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

CALIFORNIA COASTAL COMMISSION
SOUTH CENTRAL COAST AREA
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Hearing Date:	7/11-14/00

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-99-211

APPLICANT: Mark Lever

AGENTS: Alisa Morganthaler Lever, Esq. & Clare Brownowski, Esq., of Christensen, Miller, Fink, Jacobs, Glaser, Weil & Shapiro, LLP; and Donald Schmitz; of Schmitz & Associates.

PROJECT LOCATION: 28827 Grayfox Street, City of Malibu, County of Los Angeles

PROJECT DESCRIPTION: The applicant proposes to construct a 5,035 sq. ft., two-story, 18 ft. high above finished grade, single family residence with 1,034 sq. ft. attached 4-car garage; install 2,000 gallon tank/septic disposal system to serve the residence, construct swimming pool, driveway, walkways and decks; detached 762 sq. ft., two-story guest unit with attached 298 sq. ft. garage and separate 1,000 gallon tank/septic disposal system; and grade approximately 1,479 cu. yds. of material (1,181 cu. yds. cut, 298 cu. yds. fill), and dispose of 883 cu. yds. of excess graded material at an unspecified location outside of the coastal zone.

LOT AREA:	45,790 sq. ft. (1.05 acres)	Driveway Coverage:	4,769 sq. ft.
Main House Footprint:	3,776 sq. ft.	Terraces, Walks, Porches:	3,361 sq. ft.
Main Garage (4-car) Footprint:	1,034 sq. ft.	Ornamental Landscaping	8,900 sq. ft.
Guest House Footprint:	452 sq. ft.		
Guest Garage (1-car) Footprint:	298 sq. ft.		
TOTAL BUILDING COVERAGE:	5,560 sq. ft.		
TOTAL HARD SURFACES:	13,690 sq. ft. (including driveways, terraces, porches and walks)		
Fuel modification area:	23,140 sq.ft.		

IMPORTANT PROCEDURAL NOTE: This item was postponed from the Commission's May agenda at the applicant's request, and the applicant further requested that the item not be rescheduled on the Commission's June agenda due to a resultant conflict with the applicant's previously scheduled vacation. The 180-day review period for this project ended on May 13, 2000, but was extended 90 days (until July 26, 2000) by agreement between applicant and staff, on April 28, 2000. Therefore, the Commission must act on this project at the July hearing and no further extensions or postponements are available due to Permit Streamlining Act requirements.

SUMMARY OF STAFF RECOMMENDATION: Staff recommends **denial** of the project as proposed for three reasons: 1) the project as proposed is inconsistent with the policies of Chapter 3 of the Coastal Act—specifically policies that require the

protection of coastal waters and environmentally sensitive habitat and policies that require the minimization of landform alteration and address the individual and cumulative impacts associated with locating new development; 2) approval of the proposed project would prejudice the City's ability to prepare a Local Coastal Program (LCP) that is certifiable by the Commission; and 3) feasible alternatives exist which would lesson or avoid the adverse environmental impacts posed by the project within the meaning of the California Environmental Quality Act (CEQA), but which the applicant has not proposed.

The applicant asserts that the relocation of the development footprint will reduce or eliminate private, bluewater ocean views that would otherwise be available from the proposed residence if constructed in accordance with the plans submitted by the applicant.

LOCAL APPROVALS RECEIVED: City of Malibu: Planning Approval in Concept, dated August 10, 1999; Environmental Health Department, septic approval, dated July 29, 1999, Biological Review, dated August 3, 1998; County of Los Angeles, Fire Department, Forestry Division, Prevention Bureau, Preliminary Fuel Modification Plan, dated March 21, 2000.

