of burying acorns, usually at sites away from the parent tree canopy. Buried acorns have a much better chance of successful germination (about two-fold) than exposed acorns because they are protected from desiccation and predators. One scrub jay will bury approximately 5000 acorns in a year. The scrub jay therefore performs the function of greatly increasing recruitment and regeneration of oak woodland, a valuable and sensitive habitat type⁴³.

Like the scrub jay, most of the species of birds that inhabit the Mediterranean ecosystem in the Santa Monica Mountains require more than one community type in order to flourish. Many species include several community types in their daily activities. Other species tend to move from one community to another seasonally. The importance of maintaining the integrity of the multi-community ecosystem is clear in the following observations of Dr. Hartmut Walter of the University of California at Los Angeles:

"Bird diversity is directly related to the habitat mosaic and topographic diversity of the Santa Monicas. Most bird species in this bio-landscape require more than one habitat for survival and reproduction." "A significant proportion of the avifauna breeds in the wooded canyons of the Santa Monicas. Most of the canyon breeders forage every day in the brush- and grass-covered slopes, ridges and mesas. They would not breed in the canyons in the absence of the surrounding shrublands. Hawks, owls, falcons, orioles, flycatchers, woodpeckers, warblers, hummingbirds, etc. belong to this group. Conversely, some of the characteristic chaparral birds such as thrashers, quails, and wrentits need the canyons for access to shelter, protection from fire, and water. The regular and massive movement of birds between riparian corridors and adjacent shrublands has been demonstrated by qualitative and quantitative observations by several UCLA students⁴⁴."

Thus, the Mediterranean ecosystem of the Santa Monica Mountains is a mosaic of vegetation types linked together ecologically. The high biodiversity of the area results

⁴¹ Letter from Dr. Marti Witter, NPS, dated Sept. 13, 2001, in letters received and included in the September 2002 staff report for the Malibu LCP.

⁴² National Park Service. 1993. A checklist of the birds of the Santa Monica Mountains National Recreation Area. Southwest Parks and Monuments Assoc., 221 N. Court, Tucson, AZ. 85701

⁴³ Borchert, M. I., F. W. Davis, J. Michaelsen and L. D. Oyler. 1989. Interactions of factors affecting seedling recruitment of blue oak (*Quercus douglasii*) in California. *Ecology* 70:389-404. Bossema, I. 1979. Jays and oaks: An eco-ethological study of a symbiosis. *Behavior* 70:1-118. Schoenherr, A. A. 1992. A natural history of California. University of California Press, Berkeley. 772p.

⁴⁴ Walter, Hartmut. Bird use of Mediterranean habitats in the Santa Monica Mountains, Coastal Commission Workshop on the Significance of Native Habitats in the Santa Monica Mountains. CCC Hearing, June 13, 2002, Queen Mary Hotel.

from both the diversity and the interconnected nature of this mosaic. Most raptor species, for example, require large areas and will often require different habitats for perching, nesting and foraging. Fourteen species of raptors (13 of which are considered sensitive) are reported from the Santa Monica Mountains. These species utilize a variety of habitats including rock outcrops, oak woodlands, riparian areas, grasslands, chaparral, coastal sage scrub, estuaries and freshwater lakes⁴⁵.

When the community mosaic is disrupted and fragmented by development, many chaparral-associated native bird species are impacted. In a study of landscape-level fragmentation in the Santa Monica Mountains, Stralberg⁴⁶ found that the ash-throated flycatcher, Bewick's wren, wrentit, blue-gray gnatcatcher, California thrasher, orange-crowned warbler, rufous-crowned sparrow, spotted towhee, and California towhee all decreased in numbers as a result of urbanization. Soule⁴⁷ observed similar effects of fragmentation on chaparral and coastal sage scrub birds in the San Diego area.

In summary, all of the vegetation types in this ecosystem are strongly linked by animal movement and foraging. Whereas classification and mapping of vegetation types may suggest a snapshot view of the system, the seasonal movements and foraging of animals across these habitats illustrates the dynamic nature and vital connections that are crucial to the survival of this ecosystem.

Coastal Sage Scrub

"Coastal sage scrub" is a generic vegetation type that is inclusive of several subtypes⁴⁸. In the Santa Monica Mountains, coastal sage scrub is mostly of the type termed "Venturan Coastal Sage Scrub." In general, coastal sage scrub is comprised of dominant species that are semi-woody and low-growing, with shallow, dense roots that enable them to respond quickly to rainfall. Under the moist conditions of winter and spring, they grow quickly, flower, and produce light, wind-dispersed seeds, making them good colonizers following disturbance. These species cope with summer drought by dying back, dropping their leaves or producing a smaller summer leaf in order to reduce water loss. Stands of coastal sage scrub are much more open than chaparral and contain a greater admixture of herbaceous species. Coastal sage scrub is generally restricted to drier sites, such as low foothills, south-facing slopes, and shallow soils at higher elevations.

⁴⁵ National Park Service. 1993. A checklist of the birds of the Santa Monica Mountains National Recreation Area. Southwest Parks and Monuments Assoc., 221 N. Court, Tucson, AZ. 85701. and Letter from Dr. Marti Witter, NPS, Dated Sept. 13, 2001, in letters received and included in the September 2002 staff report for the Malibu LCP.

⁴⁶ Stralberg, D. 2000. Landscape-level urbanization effects on chaparral birds: A Santa Monica Mountains case study. p 125-136 in: Keeley, J. E., M. Baer-Keeley and C. J. Fotheringham (eds), 2nd Interface Between Ecology and Land Development in California, U.S. Geological Survey Open-File Report 00-62.

⁴⁷ Soule, M. E, D. T. Bolger, A. C. Alberts, J. Wright, M. Sorice and S. Hill. 1988. Reconstructed dynamics of rapid extinctions of chaparral-requiring birds in urban habitat islands. *Conserv. Biol.* 2: 75-92.

⁴⁸ Kirkpatrick, J.B. and C.F. Hutchinson. 1977. The community composition of Californian coastal sage scrub. *Vegetatio* 35:21-33; Holland, 1986. op.cit.; Sawyer and Keeler-Wolf, 1995, op.cit.

The species composition and structure of individual stands of coastal sage scrub depend on moisture conditions that derive from slope, aspect, elevation and soil type. Drier sites are dominated by more drought-resistant species (e.g., California sagebrush, coast buckwheat, and *Opuntia* cactus). Where more moisture is available (e.g., north-facing slopes), larger evergreen species such as toyon, laurel sumac, lemonade berry, and sugar bush are common. As a result, there is more cover for wildlife, and movement of large animals from chaparral into coastal sage scrub is facilitated in these areas. Characteristic wildlife in this community includes Anna's hummingbirds, rufous-sided towhees, California quail, greater roadrunners, Bewick's wrens, coyotes, and coast horned lizards⁴⁹, but most of these species move between coastal sage scrub and chaparral during their daily activities or on a seasonal basis.

Of the many important ecosystem roles performed by the coastal sage scrub community, five are particularly important in the Santa Monica Mountains. Coastal sage scrub provides critical linkages between riparian corridors, provides essential habitat for species that require several habitat types during the course of their life histories, provides essential habitat for local endemics, supports rare species that are in danger of extinction, and reduces erosion, thereby protecting the water quality of coastal streams.

Riparian woodlands are primary contributors to the high biodiversity of the Santa Monica Mountains. The ecological integrity of those riparian habitats not only requires wildlife dispersal along the streams, but also depends on the ability of animals to move from one riparian area to another. Such movement requires that the riparian corridors be connected by suitable habitat. In the Santa Monica Mountains, coastal sage scrub and chaparral provide that function. Significant development in coastal sage scrub would reduce the riparian corridors to linear islands of habitat with severe edge effects⁵⁰, reduced diversity, and lower productivity.

Most wildlife species and many species of plants utilize several types of habitat. Many species of animals endemic to Mediterranean habitats move among several plant communities during their daily activities and many are reliant on different communities either seasonally or during different stages of their life cycle. Without an intact mosaic of coastal sage scrub, chaparral, and riparian community types, many species will not thrive. Specific examples of the importance of interconnected communities, or habitats, were provided in the discussion above. This is an essential ecosystem role of coastal sage scrub.