SUBSTANTIVE FILE DOCUMENTS: Certified Malibu/Santa Monica Mountains Land Use Plan (LUP); "Geologic and Soils Engineering Exploration, Proposed Residence and Private Sewage Disposal System, 28827 Grayfox Street, Malibu, California," for Mark Lever, dated October 15, 1997, prepared by Grover Hollingsworth and Associates, Inc.; "Geologic and Soils Engineering Update, Proposed Residence and Private Sewage Disposal System, 28827 Grayfox Street, Malibu, California," addressed to Mark Lever and to the attention of Douglas Lindflors; "Terrestrial Plant Ecology," second edition, Michael G. Barbour, University of California, Davis, Jack H. Burk, California State University, Fullerton, and Wanna D. Pitts, San Jose State University, The Benjamin/Cummings Publishing Company, Inc., 1987; a bound volume of approximately 200 pages submitted by the applicant on April 12, 2000 with three separate, but attached cover letters, each dated April 11, 2000 (one from Don Schmitz, two from Alisa Morganthaler Lever), and including photographs, maps, and plans in pocket pages therein; Survey of 28827 Grayfox Street (scale: 1/8" = 1 ft.) by Robert A. MacNeil, dated July 7, 1998; Grading and Drainage Plan, prepared by John M. Cruikshank, dated July 22, 1999; and Emergency Coastal Development Permit No. 4-99-261-G (Lever).

STAFF RECOMMENDATION:

I. STAFF RECOMMENDATION OF DENIAL:

Staff recommends that the Commission adopt the resolution set forth below, via the following motion:

A. MOTION:

I move that the Commission approve Coastal Development Permit No. 4-99-211 for the development proposed by the applicant.

STAFF RECOMMENDATION:

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.

B. 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.

I. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. BACKGROUND SUMMARY

1.0 Proposed project and environmental setting

The proposed project involves the placement and construction of a single family residence on a deep, rectangular, approximately 1-acre lot at 28827 Grayfox Street, in the Point Dume area of the City of Malibu. A relatively level upper terrace comprises approximately the first two-thirds of the rectangular parcel as measured from the entrance on Grayfox. The terrace slopes gradually to approximately the rear one-third of the parcel, which descends sharply to the northeast into Malibu Riviera Canyon.

The applicant proposes to construct a 5,035 sq. ft., two story, 18 ft. high above finished grade, single family residence with 1,034 sq. ft. attached 4-car garage; install a 2,000 gallon tank/septic disposal system to serve the main residence, swimming pool, driveway, walkways and decks; to construct a detached 762 sq. ft., two-story guest unit with attached 298 sq. ft. garage and separate 1,000 gallon tank/septic disposal system; and grade approximately 1,479 cu. yds. of material (1,181 cu. yds. cut, 298 cu. yds. fill), and dispose of 883 cu. yds. of excess graded material to an unspecified location outside of the coastal zone.

The applicant's project is a relatively unusual design involving the construction of a 5,341 sq. ft., two-story, multi-level single family residence designed as a series of compartments cascading diagonally down the gently sloping upper terrace and then descending down a steeper portion of the slope toward the bottom of Malibu Riviera Canyon. A significant portion of the proposed residence (about one-third) will be constructed below the 90-foot top-of-slope contour, and will thus be located within the sensitive habitat of the canyon.

The applicant has been notified that discrepancies exist between the project described in the application and the actual to-scale plans on file. Revised plans have not been submitted, therefore the project described herein is the project shown on the to-scale plans (including the grading plan) on file.

Specifically, the project description set forth in the application states that the proposed guest unit is 750 sq. ft.; however the plans show that the unit would be 762 sq. ft. The Commission notes that guest units in the Malibu/Santa Monica Mountains are limited to a maximum of 750 sq. ft. and that revised plans would therefore have been necessary to bring the proposed second unit into conformance with this requirement if the Commission approved the proposal.

2.0 Environmental Setting

Malibu Riviera Canyon is one of the coastal canyons of the Point Dume area identified as a Disturbed Sensitive Resource Area (DSR) on the certified Malibu/Santa Monica Mountains Land Use Plan. The DSR designation indicates that the habitat is an Environmentally Sensitive Habitat Area (ESHA) that has been disturbed by the encroachment of development, and therefore no longer retains the seamless habitat value and diversity of more remote and less disturbed habitat areas. DSR areas are frequently invaded by non-native, invasive exotic plant species that escape from nearby ornamental gardens, and are subject to increased volume and velocity of runoff from the increased impervious surfaces of upslope development and resultant erosion, noise, night lighting, fuel modification, and the placement (often without the benefit of the necessary permits) of footpaths, fences, bridges, corrals, and other accessory structures on the slopes and canyon bottoms.

In addition, the Malibu Riviera Canyon has been a popular residential area for decades and therefore many pre-Coastal Act structures have been built on, and adjacent to, the canyon slopes. Before 1996, fire hazard mitigation requirements of the Los Angeles County Fire Department required the seasonal removal of fine, dry flashy fuels such as grasses and ruderal annuals and dead shrubs or trees up to 100 feet from structures. The Fire Department did not (and for pre-1996 development still does not) require the removal of healthy shrubs and trees.

Since 1996, as discussed below, these "brush clearance" requirements have been replaced for new structures with a fuel modification approach that relies on individual

fuel modification plans approved by the fire department's foresters. These plans implement the 1996 Fuel Modification Ordinance adopted by the County Board of Supervisors and extend the zone of vegetation disturbance much further (as much as 200 feet) into the areas surrounding defensible structures. The Fire Department has confirmed that these standards apply only to new development authorized after the adoption of the 1996 ordinance. The fire department staff have informed the Commission staff that structures on Point Dume built prior to 1996 are still subject only to the seasonal brush clearance requirements for removal of dead vegetation and fine, flashy fuels prior to the onset of fire season, for a distance of up to 100 feet from the subject structure, or to the subject parcel boundary. Offsite clearing of vegetation on adjoining properties has not historically been required by the Fire Department of pre-1996 development on Point Dume, and this is verified by the Commission's aerial photograph archives. Fire Department staff have further confirmed that offsite clearing is not presently required for pre-1996 structures.

On the other hand, new development on Point Dume may require fuel modification up to 200 feet from the subject structures, including lands on adjacent parcels up to the 200-foot radius from applicable development. This includes clearance of vegetation offsite, unlike the fire hazard management practices applicable to pre-1996 development.

For these reasons, fuel modification changes applicable since 1996, and which apply to the applicant's proposal, raise significant new implications for impacts to natural vegetation on the sensitive canyon slopes and riparian corridors on Point Dume. These new impacts may further reduce what remains of these canyon habitats, which are remnant ESHAs. These canyon habitats are more fragmented and fragile than undisturbed native habitat, recover from disturbance more slowly than robust habitat, and are prone to colonization by non-native species when disturbance removes native vegetation from highly erodible canyon slopes.

The Point Dume canyons contain intermittent blueline streams that may dry up on the surface during late summer and early fall, but even then groundwater is usually elevated beneath the surficially dry stream corridors. The shallow groundwater provides a relatively mesic (moist) summer environment for deeply rooted sage scrub and chaparral shrub species, as well as typical riparian species such as sycamore and willow, which flourish in many of the Point Dume canyon bottoms. Many authorities consider these conditions to represent riparian habitat, even when water is not visible on the surface. The shrubs growing in such conditions frequently produce closed canopies with heights of six to ten feet, with almost tree-like architecture.

Coyote bush (*Baccharis pilularis*) tends to be the predominant shrub in much of the Point Dume area, and is the most abundant native plant on the portion of the applicant's parcel that slopes downward into Malibu Riviera Canyon. Coyote bush is a common representative of the vegetation type generally known as southern coastal sage scrub (or occasionally referred to as "soft chaparral") (Exhibit 9).

Malibu Riviera Canyon bisects much of the Point Dume coastal terrace, and comprises one of the most extensive stretches of natural habitat and wildlife corridor remaining on Point Dume. The intermittent blueline stream meandering the canyon bottom outlets to the Pacific Ocean, less than one half mile downstream from the subject site. The stream channel is located immediately adjacent to the parcel line of the applicant's lot at the bottom of the canyon.

The Malibu Riviera Canyon habitat is the fragile remnant of a far more robust environmentally sensitive habitat area that once existed on the unique headlands and terraces of Point Dume. Most of the flatter terrace areas connecting the Point Dume canyons have already been lost – first to agriculture in the middle of the last century-- and more recently to residential development in this highly desirable area of Malibu. The only significant habitat left in the coastal canyons of Point Dume occurs on the canyon slopes and bottoms such as those the applicant seeks to develop or modify through the subject proposal.