A characteristic of the coastal sage scrub vegetation type is a high degree of endemism. This is consonant with Westman's observation that 44 percent of the species he sampled in coastal sage scrub occurred at only one of his 67 sites, which were

⁴⁹ National Park Service. 2000. Draft: General Management Plan & Environmental Impact Statement, Santa Monica Mountains National Recreation Area, US Dept. of Interior, National Park Service, December 2000.

⁵⁰ Environmental impacts are particularly severe at the interface between development and natural habitats. The greater the amount of this "edge" relative to the area of natural habitat, the worse the impact.

distributed from the San Francisco Bay area to Mexico⁵¹. Species with restricted distributions are by nature more susceptible to loss or degradation of their habitat. Westman said of this unique and local aspect of coastal sage scrub species in California:

"While there are about 50 widespread sage scrub species, more than half of the 375 species encountered in the present study of the sage scrub flora are rare in occurrence within the habitat range. In view of the reduction of the area of coastal sage scrub in California to 10-15% of its former extent and the limited extent of preserves, measures to conserve the diversity of the flora are needed."⁵²

Coastal sage scrub in southern California provides habitat for about 100 rare species⁵³, many of which are also endemic to limited geographic regions⁵⁴. In the Santa Monica Mountains, rare animals that inhabit coastal sage scrub⁵⁵ include the Santa Monica shieldback katydid, silvery legless lizard, coastal cactus wren, Bell's sparrow, San Diego desert woodrat, southern California rufous-crowned sparrow, coastal western whiptail, and San Diego horned lizard. Some of these species are also found in chaparral⁵⁶. Rare plants found in coastal sage scrub in the Santa Monica Mountains include Santa Susana tarplant, Coulter's saltbush, Blockman's dudleya, Braunton's milkvetch, Parry's spineflower, and Plummer's mariposa lily⁵⁷. A total of 32 sensitive species of reptiles, birds and mammals have been identified in this community by the National Park Service.⁵⁸

One of the most important ecological functions of coastal sage scrub in the Santa Monica Mountains is to protect water quality in coastal streams by reducing erosion in the watershed. Although shallow rooted, the shrubs that define coastal sage scrub have dense root masses that hold the surface soils much more effectively than the exotic annual grasses and forbs that tend to dominate in disturbed areas. The native shrubs of this community are resistant not only to drought, as discussed above, but well adapted to fire. Most of the semi-woody shrubs have some ability to crown sprout after

⁵¹ Westman, W.E. 1981. Diversity relations and succession in Californian coastal sage scrub. *Ecology* 62:170-184.

⁵² Ibid.

⁵³ Atwood, J. L. 1993. California gnatcatchers and coastal sage scrub: The biological basis for endangered species listing. pp.149-166 *In: Interface Between Ecology and Land Development in California*. Ed. J. E. Keeley, So. Calif. Acad. of Sci., Los Angeles. California Department of Fish and Game (CDFG). 1993. The Southern California Coastal Sage Scrub (CSS) Natural Communities Conservation Plan (NCCP). CDFG and Calif. Resources Agency, 1416 9th St., Sacramento, CA 95814.

⁵⁴ Westman, W.E. 1981. op. cit.

⁵⁵ Biological Resources Assessment of the Proposed Santa Monica Mountains Significant Ecological Area. Nov. 2000. Los Angeles Co., Dept. of Regional Planning, 320 West Temple St., Rm. 1383, Los Angeles, CA 90012.

⁵⁶ O'Leary J.F., S.A. DeSimone, D.D. Murphy, P.F. Brussard, M.S. Gilpin, and R.F. Noss. 1994. Bibliographies on coastal sage scrub and related malacophyllous shrublands of other Mediterranean-type climates. *California Wildlife Conservation Bulletin* 10:1-51.

⁵⁷ Biological Resources Assessment of the Proposed Santa Monica Mountains Significant Ecological Area. Nov. 2000. Los Angeles Co., Dept. of Regional Planning, 320 West Temple St., Rm. 1383, Los Angeles, CA 90012.

⁵⁸ NPS, 2000, op cit.

fire. Several CSS species (e.g., *Eriogonum cinereum*) in the Santa Monica Mountains and adjacent areas resprout vigorously and other species growing near the coast demonstrate this characteristic more strongly than do individuals of the same species growing at inland sites in Riverside County.⁵⁹ These shrub species also tend to recolonize rapidly from seed following fire. As a result they provide persistent cover that reduces erosion.

In addition to performing extremely important roles in the Mediterranean ecosystem, the coastal sage scrub community type has been drastically reduced in area by habitat loss to development. In the early 1980's it was estimated that 85 to 90 percent of the original extent of coastal sage scrub in California had already been destroyed.⁶⁰ Losses since that time have been significant and particularly severe in the coastal zone.

Therefore, because of its increasing rarity, its important role in the functioning of the Santa Monica Mountains Mediterranean ecosystem, and its extreme vulnerability to development, coastal sage scrub within the Santa Monica Mountains meets the definition of ESHA under the Coastal Act.

Chaparral

Another shrub community in the Santa Monica Mountain Mediterranean ecosystem is chaparral. Like "coastal sage scrub," this is a generic category of vegetation. Chaparral species have deep roots (10s of ft) and hard waxy leaves, adaptations to drought that increase water supply and decrease water loss at the leaf surface. Some chaparral species cope more effectively with drought conditions than do desert plants⁶¹. Chaparral plants vary from about one to four meters tall and form dense, intertwining stands with nearly 100 percent ground cover. As a result, there are few herbaceous species present in mature stands. Chaparral is well adapted to fire. Many species regenerate mainly by crown sprouting; others rely on seeds which are stimulated to germinate by the heat and ash from fires. Over 100 evergreen shrubs may be found in chaparral⁶². On average, chaparral is found in wetter habitats than coastal sage scrub, being more common at higher elevations and on north facing slopes.

The broad category "northern mixed chaparral" is the major type of chaparral shown in the National Park Service map of the Santa Monica Mountains. However, northern mixed chaparral can be variously dominated by chamise, scrub oak or one of several species of manzanita or by ceanothus. In addition, it commonly contains woody vines and large shrubs such as mountain mahogany, toyon, hollyleaf redberry, and sugarbush⁶³. The rare red shank chaparral plant community also occurs in the Santa Monica Mountains. Although included within the category "northern mixed chaparral" in

⁵⁹ Dr. John O'Leary, SDSU, personal communication to Dr. John Dixon, CCC, July 2, 2002

⁶⁰ Westman, W.E. 1981. op. cit.

⁶¹ Dr. Stephen Davis, Pepperdine University. Presentation at the CCC workshop on the significance of native habitats in the Santa Monica Mountains. June 13, 2002.

⁶² Keely, J.E. and S.C. Keeley. Chaparral. Pages 166-207 in M.G. Barbour and W.D. Billings, eds. North American Terrestrial Vegetation. New York, Cambridge University Press.

⁶³ Ibid.

the vegetation map, several types of ceanothus chaparral are reported in the Santa Monica Mountains. Ceanothus chaparral occurs on stable slopes and ridges, and may be dominated by bigpod ceanothus, buck brush ceanothus, hoaryleaf ceanothus, or greenbark ceanothus. In addition to ceanothus, other species that are usually present in varying amounts are chamise, black sage, holly-leaf redberry, sugarbush, and coast golden bush⁶⁴.

Several sensitive plant species that occur in the chaparral of the Santa Monica Mountains area are: Santa Susana tarplant, Lyon's pentachaeta, marcescent dudleya, Santa Monica Mountains dudleya, Branton's milk vetch and salt spring checkerbloom⁶⁵. Several occurring or potentially occurring sensitive animal species in chaparral from the area are: Santa Monica shieldback katydid, western spadefoot toad, silvery legless lizard, San Bernardino ring-neck snake, San Diego mountain kingsnake, coast patch-nosed snake, sharp-shinned hawk, southern California rufous-crowned sparrow, Bell's sparrow, yellow warbler, pallid bat, long-legged myotis bat, western mastiff bat, and San Diego desert woodrat.⁶⁶

Coastal sage scrub and chaparral are the predominant generic community types of the Santa Monica Mountains and provide the living matrix within which rarer habitats like riparian woodlands exist. These two shrub communities share many important ecosystem roles. Like coastal sage scrub, chaparral within the Santa Monica Mountains provides critical linkages among riparian corridors, provides essential habitat for species that require several habitat types during the course of their life histories, provides essential habitat for sensitive species, and stabilizes steep slopes and reduces erosion, thereby protecting the water quality of coastal streams.