The Point Dume coastal canyons are located on the Pacific Flyway, and offer critical transitional habitat between the marine and terrestrial ecosystems that converge near the subject site. These corridors constitute a significant habitat refuge for a wide variety of birds and animals that rely on them year around or during specific migration seasons or lifecycle stages. The habitat that would be eliminated or modified if the applicant's project is constructed as proposed cannot be replaced, particularly in the unique biogeographic context of Point Dume.

Obviously, the sensitive canyon habitat cannot be moved. As explained in detail in the findings below, further fragmentation and modification of the remaining vegetation in Malibu Riviera Canyon will diminish the buffering effects of the vegetation flanking the canyon slopes and stream channels. Resultant erosion will degrade not only the immediately downgradient water quality, but will charge the runoff waters entering the marine environment immediately downstream with sediment pollution and the other pollutants common to urban runoff. The sensitive kelp beds located immediately offshore on Point Dume may be degraded by such chronic adverse impacts. In addition, the canyon's direct value as a wildlife corridor and refuge will be diminished by the reduction in mature native brush cover that is required to achieve contemporary fuel modification standards (crown separation of at least fifteen feet, height limit of no more than two feet, and limits on allowable native species that exclude the majority of the coastal sage scrub brush assemblage). All of these impacts, taken individually and cumulatively, degrade not only the immediately affected area of the applicant's parcel, but the entire canyon habitat corridor.

3.0 Discussion of feasible alternative(s)

As noted, the applicant proposes to construct the proposed project within the environmentally sensitive habitat area of a portion of Malibu Riviera Canyon intersected by the applicant's parcel. In addition to the habitat area lost by the actual placement of structures on the canyon slope, the Los Angeles County Fire

Department, Forestry Division, will require permanent fuel modification of the remaining canyon vegetation on the subject parcel. These requirements will extend significant vegetation clearance, thinning, height reductions, and species composition restrictions over the entire slope area of the applicant's parcel and these impacts will also extend into the streambed adjacent to the applicant's property line at the canyon bottom.

Construction on the slope is not necessary to achieve an adequate development envelope on the subject site. Commission staff has determined that one or more feasible alternatives exist that would protect the canyon slopes and provide for the construction of a residence, albeit of a different design, and that such alternatives could be favorably considered under the Chapter 3 policies of the Coastal Act.

A large, nearly level pad area is situated immediately adjacent to the site entrance off Grayfox Street. The project plans conceptually approved by the City of Malibu show a front yard setback from Grayfox Street of 65 feet. This setback removes over 5,250 square feet of level building area from the applicant's available building footprint. Returning part of the area captured by this rather deep setback to the area available for construction would facilitate the redesign and relocation of the proposed residence away from the canyon slope, thereby protecting the canyon's environmentally sensitive habitat.

The applicant has not submitted evidence that he has sought relief from the present 65-foot street setback or that he has been denied the necessary variance from the City in response. Instead, the applicant's agent has stated in supplemental correspondence with staff dated April 11, 2000 (page 10) that:

> "...The subject lot is subject to a sixty-five (65) foot setback from the street by the City of Malibu. Accordingly, should the proposed house be moved closer to the street as proposed by CCC staff, a variance will be required from the City of Malibu, an expensive proposition with little likelihood of success...."

Commission staff has been informed by City staff that the applicant could seek a reduction in the frontyard setback (65 feet) presently required by the City for the subject proposal. requirements. City of Malibu Senior Planner Drew Purvis, at the request of Commission staff on June 21, 2000, explained that the City planning staff reviews over 100 requests in a typical year for minor modifications to required setbacks, and that planning staff is authorized to administratively approve reductions of up to 50% from frontyard setbacks and up to 20% from sideyard setbacks provided that private coastal view impacts or community character conflicts do not arise as the result of modifying the applicable setbacks. Mr. Purvis indicated that the turnaround time for this review is typically a matter of three to six weeks, and that if the staff refuses to grant the requested modification, the applicant is entitled to seek approval from the Planning Commission and ultimately from the City Council.

To illustrate the effect a change in the frontyard setback would have on the available development envelope on the subject site, the Commission estimates that if the applicant obtained a variance to reduce the present 65-foot front yard setback to a more moderate 25-foot setback (though this represents a slightly greater reduction than the approximately 32 –foot setback that could be authorized administratively by the City staff), and retained the existing total of approximately 28 feet of combined sideyard setbacks (25% of lot width as required by the City), and if the footprint of the proposed development was relocated to a minimum of 100 feet streetward (south/southwest) of the 90-foot contour (top-of-slope), thereby avoiding fuel modification and other adverse impacts upon the canyon's sensitive habitat, the applicant would still have a remaining potential building footprint of approximately 11,700 square feet. As noted in further discussion below, an alternative has also been identified that would setback the project only 50 feet from the 90-foot contour, thus increasing the potential alternative building envelope by approximately 6,000 additional square feet and thereby producing a more-than-adequate potential building envelope of at least 17,000 square feet.

These options illustrate that a range of potential siting and design alternatives exist That would avoid the significant, adverse impacts on coastal resources that will result if the proposed project is constructed on the canyon slopes as shown in the project plans.

An additional consideration is the more favorable the topographic relief of the upper terrace of the subject parcel, which is almost flat with a gradual slope transition that would require little, if any grading, other than pad grooming and compaction and the excavation of footings (or, grading volumes could be redirected toward the construction of a below-grade garage to further maximize the use of the buildable area). In addition, the extensive foundation measures recommended by the applicant's geotechnical consultant for the purpose of constructing the proposed project on the steeper area at the rear of the parcel could probably be avoided by constructing a more conventional design on the level portion of the site.

The applicant has informed staff that the 18.0 ft. height limit above grade that has been applied by the City to the to present design is only necessary if the structure is situated within a pie-shaped slice of the lot where development could block adjacent private ocean views if the structure located in that area were any higher. The applicant has further clarified that if the structure is limited to 18 ft. in height, a more extensive review process at the City level is thereby avoided.

If the project were redesigned in the alternative envelope identified herein, it appears that the private ocean views of the neighbor at 28837 Grayfox Street would not be affected by the alternative structure, and construction of a conventional two story residence and guest unit exceeding 18 ft. in height could therefore presumably be approved by the City.

If the project is set back as described above, with a redesigned floor plan and the garage located beneath the main floor, the total potential square footage of living space would increase as the result. As noted, the alternative setback would move the subject residence out of the line of sight of most, or all, of the residence next door at 28837 Grayfox, thereby eliminating height constraints imposed by the City (though not a consideration under Chapter 3 of the Coastal Act, which does not protect private views).

In addition, the Commission notes that in conjunction with the other aspects of a redesigned project alternative, the applicant could develop a landscape plan that incorporates, for example, an expansive stone terrace above the top-of-slope and a swimming pool near that area of the parcel, thereby creating attractive recreational amenities to capture the bluewater views looking out over the canyon toward the Pacific Ocean. Such a setting would offer the applicant and his guests leisure and entertainment areas with permanent, unobstructable views of the Pacific Ocean. These features would not require fuel modification downslope if designed in accordance with the fire department's requirements.

As outlined above, the applicant can relocate the proposed project elsewhere on the ample developable area that remains if the presently proposed project is setback a minimum of 100 feet commencing from the 90-foot elevation contour marking the top-of-slope of Malibu Riviera Canyon.

In addition, since the publication of the previous staff report prepared for the Commission's May hearing, the Commission staff has developed an additional alternative that has been evaluated and conceptually approved by the Los Angeles County Fire Department Fuel Modification Unit. This alternative would require the construction of a fire wall six feet in height to be constructed at the 85-foot elevation contour, with a setback of 50 feet upslope from the 90-foot elevation contour (top-of-slope as determined by Commission staff). The slope between the 90-foot contour and the downslope 85-foot contour (approximately 20 linear feet) would be subject to fire department restrictions on species composition and height limits, but the remainder of the sensitive canyon habitat downslope of the wall (to, and including, the stream corridor) would be allowed to recover to mature coyote bush-dominated cover with no annual thinning or other modofication requirements of any kind.

Upon request by Commission staff, the Fuel Modification Unit staff stated that if a firewall was constructed at the 85-foot elevation contour and the proposed project was setback only 20 feet upslope from the 90-foot elevation contour, a minimum of 30 feet of canyon habitat downslope from the firewall would require fuel modification. This section of the slope is steep and perpetual fuel modification practices in this sensitive area of the canyon would result in significant adverse impacts as discussed in detail in this report. As outlined above, alternatives to such a location clearly exist that would avoid fuel modification on all, or most of, the canyon slope altogether.