Many species of animals in Mediterranean habitats characteristically move among several plant communities during their daily activities, and many are reliant on different communities either seasonally or during different stages of their life cycle. The importance of an intact mosaic of coastal sage scrub, chaparral, and riparian community types is perhaps most critical for birds. However, the same principles apply to other taxonomic groups. For example, whereas coastal sage scrub supports a higher diversity of native ant species than chaparral, chaparral habitat is necessary for the coast horned lizard, an ant specialist⁶⁷. Additional examples of the importance of an interconnected communities, or habitats, were provided in the discussion of coastal sage scrub above. This is an extremely important ecosystem role of chaparral in the Santa Monica Mountains.

Chaparral is also remarkably adapted to control erosion, especially on steep slopes. The root systems of chaparral plants are very deep, extending far below the surface and

⁶⁴ Ibid.

⁶⁵ Biological Resources Assessment of the Proposed Santa Monica Mountains Significant Ecological Area. Nov. 2000. Los Angeles Co., Dept. of Regional Planning, 320 West Temple St., Rm. 1383, Los Angeles, CA 90012.

⁶⁶ Ibid.

⁶⁷ A.V. Suarez. Ants and lizards in coastal sage scrub and chaparral. A presentation at the CCC workshop on the significance of native habitats in the Santa Monica Mountains. June 13, 2002.

penetrating the bedrock below⁶⁸, so chaparral literally holds the hillsides together and prevents slippage.⁶⁹ In addition, the direct soil erosion from precipitation is also greatly reduced by 1) water interception on the leaves and above ground foliage and plant structures, and 2) slowing the runoff of water across the soil surface and providing greater soil infiltration. Chaparral plants are extremely resistant to drought, which enables them to persist on steep slopes even during long periods of adverse conditions. Many other species die under such conditions, leaving the slopes unprotected when rains return. Since chaparral plants recover rapidly from fire, they quickly re-exert their ground stabilizing influence following burns. The effectiveness of chaparral for erosion control after fire increases rapidly with time⁷⁰. Thus, the erosion from a 2-inch rain-day event drops from 5 yd³/acre of soil one year after a fire to 1 yd³/acre after 4 years.⁷¹ The following table illustrates the strong protective effect of chaparral in preventing erosion.

Soil erosion as a function of 24-hour precipitation and chaparral age.

| Years Since Fire | Erosion (yd ³ /acre) at Maximum 24-hr Precipitation of: | | |
|------------------|--|----------|-----------|
| | 2 inches | 5 inches | 11 inches |
| 1 | 5 | 20 | 180 |
| 4 | 1 | 12 | 140 |
| 17 | 0 | 1 | 28 |
| 50+ | 0 | 0 | 3 |

Therefore, because of its important roles in the functioning of the Santa Monica Mountains Mediterranean ecosystem, and its extreme vulnerability to development, chaparral within the Santa Monica Mountains meets the definition of ESHA under the Coastal Act.

Oak Woodland and Savanna

Coast live oak woodland occurs mostly on north slopes, shaded ravines and canyon bottoms. Besides the coast live oak, this plant community includes hollyleaf cherry, California bay laurel, coffeeberry, and poison oak. Coast live oak woodland is more

⁶⁸ Helmers, H., J.S. Horton, G. Juhren and J. O'Keefe. 1955. Root systems of some chaparral plants in southern California. *Ecology* 36(4):667-678. Kummerow, J. and W. Jow. 1977. Root systems of chaparral shrubs. *Oecologia* 29:163-177.

⁶⁹ Radtke, K. 1983. *Living more safely in the chaparral-urban interface*. General Technical Report PSW-67. U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station, Berkeley, California. 51 pp.

⁷⁰ Kittredge, J. 1973. *Forest influences — the effects of woody vegetation on climate, water, and soil*. Dover Publications, New York. 394 pp. Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains. (Table 1). The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024. Vicars, M. (ed.) 1999. *FireSmart: protecting your community from wildfire*. Partners in Protection, Edmonton, Alberta.

⁷¹ Ibid.

tolerant of salt-laden fog than other oaks and is generally found nearer the coast⁷². Coast live oak also occurs as a riparian corridor species within the Santa Monica Mountains.

Valley oaks are endemic to California and reach their southern most extent in the Santa Monica Mountains. Valley oaks were once widely distributed throughout California's perennial grasslands in central and coastal valleys. Individuals of this species may survive 400-600 years. Over the past 150 years, valley oak savanna habitat has been drastically reduced and altered due to agricultural and residential development. The understory is now dominated by annual grasses and recruitment of seedlings is generally poor. This is a very threatened habitat.

The important ecosystem functions of oak woodlands and savanna are widely recognized⁷³. These habitats support a high diversity of birds⁷⁴, and provide refuge for many species of sensitive bats⁷⁵. Typical wildlife in this habitat includes acorn woodpeckers, scrub jays, plain titmice, northern flickers, cooper's hawks, western screech owls, mule deer, gray foxes, ground squirrels, jackrabbits and several species of sensitive bats.

Therefore, because of their important ecosystem functions and vulnerability to development, oak woodlands and savanna within the Santa Monica Mountains met the definition of ESHA under the Coastal Act.

Grasslands

Grasslands consist of low herbaceous vegetation that is dominated by grass species but may also harbor native or non-native forbs.

California Perennial Grassland

Native grassland within the Santa Monica Mountains consists of perennial native needlegrasses: purple needlegrass, (*Nassella pulchra*), foothills needlegrass, (*Nassella lepida*) and nodding needlegrass (*Nassella cernua*). These grasses may occur in the same general area but they do not typically mix, tending to segregate based on slope

⁷² NPS 2000. op. cit.

⁷³ Block, W.M., M.L. Morrison, and J. Verner. 1990. Wildlife and oak-woodland interdependency. *Fremontia* 18(3):72-76. Pavlik, B.M., P.C. Muick, S. Johnson, and M. Popper. 1991. *Oaks of California*. Cachuma Press and California Oak Foundation, Los Olivos, California. 184 pp.

⁷⁴ Cody, M.L. 1977. Birds. Pp. 223-231 in Thrower, N.J.W., and D.E. Bradbury (eds.). *Chile-California Mediterranean scrub atlas*. US/IBP Synthesis Series 2. Dowden, Hutchinson & Ross, Stroudsburg, Pennsylvania. National Park Service. 1993. A checklist of the birds of the Santa Monica Mountains National Recreation Area. Southwest Parks and Monuments Assoc., 221 N. Court, Tucson, AZ. 85701

⁷⁵ Miner, K.L., and D.C. Stokes. 2000. Status, conservation issues, and research needs for bats in the south coast bioregion. Paper presented at *Planning for biodiversity: bringing research and management together*, February 29, California State University, Pomona, California.

and substrate factors⁷⁶. Mixed with these native needlegrasses are many non-native annual species that are characteristic of California annual grassland⁷⁷. Native perennial grasslands are now exceedingly rare⁷⁸. In California, native grasslands once covered nearly 20 percent of the land area, but today are reduced to less than 0.1 percent⁷⁹. The California Natural Diversity Database (CNDDB) lists purple needlegrass habitat as a community needing priority monitoring and restoration. The CNDDB considers grasslands with 10 percent or more cover by purple needlegrass to be significant, and recommends that these be protected as remnants of original California prairie. Patches of this sensitive habitat occur throughout the Santa Monica Mountains where they are intermingled with coastal sage scrub, chaparral and oak woodlands.

Many of the raptors that inhabit the Santa Monica Mountains make use of grasslands for foraging because they provide essential habitat for small mammals and other prey. Grasslands adjacent to woodlands are particularly attractive to these birds of prey since they simultaneously offer perching and foraging habitat. Particularly noteworthy in this regard are the white-tailed kite, northern harrier, sharp-shinned hawk, Cooper's hawk, red-shouldered hawk, red-tailed hawk, golden eagle, American kestrel, merlin, and prairie falcon⁸⁰.

Therefore, because of their extreme rarity, important ecosystem functions, and vulnerability to development, California native perennial grasslands within the Santa Monica Mountains meet the definition of ESHA under the Coastal Act.

California Annual Grassland

The term "California annual grassland" has been proposed to recognize the fact that non-native annual grasses should now be considered naturalized and a permanent feature of the California landscape and should be acknowledged as providing important ecological functions. These habitats support large populations of small mammals and provide essential foraging habitat for many species of birds of prey. California annual grassland generally consists of dominant invasive annual grasses that are primarily of Mediterranean origin. The dominant species in this community include common wild oats (*Avena fatua*), slender oat (*Avena barbata*), red brome (*Bromus madritensis* ssp. *Rubens*), ripgut brome, (*Bromus diandrus*), and herbs such as black mustard (*Brassica nigra*), wild radish (*Raphanus sativus*) and sweet fennel (*Foeniculum vulgare*). Annual grasslands are located in patches throughout the Santa Monica Mountains in previously disturbed areas, cattle pastures, valley bottoms and along roadsides. While many of

⁷⁶ Sawyer, J. O. and T. Keeler-Wolf. 1995. A manual of California vegetation. California Native Plant Society, 1722 J St., Suite 17, Sacramento, CA 95814.

⁷⁷ Biological Resources Assessment of the Proposed Santa Monica Mountains Significant Ecological Area. Nov. 2000. Los Angeles Co., Dept. of Regional Planning, 320 West Temple St., Rm. 1383, Los Angeles, CA 90012.

⁷⁸ Noss, R.F., E.T. LaRoe III and J.M. Scott. 1995. Endangered ecosystems of the United States: a preliminary assessment of loss and degradation. Biological Report 28. National Biological Service, U.S. Dept. of Interior.

⁷⁹ NPS 2000. op. cit.

⁸⁰ NPS 2000. op. cit.

these patches are dominated by invasive non-native species, it would be premature to say that they are never sensitive or do not harbor valuable annual native species. A large number of native forbs also may be present in these habitats⁸¹, and many native wildflowers occur primarily in annual grasslands. In addition, annual grasslands are primary foraging areas for many sensitive raptor species in the area.

Inspection of California annual grasslands should be done prior to any impacts to determine if any rare native species are present or if any rare wildlife rely on the habitat and to determine if the site meets the Coastal Act ESHA criteria.

Effects of Human Activities and Development on Habitats within the Santa Monica Mountains

The natural habitats of the Santa Monica Mountains are highly threatened by current development pressure, fragmentation and impacts from the surrounding megalopolis. The developed portions of the Santa Monica Mountains represents the extension of this urbanization into natural areas. About 54% of the undeveloped Santa Monica Mountains are in private ownership⁸², and computer simulation studies of the development patterns over the next 25 years predict a serious increase in habitat fragmentation⁸³. Development and associated human activities have many well-documented deleterious effects on natural communities. These environmental impacts may be both direct and indirect and include the effects of increased fire frequency, of fire clearance, of introduction of exotic species, and of night lighting.

Increased Fire Frequency

Since 1925, all the major fires in the Santa Monica Mountains have been caused by human activities⁸⁴. Increased fire frequency alters plant communities by creating conditions that select for some species over others. Strong resprouting plant species such as laurel sumac, are favored while non-sprouters like bigpod ceanothus, are at a disadvantage. Frequent fire recurrence before the non-sprouters can develop and reestablish a seed bank is detrimental, so that with each fire their chances for propagation are further reduced. Resprouters can be sending up new shoots quickly, and so they are favored in an increased fire frequency regime. Also favored are weedy and invasive species. Dr. Steven Davis in his abstract for a Coastal Commission

⁸¹ Holstein, G. 2001. Pre-agricultural grassland in Central California. *Madrono* 48(4):253-264. Stromberg, M.R., P. Kephart and V. Yadon. 2001. Composition, invasibility and diversity of coastal California grasslands. *Madrono* 48(4):236-252.

⁸² National Park Service. 2000. Draft: General Management Plan & Environmental Impact Statement, Santa Monica Mountains National Recreation Area, US Dept. of Interior, National Park Service, December 2000.

⁸³ Swenson, J. J., and J. Franklin. 2000. The effects of future urban development on habitat fragmentation in the Santa Monica Mountains. *Landscape Ecol.* 15:713-730.

⁸⁴ NPS, 2000, op. cit.

Workshop stated⁸⁵ *"We have evidence that recent increases in fire frequency has eliminated drought-hardy non-sprouters from chaparral communities near Malibu, facilitating the invasion of exotic grasses and forbs that further exacerbate fire frequency."* Thus, simply increasing fire frequency from about once every 22 years (the historical frequency) to about once every 12 years (the current frequency) can completely change the vegetation community. This has cascading effects throughout the ecosystem.

Fuel Clearance

The removal of vegetation for fire protection in the Santa Monica Mountains is required by law in "Very High Fire Hazard Severity Zones"⁸⁶. Fuel removal is reinforced by insurance carriers⁸⁷. Generally, the Santa Monica Mountains are considered to be a high fire hazard severity zone. In such high fire hazard areas, homeowners must often resort to the California FAIR Plan to obtain insurance. Because of the high risk, all homes in "brush areas" are assessed an insurance surcharge if they have less than the recommended 200-foot fuel modification zone⁸⁸ around the home. The combination of insurance incentives and regulation assures that the 200-foot clearance zone will be applied universally⁸⁹. While it is not required that all of this zone be cleared of vegetation, the common practice is simply to disk this zone, essentially removing or highly modifying all native vegetation. For a new structure not adjacent to existing structures, this results in the removal or modification of a minimum of three acres of vegetation⁹⁰. While the directly impacted area is large, the effects of fuel modification extend beyond the 200-foot clearance area.

Effects of Fuel Clearance on Bird Communities

The impacts of fuel clearance on bird communities was studied by Stralberg who identified three ecological categories of birds in the Santa Monica Mountains: 1) local and long distance migrators (ash-throated flycatcher, Pacific-slope flycatcher, phainopepla, black-headed grosbeak), 2) chaparral-associated species (Bewick's wren, wrentit, blue-gray gnatcatcher, California thrasher, orange-crowned warbler, rufous-crowned sparrow, spotted towhee, California towhee) and 3) urban-associated species

⁸⁵ Davis, Steven. Effects of fire and other factors on patterns of chaparral in the Santa Monica Mountains, Coastal Commission Workshop on the Significance of Native Habitats in the Santa Monica Mountains. CCC Hearing, June 13, 2002, Queen Mary Hotel.

⁸⁶ 1996 Los Angeles County Fire Code Section 1117.2.1

⁸⁷ Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains. The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024. Vicars, M. (ed.) 1999. FireSmart: protecting your community from wildfire. Partners in Protection, Edmonton, Alberta.

⁸⁸ Fuel Modification Plan Guidelines. Co. of Los Angeles Fire Department, Fuel Modification Unit, Prevention Bureau, Forestry Division, Brush Clearance Section, January 1998.

⁸⁹ Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains. The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024.

⁹⁰ Ibid.

(mourning dove, American crow, Western scrub-jay, Northern mockingbird)⁹¹. It was found in this study that the number of migrators and chaparral-associated species decreased due to habitat fragmentation while the abundance of urban-associated species increased. The impact of fuel clearance is to greatly increase this edge-effect of fragmentation by expanding the amount of cleared area and "edge" many-fold. Similar results of decreases in fragmentation-sensitive bird species are reported from the work of Bolger et al. in southern California chaparral⁹².