For the above reasons, feasible alternatives have been identified that would allow the applicant to redesign the project to a more conventional design on the upper portion of the subject parcel, or to retain the essence of the present design but with lesser modifications and the construction of a firewall in concert with the setbacks described above from the 90-foot top-of-slope contour. Thus, at least two alternatives have been identified that either completely, almost completely avoid fuel modification in the canyon. In addition, these alternatives would reduce or avoid other impacts posed by development on the canyon slope, such as increased erosion, polluted runoff, disturbance to wildlife, and other impacts addressed more fully below.

4.0 Primary issue: Protecting ESHAs where feasible alternatives exist

The primary issue raised by this application is whether the Chapter 3 policies of the Coastal Act permit the approval of development within the environmentally sensitive canyon slopes and coastal streams of Point Dume, in the City of Malibu—particularly where feasible alternatives exist to relocate/redesign the project elsewhere on the subject site—and to thereby avoid the adverse impacts to coastal resources that would otherwise occur.

The applicant asserts that if the proposed residence is set back from the canyon slope sufficiently to avoid direct project impacts on the environmentally sensitive canyon habitat, including the impacts associated with fuel modification of the canyon vegetation, the bluewater ocean view available from the presently proposed residence may be reduced or eliminated as the result.

The applicant submitted new information on April 12, 2000 including an appraisal of the proposed project's market value and the appraiser's estimates of the diminished market value of a hypothetically relocated structure that in the appraiser's opinion would result from project alternatives to avoid the canyon slope. (Appraisal report prepared April 7, 2000 by Adler Realty Advisors, Inc., Exhibit 8).

The applicant asserts that failure to approve the size and location of the residence he proposes would constitute a "taking" because he would be unable to construct a residence with an ocean view. The Commission does not agree. If the proposed residence size and location is not approved, the applicant may seek approval for construction of a residence at a different location on his property. Such a residence would provide a reasonable use of the property, even if it did not have an ocean view, and there would not be a taking. The applicant has not submitted evidence indicating that disapproval of the proposed residence size and location would deny all reasonable use of the property or interfere with his reasonable investment-backed expectations.

In fact, the evidence submitted by the applicant indicates that denial of his proposal would clearly still allow a reasonable use of the property. The applicant's appraisal indicates that it would be profitable to build a smaller house of 3,000 square feet, with no accessory structures or ocean view. It is assumed that this smaller residence

would be setback a minimum setback of 100 feet from the top-of-slope from the top of the canyon.

The Commission has not reviewed the financial assumptions used in the applicant's analysis and has not determined whether the appraisal's conclusions are accurate. This limitation notwithstanding, and as discussed above, an additional alternative has been identified by staff since the publication of the previous staff report and the preparation of the referenced appraisal, which would only require a 50-foot setback from the top-of-slope. This alternative adds approximately 6,000 square feet of area to the potential building envelope. The value of the resultant residence and accessory structures that might be placed on the enlarged buildable area identified in this alternative has not been evaluated by the applicant's appraiser.

Thus, while the applicant's analysis shows that it would be feasible and profitable to construct the smaller residence, the Commission also finds that other feasible options for constructing a residence larger than 3,000 square feet exist that would setback the project sufficiently from the top of the canyon. These options include, but are not limited to, relocating/redesigning the residence and/or seeking a modification of, or variance from, the 65-foot frontyard setback presently required by the City of Malibu, or constructing a firewall near the top-of-slope and incorporating the necessary setbacks described above that have also been determined acceptable by the Los Angeles County Fire Department.

5.0 Staff review of subject proposal

The Commission staff has met extensively with the applicant and the applicant's agents both before and since the present application was submitted in September of 1999 and filed in November. The Malibu regulatory and enforcement supervisor, John Ainsworth, met with the applicant and his agent at their request on February 26, 1998 to provide an initial evaluation of the Coastal Act issues that would be raised by the applicant's proposal. Two supervisors, including the South Central Coast District Manager, have visited the subject site on two additional occasions since the pending application was submitted. At the meetings and site visits the staff explained and confirmed that the project encroached significantly into the Malibu Riviera Canyon environmentally sensitive habitat and would pose significant fuel modification impacts to the canyon vegetation. Staff explained to the applicant even before the application was submitted for formal review that staff would likely recommend sufficient setbacks to avoid disturbance of the sensitive canyon and riparian areas, particularly in light of the large, relatively flat area closer to the street that was not being fully used in the project design.