Effects of Fuel Clearance on Arthropod Communities

Fuel clearance and habitat modification may also disrupt native arthropod communities, and this can have surprising effects far beyond the cleared area on species seemingly unrelated to the direct impacts. A particularly interesting and well-documented example with ants and lizards illustrates this point. When non-native landscaping with intensive irrigation is introduced, the area becomes favorable for the invasive and non-native Argentine ant. This ant forms "super colonies" that can forage more than 650 feet out into the surrounding native chaparral or coastal sage scrub around the landscaped area⁹³. The Argentine ant competes with native harvester ants and carpenter ants displacing them from the habitat⁹⁴. These native ants are the primary food resource for the native coast horned lizard, a California "Species of Special Concern." As a result of Argentine ant invasion, the coast horned lizard and its native ant food resources are diminished in areas near landscaped and irrigated developments⁹⁵. In addition to specific effects on the coast horned lizard, there are other Mediterranean habitat ecosystem processes that are impacted by Argentine ant invasion through impacts on long-evolved native ant-plant mutualisms⁹⁶. The composition of the whole arthropod community changes and biodiversity decreases when habitats are subjected to fuel modification. In coastal sage scrub disturbed by fuel modification, fewer arthropod

⁹¹ Stralberg, D. 2000. Landscape-level urbanization effects on chaparral birds: a Santa Monica Mountains case study. Pp. 125-136 in Keeley, J.E., M. Baer-Keeley, and C.J. Fotheringham (eds.). *2nd interface between ecology and land development in California*. U.S. Geological Survey, Sacramento, California.

⁹² Bolger, D. T., T. A. Scott and J. T. Rotenberry. 1997. Breeding bird abundance in an urbanizing landscape in coastal Southern California. *Conserv. Biol.* 11:406-421.

⁹³ Suarez, A.V., D.T. Bolger and T.J. Case. 1998. Effects of fragmentation and invasion on native ant communities in coastal southern California. *Ecology* 79(6):2041-2056.

⁹⁴ Holway, D.A. 1995. The distribution of the Argentine ant (*Linepithema humile*) in central California: a twenty-year record of invasion. *Conservation Biology* 9:1634-1637. Human, K.G. and D.M. Gordon. 1996. Exploitation and interference competition between the invasive Argentine ant, (*Linepithema humile*), and native ant species. *Oecologia* 105:405-412.

⁹⁵ Fisher, R.N., A.V. Suarez and T.J. Case. 2002. Spatial patterns in the abundance of the coastal horned lizard. *Conservation Biology* 16(1):205-215. Suarez, A.V. J.Q. Richmond and T.J. Case. 2000. Prey selection in horned lizards following the invasion of Argentine ants in southern California. *Ecological Applications* 10(3):711-725.

⁹⁶ Suarez, A.V., D.T. Bolger and T.J. Case. 1998. Effects of fragmentation and invasion on native ant communities in coastal southern California. *Ecology* 79(6):2041-2056. Bond, W. and P. Slingsby. Collapse of an Ant-Plant Mutualism: The Argentine Ant (*Iridomyrmex humilis*) and Myrmecochorous Proteaceae. *Ecology* 65(4):1031-1037.

for species are seen and more exotic arthropod species are present than in disturbed habitats⁹⁷.

In the Mediterranean vegetation of South Africa (equivalent to California scrub with similar plant species) have shown how the invasive Argentine ant can change the whole ecosystem.⁹⁸ In South Africa the Argentine ant displaces native ants in California. Because the native ants are no longer present to collect and bury the seeds of the native plants are exposed to predation, and consumed by other insects, birds and mammals. When this habitat burns after Argentine ant invasion the large-seeded plants that were protected by the native ants all but disappear. The invasion of a non-native ant species drives out native ants, and this causes a dramatic change in the species composition of the plant community by disrupting established seed dispersal mutualisms. In California, some insect eggs are being buried by native ants in a manner similar to plant seeds⁹⁹.

Artificial Lighting

One of the more recently recognized human impacts on ecosystem function is that of artificial night lighting as it effects the behavior and function of many different types of organisms¹⁰⁰. For literally billions of years the only nighttime sources of light were the stars and stars, and living things have adapted to this previously immutable standard. Many organisms depend upon it for their survival. A review of lighting impacts suggests that some species are unaffected by artificial night lighting, many others are negatively affected. Overall, most impacts are negative ones or ones whose outcome is uncertain. Research to date has found negative impacts to plants, aquatic and terrestrial invertebrates, amphibians, fish, birds and mammals, and a detailed literature review can be found in the report by Longcore and Rich¹⁰¹.

Summary

In the most recent action, the Coastal Commission found¹⁰² that the Santa Monica Mountains Mediterranean Ecosystem, which includes the undeveloped native habitats of the Santa Monica Mountains, is rare and especially valuable because of its relatively pristine

-
97. T.R. 1999. Terrestrial arthropods as indicators of restoration success in coastal sage scrub. Restoration, University of California, Los Angeles.
98. T.R. 2001. Consequences of a biological invasion reveal the importance of mutualism for plant communities. *Nature* 413:635-639.
99. T.R. and M. Westoby. 1992. Capitula on stick insect eggs and elaiosomes on seeds: convergent functions for burial by ants. *Functional Ecology* 6:642-648.
100. Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed coastal plan for the Santa Monica Mountains. The Urban Wildlands Group, Inc., P.O. Box 24020 Malibu, CA 90024.
101. Longcore, T and C. Rich. 2002. *Protection of environmentally sensitive habitat areas in proposed coastal plan for the Santa Monica Mountains*. Conference, February 23-24, 2002, Los Angeles, California.
102. *Coastal Commission Findings for the City of Malibu Local Coastal Program* (as adopted on September 13, 2002) on February 6, 2003.

character, physical complexity, and resultant biological diversity. The undeveloped native habitats within the Santa Monica Mountains that are discussed above are ESHA because of their valuable roles in that ecosystem, including providing a critical mosaic of habitats required by many species of birds, mammals and other groups of wildlife, providing the opportunity for unrestricted wildlife movement among habitats, supporting populations of rare species, and preventing the erosion of steep slopes and thereby protecting riparian corridors, streams and, ultimately, shallow marine waters.

The importance the native habitats in the Santa Monica Mountains was emphasized nearly 20 years ago by the California Department of Fish and Game¹⁰³. Commenting on a Draft Land Use Plan for the City of Malibu, the Regional Manager wrote that, "It is essential that large areas of land be reclassified to reflect their true status as ESHAs. One of the major needs of the Malibu LUP is that it should provide protection for entire drainages and not just stream bottoms." These conclusions were supported by the following observations:

"It is a fact that many of the wildlife species of the Santa Monica Mountains, such as mountain lion, deer, and raccoon, have established access routes through the mountains. They often travel to and from riparian zones and development such as high density residential may adversely affect a wildlife corridor.

Most animal species that exist in riparian areas will, as part of their life histories, also be found in other habitat types, including chapparal (sic) or grassland. For example, hawks nest and roost in riparian areas, but are dependent on large open areas for foraging. For the survival of many species, particularly those high on the food chain, survival will depend upon the presence of such areas. Such areas in the Santa Monica Mountains include grassland and coastal sage scrub communities, which have been documented in the SEA studies as supporting a wide diversity of plant and animal life."

This analysis by the Department of Fish and Game is consonant with the findings of the Commission in the case of the Malibu LCP, and with the conclusion that large contiguous areas of relatively pristine native habitat in the Santa Monica Mountains meet the definition of ESHA under the Coastal Act.

¹⁰³ Letter from F. A. Worthley, Jr. (CDFG) to N. Lucast (CCC) re Land Use Plan for Malibu dated March 22, 1983.

CALIFORNIA COASTAL COMMISSION

SOUTH CENTRAL COAST AREA
89 SOUTH CALIFORNIA ST., SUITE 200
VENTURA, CA 93001
(805) 585-1800

Filed: 6/17/02
49th Day: 8/05/02
180th Day: 12/14/02
Staff: LKF-V [Signature]
Staff Report: 9/19/02
Hearing Date: 10/08/02
Commission Action:



STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-01-235

APPLICANT: John and Ann Matise

AGENT: Clive Dawson

PROJECT LOCATION: 24738 W. Saddlepeak Road, Malibu, Los Angeles County

PROJECT DESCRIPTION: Construction of a two story, 35 foot high, 7,537 sq. ft. single family residence, with two garages (one attached and one detached), driveway, turnaround, 750 sq. ft. guest house, swimming pool and spa, stairs, gazebo, septic system, and approximately 3,400 cu. yds. of grading (1,700 cu. yds. cut, 1,700 cu. yds. fill).

| | |
|--------------------|-----------------|
| Lot area: | 6.92 acres |
| Building coverage: | 5,438 sq. ft. |
| Pavement coverage: | 9,031 sq. ft. |
| Unimproved area: | 286,966 sq. ft. |
| Maximum height: | 35 ft. |

SUMMARY OF STAFF RECOMMENDATION

Staff recommends **Denial** of the proposed project, as the proposed project is inconsistent with the requirements of Coastal Act Sections 30231, 30251 and 30253 for the minimization of erosion and landform alteration and the protection of visual resources. There are alternatives to the proposed project outlined in this report that can bring the project into conformance with the Coastal Act. The project site is located on the crest and east slopes of a prominent ridgeline west of Carbon Canyon. The hillside lot slopes moderately near the crest then drops at near vertical gradients from the ridgeline to Piuma Road, a vertical distance of approximately 200 feet. The steep rocky slope contains a thin and discontinuous layer of soil supporting native coastal sage scrub vegetation. The project site is visible from public viewing areas along Rambla Pacifico and Piuma Road and is located within a scenic element of the Commission-certified 1986 Malibu-Santa Monica Mountains Land Use

EXHIBIT NO. 20

APPLICATION NO.

4-03-017

STAFF REPORT 4-01-235

The project is also visible, in the far distance, from Pacific Coast Highway, approximately two miles south of the project site.

The applicants propose to construct a single family residence with two garages, swimming pool, guesthouse, gazebo, turnaround, and driveway. As proposed, the main residence and swimming pool/guesthouse area would be constructed on level pads achieved by placing large amounts of fill on the slope. The pads would be supported by retaining walls up to 14 feet in height. The proposed height and finished grade elevation would allow the main residence to extend approximately 21 feet above the ridgeline. The proposed development would occupy an area of approximately 18,000 sq. ft. and would result in significant clearing of native vegetation on the steep descending slopes surrounding the development area on three sides, therefore increasing the potential for erosion. The project, as proposed, would result in significant landform alteration, intrusion into public views of a scenic ridgeline, and an increase in the potential for erosion on the site.

There are several feasible alternatives to the proposed project that would significantly reduce adverse impacts to public views consistent with the requirements of Section 30251 of the Coastal Act and reduce the potential for erosion consistent with of Sections 30253 and 30231 of the Coastal Act. These alternatives include: (a) reduction in the size, bulk and scale of the structures, (b) use of a split-level design which follows the natural topography of the site rather than the proposed design which elevates the main residence and lower swimming pool/guest house area on fill; and (c) deletion of the guest house, swimming pool, gazebo, and second garage.

Revising the proposed project to include a number of these alternatives would still allow for reasonable size, bulk and scale of residential development on this site. Therefore, as proposed, the project would not minimize landform alteration, adverse effects to public views, and the potential for erosion, and is therefore, not consistent with Sections 30231, 30251, and 30253 of the Coastal Act.

LOCAL APPROVALS RECEIVED: County of Los Angeles Regional Planning, Approval In Concept, dated December 17, 2001; County of Los Angeles Geology and Geotechnical Engineering Review Sheet, Approval In-Concept dated November 27, 2000; County of Los Angeles Environmental Health, Conceptual Approval, dated September 28, 2001; County of Los Angeles Fire Department (Access), Approval in Concept, dated August 6, 2001; County of Los Angeles Fire Department, Preliminary Fuel Modification Plan, Approval in Concept, dated September 20, 2001.

SUBSTANTIVE FILE DOCUMENTS: Engineering Geologic Update Letter, Proposed Residential Development, A.P.N. 4453-002-045, 24738 W. Saddle Peak Road, County of Los Angeles, California, by Mountain Geology, Inc., dated September 17, 2001; Update Geotechnical Engineering Report, Proposed Residential Development, 24738 W. Saddle Peak Road, A.P.N. 4453-002-045, Malibu, County of Los Angeles, California, by West Coast Geotechnical, dated October 1, 2001.

I. STAFF RECOMMENDATION: PERMIT DENIAL

MOTION: *I move that the Commission approve Coastal Development Permit No. 4-01-235 for the development proposed by the applicant.*

STAFF RECOMMENDATION OF DENIAL:

Staff recommends a **NO** vote. Failure of this motion will result in denial of the permit and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION TO DENY THE PERMIT:

The Commission hereby denies a coastal development permit for the proposed development on the ground that the development will not conform with the policies of Chapter 3 of the Coastal Act and will 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 would not comply with the California Environmental Quality Act because there are feasible mitigation measures or alternatives that would substantially lessen the significant adverse impacts of the development on the environment.

II. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. Project Description and Background

The applicant is proposing to construct a two story, 35 foot high, 7,537 sq. ft. single family residence, with two three-car garages, driveway, turnaround, 750 sq. ft. guest house, swimming pool and spa, stairs, gazebo, septic system, and approximately 3,400 cu. yds. of grading (1,700 cu. yds. cut, 1,700 cu. yds. fill) in an unincorporated area of Los Angeles County (**Exhibits 3-10**).

The project site is located on the crest and eastern slopes of a prominent ridgeline west of Carbon Canyon, at the end of West Saddlepeak Road (**Exhibit 1**). The hillside lot slopes moderately near the crest then drops at near vertical gradients from the ridgeline to Piuma Road, a vertical distance of approximately 200 feet. The steep rocky slope contains a thin and discontinuous layer of soil supporting native coastal sage scrub

vegetation. The project site is visible from public viewing areas along Rambla Pacifico, Piuma Road, and the Saddle Peak Trail (which runs along Piuma Road) and is located within a scenic element identified in the Commission-certified 1986 Malibu-Santa Monica Mountains Land Use Plan (LUP). The project site is also visible, in the far distance, from Pacific Coast Highway, approximately two miles south of the project site (**Exhibits 2 and 14**).

The project site is surrounded on three sides by undeveloped hillside. Several single family residences are located along the ridgeline to the north of the project site. The proposed project will extend the brush clearance radius up to 200 feet down steep slopes containing native coastal sage scrub vegetation (**Exhibit 12**).

The proposed development extends from the crest of the ridge approximately 150 feet downslope. The proposed development consists of a driveway, two three-car garages and a 100-foot wide turnaround at the crest, a two-story 35 ft. high main residence just below the crest, and a guest house, swimming pool and gazebo approximately 15 vertical feet below the main residence. The height of the proposed development envelope is approximately 60 feet. As proposed, the main residence will be constructed on a level grade achieved by cutting into a portion of the slope just below the crest and placing an eight foot high wedge of fill on the lower portion of the slope. The applicants propose to construct a 2:1 fill slope between the swimming pool area and the main residence, and to construct the proposed swimming pool and guesthouse on an additional wedge of fill. The applicants propose to support the areas of fill with several retaining walls ranging from 0 to 14 feet high (**Exhibits 3-10**).

Staff met with the applicant on July 26, 2002 at the project site. At this meeting, staff raised concerns about the amount of grading proposed and the extent of brush clearance and fuel modification that would be required for the proposed development. Staff suggested that alternative development proposals, such as stepping the house down the hillside and relocating or deleting the guesthouse, could reduce the impacts of development of the site. Staff reiterated these concerns in phone conversations with the applicant on September 10, 2002 and September 11, 2002, and stated that staff could not recommend approval of the project as currently proposed. In response, the applicants offered to revise the proposal to remove the gazebo, but maintained that the remainder of the development was the best possible alternative that would meet their needs.