The applicant and the applicant's agent were notified in January, 2000 that the preliminary recommendation of the Commission staff was for denial of the proposed project as submitted, and they were again notified that this was the pending recommendation in February, after the second evaluation of the project at the monthly staff project review. The applicant was advised that staff had identified alternatives that would lessen the project's potential adverse effects upon the sensitive habitat yet

provide for a substantially similar development, though possibly with reduced ocean views from the main residence.

Since that time, and subsequent to the publication of the staff report for the subject proposal for the May agenda, the staff has met further with the applicant to review the potential alternatives and the requirements of the fire department vis-à-vis fuel modification. The applicant has not submitted revised plans incorporating any of the suggestions of Commission staff.

6.0 Unauthorized grading and vegetation removal that has been undertaken on site without the benefit of a coastal development permit.

Staff determined during an initial site visit for the pending application (No. 4-99-211) in November, 1999 that the site had been cleared on an unspecified previous date, the slope graded to well below the top-of-slope area—to approximately the 70-foot elevation, from the side yard boundary to side yard boundary on the parcel—and vegetation to the same elevation completely stripped to mineral earth. No slope stabilization measures had been implemented for the graded area. Staff suggested that temporary slope stabilization measures be implemented during the forthcoming winter season. Staff subsequently issued Emergency Coastal Development Permit No. 4-99-261-G, on November 30, 1999 to implement these measures.

The applicant's current proposal includes grading that area to build the proposed structure. Although the grading already occurred, the Commission evaluates this application as if the resources were still there and applies the Chapter 3 policies. This application does not fold in the followup regular coastal development permit approval that is required to make permanent the development authorized under an emergency permit. The staff invited the applicant to amend the proposed project to incorporate a slope restoration plan, but they did not do so.

If the Commission denies Coastal Development Permit No. 4-99-211 as recommended by staff, the applicant will still be required to obtain a regular coastal development permit for the grading and vegetation removal undertaken on the site, as required by the emergency permit. The followup permit will address the implementation of a restoration plan for the slope area that was cleared.

Significantly, the applicant was required by the City of Malibu to substantially revise a previous version of the subject proposal in 1998. The required project revisions addressed, among other concerns (such as visual impacts), the interpretation of the top-of-slope and the relationship between constructing the proposed project within the canyon and resultant adverse environmental impacts. The relationship of these issues to the unauthorized grading and vegetation removal undertaken by the applicant is addressed in the ESHA section of this report. To summarize, however, the applicant secured a determination by the City of Malibu that they could rely on a lower slope segment than the Commission staff determined to be appropriate based on the staff's on-site review of the parcel's topography. The result of securing the City's approval for

use of the lower contour is that under the City of Malibu's development review, the use of the lower top of slope determination increases by at least 5,000 sq. ft. the portion of the canyon slope that may be developed.

The applicant notified staff that an approved fuel modification plan, with a planting plan consistent with the restoration proposal would be submitted for staff consideration, but the staff only received a preliminary fuel modification plan, which does not include a planting plan or a restoration proposal, on April 12, 2000.

B. Environmentally Sensitive Habitat Areas; Coastal Waters

Section 30230 of the Coastal Act states:

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

Section 30231 of the Coastal Act states:

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

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 those resources shall be allowed within those areas.
>
> (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

In addition, the certified Malibu/Santa Monica Mountains Land Use Plan (LUP) contains policies that provide useful guidance that the Commission has consulted in the past when considering development proposals in the Point Dume area of Malibu

for consistency with the policies of the Coastal Act. These policies have been found by the Coastal Commission in certifying the LUP to incorporate the resource protection requirements of Coastal Act Sections 30240 and 30231 for application to specific sensitive resource areas in Malibu and therefore continue to serve as guidance in reviewing proposed development for consistency with Coastal Act policies.