B. Visual Resources and Landform Alteration

Section 30251 of the Coastal Act states:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the

character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline reservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

The project site is located on the crest and eastern slopes of a prominent ridgeline in a rural area characterized by expansive, naturally vegetated mountains and hillsides that are traversed by public trails. The hillside lot slopes moderately near the crest then drops at near vertical gradients from the ridgeline to Piuma Road, a vertical distance of approximately 200 feet. The project site is surrounded on three sides by undeveloped hillside. Several single family residences are located along the ridgeline to the north of the project site. The project site is visible from public viewing areas along Rambla Pacifico, Piuma Road, and the Saddle Peak Trail (which runs along Piuma Road) and is located within a scenic element identified in the Commission-certified 1986 Malibu-Santa Monica Mountains Land Use Plan (LUP).

1. Protection of Public Views / Siting and Design

Section 30251 of the Coastal Act requires that permitted development be sited and designed to protect views to and along scenic coastal areas. As noted above, the project site is visible from public viewing areas along Rambla Pacifico, Piuma Road, and the Saddle Peak Trail (which runs along Piuma Road) and is located within a scenic element identified in the Commission-certified 1986 Malibu-Santa Monica Mountains Land Use Plan (LUP). The Malibu-Santa Monica Mountains LUP, which is used as guidance in Commission review of development, provides the following policies for new development in highly scenic areas and along scenic roadways:

(P130) New development shall:

- be sited and designed to protect views to and along the ocean and to and along other scenic features, as defined and identified in the Malibu LCP.
- minimize the alteration of natural landforms
- be designed so as not to significantly intrude into the skyline as seen from public viewing places

(P131) Where feasible, prohibit placement of structures that will break the ridgeline view, as seen from public places.

The Malibu-Santa Monica Mountains LUP also provides the following guidelines for siting of structures in visual resource areas:

- (P134) Structures shall be sited to conform to the natural topography, as feasible. Massive grading and reconfiguration of the site shall be discouraged.
- (P135) Clustering of development in suitable areas shall be encouraged as a means to facilitate greater view protection

The proposed development extends from the crest of the ridge approximately 150 feet downslope. The proposed development consists of a driveway, two three-car garages and a 100-foot wide turnaround at the crest, a two-story 35 ft. high main residence just below the crest, and a guesthouse, swimming pool and gazebo approximately 15 vertical feet below the main residence.

As proposed, the main residence would be constructed on a level grade achieved by cutting into a portion of the slope just below the crest and placing a wedge of fill up to 14 feet in height on the lower portion of the slope. The applicants propose to construct a 2:1 fill slope between the swimming pool area and the main residence, and to construct the proposed swimming pool and guesthouse on an additional wedge of fill. The applicants propose to support the areas of fill with several retaining walls ranging from 0 to 14 feet in height.

As proposed, the finished floor level of the main residence is at 2,328 ft. above sea level, approximately 9 feet below the crest of the ridge. The 30 foot high main residence would extend 21 feet above the crest of the ridge behind it. The remainder of the development, consisting of a 2:1 fill slope, swimming pool, gazebo, guesthouse, and 8 to 14 foot high retaining wall would extend approximately 30 vertical feet below the floor level of the main residence, thus creating an approximately 60 foot high development envelope. The width of the development envelope is approximately 140 feet. Retaining walls extend the entire width of the project.

In summary, the proposed development would result in the addition of an approximately 8,400 sq. ft. development façade extending from approximately 39 feet below the ridgeline to 21 feet above it. The siting and design of the proposed project would therefore intrude into the skyline and adversely impact public views of this scenic area from Rambla Pacifico, Piuma Road, and the Saddle Peak Trail (which runs along Piuma Road). Thus, the proposed development is inconsistent with Section 30251 of the Coastal Act.

Alternatives to the proposed siting and design of the project are feasible that would significantly minimize adverse effects to public views, including intrusion into the skyline, while still allowing for a reasonable size, bulk and scale of residential development to occur. These alternatives include multiple combinations of the following: (a) reduction in the size, bulk and scale of the structures, (b) use of a multiple split-level design which follows the natural topography of the site rather than the proposed design which elevates the main residence and swimming pool/guest house area on fill; and (c) deletion of the guest house, swimming pool, gazebo, and second garage. For instance, eliminating the second story and adding a daylight basement

level would substantially reduce the prominence of the structure along the ridgeline. These alternatives are discussed further in Subsection 4 below.

2. Landform Alteration

Section 30251 of the Coastal Act requires that permitted development minimize landform alteration. The project site is located on the crest and eastern slopes of a prominent ridgeline. The hillside lot slopes moderately near the crest, then drops at near vertical gradients from the ridgeline to Piuma Road, a vertical distance of approximately 200 feet.

As proposed, the main residence would be constructed on a level grade achieved by cutting into a portion of the slope just below the crest and placing a wedge of fill up to 14 feet in height on the lower portion of the slope. The applicants propose to construct a 2:1 fill slope between the swimming pool area and the main residence, and to construct the proposed swimming pool and guesthouse on an additional wedge of fill. The applicants propose to support the areas of fill with several retaining walls ranging from 0 to 14 feet in height. The proposed project includes 3,400 cu. yds. of grading (1,700 cu. yds. cut, 1,700 cu. yds. fill).

In summary, the proposed development would result in the creation of three level pads supported by retaining walls (for the turnaround/garages, main residence, and swimming pool/guest house areas respectively) and a 2:1 fill slope in a development area covering approximately 18,000 sq. ft. of hillside. The siting and design of the proposed project would result in significant landform alteration, inconsistent with Section 30251 of the Coastal Act.

Several revisions or alternatives to the proposed project are feasible that would significantly minimize landform alteration, while still allowing for a reasonable size, bulk and scale of residential development to occur. These alternatives include multiple combinations of the following: (a) reduction in the size, bulk and scale of the structures, (b) use of a split-level design which follows the natural topography of the site rather than the proposed design which elevates the main residence and lower swimming pool/guest house area on fill; and (c) deletion of the guest house, swimming pool, gazebo, and second garage. These alternatives are discussed further in Subsection 4 below.

3. Compatibility with the Character of Surrounding Areas

Coastal Act Section 30251 requires that new development be visually compatible with the character of surrounding areas. As noted above, the project site is located in a rural area characterized by expansive, naturally vegetated mountains and hillsides. In its immediate vicinity, the project site is surrounded on three sides by undeveloped hillside, and by single family residences located along the ridgeline to the north of the project site.

The proposed project is greater in size than other residences on the ridgeline. According to assessment data for the area, the square footages of the two residences immediately north of the project site (24736 West Saddle Peak Road and 24740 West Saddle Peak Road) are 2,446 sq. ft. and 2,742 sq. ft. respectively. Other houses on the ridgeline measure 2,690 sq. ft., 3,632 sq. ft. and 4,319 sq. ft. The proposed residence, with a square footage of 7,537 sq. ft. (including garages and guesthouse) would be the largest on the ridge, and over twice the size of four of the five residences. Furthermore, the overall development areas of the immediately adjacent residences are approximately 3,500 sq. ft. and 6,300 sq. ft. respectively, according to a site survey submitted by the applicants. These development areas are several times smaller than the approximately 18, 000 sq. ft. proposed by the applicants.

Several revisions or alternatives to the proposed project are feasible that would increase the project's visual compatibility with the surrounding area, while still allowing for a reasonable size, bulk and scale of residential development to occur. These alternatives include multiple combinations of the following: (a) reduction in the size, bulk and scale of the structures; and (b) deletion or relocation of the guesthouse, swimming pool, gazebo, and second garage. These alternatives are discussed further in Subsection 4 below.

4. Project Alternatives

Several alternatives to the proposed project plans exist that would minimize landform alteration and adverse effects to public views consistent with Coastal Act Section 30251. Such alternatives include multiple combinations of the following: (a) reduction in the size, bulk and scale of the structures; (b) use of a split-level design that follows the natural topography of the site rather than the proposed design which elevates the main residence and lower swimming pool/guest house area on fill; and (c) deletion of the guest house, swimming pool, gazebo, and second garage. The Commission notes that implementation of many of the above alternatives to the proposed project would still allow for a reasonable size, bulk and scale of residential development to occur. These alternatives includes multiple combinations of the following:

a. Reduction in the Size, Bulk and Scale of Structures

The Commission notes that construction of a large structure on even a gently sloping site typically requires a significantly greater amount of grading and landform alteration than would otherwise be required in order to construct a smaller structure. Constructing a reduced size, bulk and scale residential structure on the site would require significantly less grading and landform alteration, would minimize adverse effects to public views, and would still allow for residential development to occur on site. For example, reducing the width of the main residence would reduce the amount of required grading and reduce the visual impact of the structure. Alternatively, eliminating

the second story and adding a daylight basement level would substantially reduce the prominence of the structure along the ridgeline.

b. Use of a Multiple Split-Level Design

The proposed project includes a substantial amount of grading to create three level pad areas and a connecting 2:1 slope on the site. In addition to reducing the size, bulk and scale of the structures a multiple split level design could reduce grading and minimize visibility of the development. The Commission notes that the use of a multiple split-level design (the use of several small pads cut into the slope) would eliminate the need for large uniform level pad areas and prominent retaining walls and would minimize landform alteration, while allowing the development to conform to the natural topography of the site.

Another method of minimizing the visual obtrusiveness of new development on slopes is to excavate (or sink) the uphill structure deeper into the existing grade. By lowering, or "sinking," the elevation of the uphill portion of the structure, the development's elevation is significantly less visible. This alternative, although it may not significantly reduce the amount of required excavation, would reduce: (1) the necessity for the placement of fill, and (2) the extent that the proposed structures would intrude into public views of the ridgeline.

c. Deletion of Guest House, Pool Area, Gazebo, Second Garage

The proposed project includes the construction of large terrace or patio area with a pool, guest house and gazebo in front of and below the proposed main residence. The project also includes the construction of a second garage immediately southwest of the main residence. Construction of these amenities are not necessary in order to allow for residential development to occur on the subject site. Substantial reduction in size or deletion of these amenities in their entirety is a feasible alternative that would reduce the visual impact of the project.

Implementation of a combination of the above alternatives to the proposed project would significantly reduce the visual impacts of the proposed project. Therefore, for the reasons discussed above, the Commission finds that the proposed development, as proposed, has not been sited or designed in a manner that would minimize landform alteration and adverse effects to public views and is, therefore, not consistent with Section 30251 of the Coastal Act.

C. Erosion / Water Quality

Section 30253 of the Coastal Act states (in relevant part):

New development shall:

....

(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 30231 of the Coastal Act states (in relevant part):

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.

Sections 30253 of the Coastal Act require that new development neither create nor contribute to erosion. In addition, Section 30231 requires that the biological productivity of coastal waters be maintained, and where feasible, restored. The Malibu-Santa Monica Mountains LUP, which is used as guidance in Commission review of development, also provides policies for erosion control and stream protection. These include policies that require site design to minimize grading activities and reduce vegetation removal in areas of high potential erosion hazard, which include "areas with a slope exceeding 2:1" (P85, P88); a policy that prohibits grading and/or "development-related vegetation clearance" where the slope exceeds 2:1 (except for driveways and/or utilities under certain circumstances and with maximum mitigation) (P150); and a policy that requires new development to be designed to minimize impacts and alterations of physical features, such as hillsides, and processes (geological, soils, hydrological) to the maximum extent feasible (P91).

The applicants propose to construct a two story, 35 foot high, 7,537 sq. ft. single family residence, with two three-car garages, driveway, turnaround, 750 sq. ft. guest house, swimming pool and spa, stairs, gazebo, septic system, and approximately 3,400 cu. yds. of grading (1,700 cu. yds. cut, 1,700 cu. yds. fill)

The project site is located on the crest and eastern slopes of a prominent ridgeline in a rural area characterized by expansive, naturally vegetated mountains and hillsides. The project site is surrounded on three sides by undeveloped hillside, and by single family residences located along the ridgeline to the north. The hillside lot slopes moderately near the crest then drops at near vertical gradients from the ridgeline to Piuma Road, a vertical descent of approximately 200 feet. The slopes consist of sandstone bedrock covered with a thin, discontinuous layer of soil and native coastal sage scrub vegetation.

The proposed project would extend the brush clearance radius up to 200 feet down these steep slopes and result in the clearing of native coastal sage scrub vegetation. The proposed project would also result in the implementation of a fuel modification regime that would introduce irrigated, non-native plants onto the hillside and adjacent graded areas. The irrigated fuel modification zones would extend 100 feet down the hillside, and would include areas of native vegetation on slopes ranging from near vertical (northeast and east of the proposed development) to 4:1 (south of the proposed development). Approximately half of the irrigated area would be on slopes with gradients less than 1.5:1. In addition, Fuel Modification Zone C, which would extend an additional 100 feet down the slope would result in the implementation of thinning requirements, including the removal of native coastal sage scrub species including chamise, buckwheat and several varieties of sage. In summary, the proposed project would result in significant clearing and irrigation of much of the steep slope below the project site.

Removal of native coastal sage scrub species and introduction of irrigation on the steep slopes and thin soils of the subject site would increase the potential for erosion. Native coastal sage scrub vegetation tends to have a relatively low surface/foliage weight and deeper root structures than non-native species and therefore aids in preventing erosion. Conversely, maintenance of native coastal sage scrub habitat would serve to reduce erosion and enhance the geologic stability of the site. Therefore, in order to reduce the potential for erosion on the site consistent with Section 30253 of the Coastal Act, it is necessary to minimize the removal of native coastal sage scrub vegetation on the site.

In addition, 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. Therefore, in order to reduce the potential for sedimentation of downstream waters, consistent with Section 30253 of the Coastal Act, it is necessary to minimize erosion that may be caused by the development of the subject site.

Alternatives to the proposed project plans exist that would minimize the potential for erosion consistent with Sections 30253 and 30231 of the Coastal Act. Such alternatives include: (a) reduction in the size of the proposed structures; and (b) deletion or relocation of the guest house, gazebo, and second garage. The Commission notes that implementation of the above alternatives to the proposed project would still allow for a reasonable size, bulk and scale of residential development to occur. These alternatives are discussed below:

a. Reduction in the Size, Bulk and Scale of Structures

Substantially reducing the size of the structures on the site would minimize the extent of fuel modification and brush clearance on the site, thereby reducing the potential for erosion. For example, reducing the width of the main residence, in conjunction with elimination of the second garage and guesthouse, would narrow the fuel modification and brush clearance radii on slopes to the west and southwest.

b. Deletion of Guest House, Gazebo, Second Garage

The proposed project includes the construction of a large terrace or patio area with a pool, guest house and gazebo in front of and below the proposed main residence. The project also includes the construction of a second garage immediately southwest of the main residence. Construction of these amenities are not necessary in order to allow for residential development to occur on the subject site. Deletion of the guesthouse and gazebo from project plans would reduce the irrigated fuel modification radius by approximately 50 feet. Deletion of the second garage would reduce the irrigated fuel modification radius west of the main residence, and, more significantly, reduce the brush clearance radius up to 50 feet on the steep slopes of the adjacent undeveloped property.

Implementation of a combination of the above alternatives to the proposed project would significantly minimize the potential for erosion and related impacts to coastal waters. Therefore, for the reasons discussed above, the Commission finds that the proposed development does not minimize the potential for erosion and impacts to coastal waters and, therefore, is not consistent with Sections 30231 and 30253 of the Coastal Act.

D. 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 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 that conforms to Chapter 3 policies of the Coastal Act. The preceding sections provide findings that the proposed project would not be in conformity with the provisions of Chapter 3 of the Coastal Act. The

proposed development would result in adverse impacts and is found to be not consistent with the applicable policies contained in Chapter 3. Therefore, the Commission finds that approval of the proposed project would prejudice the City of Malibu's ability to prepare a Local Coastal Program which is also consistent with the policies of Chapter 3 of the Coastal Act as required by Section 30604(a).

E. CEQA

Section 13096(a) of the Commission's administrative regulations requires Commission approval of 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 Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The Commission finds that the proposed project would result in significant adverse effects on the environment, within the meaning of the California Environmental Quality Act of 1970. Therefore, the proposed project is determined to be inconsistent with CEQA and the policies of the Coastal Act. Feasible alternatives exist which would result in a project that would lessen the significant, avoidable adverse impacts to coastal resources and public coastal views of the currently proposed project.