Specifically applicable LUP policies addressing the protection of DSRs and ESHAs and thereby incorporating the resource protection policies that are relevant to the proposed project include:

P 74 New development shall be located as close as feasible to existing roadways, services, and existing development to minimize the effects on sensitive environmental resources.

P 81 To control runoff into coastal waters, wetlands and riparian areas, as required by Section 30231 of the Coastal Act, the maximum rate of storm water runoff into such areas from new development should not exceed the peak level that existed prior to development.

P 82 Grading shall be minimized for all new development to ensure the potential effects of runoff and erosion on these resources are minimized.

P 86 A drainage control system, including on-site retention or detention where appropriate, shall be incorporated into the site design of new developments to minimize the effects of runoff and erosion. Runoff control systems shall be designed to prevent any increase in site runoff over pre-existing peak flows. Impacts on downstream sensitive riparian habitats must be mitigated.

P 87 Require as a condition of new development approval abatement of any grading or drainage condition on the property which gives rise to existing erosion problems. Measures must be consistent with protection of ESHAs.

P 89 In ESHAs and Significant Watersheds and other areas of high potential erosion hazard, require approval of final site development plans, including drainage and erosion control plans for new development prior to authorization of any grading activities.

P 91 All new development shall be designed to minimize impacts and alterations of physical features, such as ravines and hillsides, and processes of the site (i.e., geological, soils, hydrological, water percolation and runoff) to the maximum extent feasible.

The project site includes habitat mapped as a Disturbed Sensitive Resource Area (DSR) on the certified LUP maps; therefore, specifically applicable that provide guidance in evaluating the proposed project include:

Table 1 Policies:

DISTURBED SENSITIVE RESOURCES

- In disturbed riparian areas, structures shall be sited to minimize removal or riparian trees.
- Removal of native vegetation and grading shall be minimized.
- Site grading shall be accomplished in accordance with the stream protection and erosion policies.
- Disturbed, sensitive ravines and canyons at Point Dume should be retained in their existing condition or restored.

1.0 Proposed project

As discussed above, the applicant proposes construct a single family residence, guest unit, two garages, a swimming pool, and other attendant development on a 1.05—acre parcel. The subject parcel takes access off Grayfox Street and contains a deep, flat rectangular area that slopes at the rear into, and comprises a portion of, Malibu Riviera Canyon, on Point Dume. The canyon, which is mapped in the LUP as a Disturbed Sensitive Resource Area (DSR), drains into an intermittent stream at the bottom of the canyon, which is a designated blueline stream on the U.S. Geologic Survey quadrangle maps and an Environmentally Sensitive Habitat Area as defined by the Coastal Act. The stream empties into the Pacific Ocean less than one half mile from the applicants' parcel.

2.0 Disturbed Sensitive Resource Area

The certified LUP maps show the boundary of the disturbed sensitive resource area at approximately the 90-foot elevation line along the upper edge of Malibu Riviera, Canyon, which coincides with the slope's increasingly steep descent into the canyon. As can be seen on Exhibit 6, the parcel is of relatively low relief until approximately the 90-foot elevation line, which Commission staff believes represents the top-of-slope.

The Commission has found, in past permit actions, that the canyons of Point Dume are disturbed sensitive resource areas. While such areas may contain modified habitats that no longer offer their original, undisturbed biological significance they are nonetheless sufficiently valuable to warrant protection from further impacts. Modified habitats may thus be more vulnerable to damage from the potentially adverse impacts of development in or adjacent to such areas than more pristine areas. 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 downgradient 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.

3.0 Ecological significance of the Point Dume coastal canyons

An intermittent blueline stream meanders through the canyon bottom just over 100 feet downgradient of the proposed project, and empties into the Pacific Ocean less than one half of a mile away. The length of Malibu Riviera Canyon supports, in various locations, riparian species such as willow and occasional stands of sycamores, scattered oaks, and extensive stands of coyote bush (*Baccharis pilularis*), the most characteristic shrub species on Point Dume. Mature stands of coyote bush observed by staff in the canyons of Point Dume often form a lush, closed canopy up to breast height. The architecture of healthy, mature stands of coyote bush provide critical cover and refuge for a wide variety of animals and birds that rely on the coastal canyons of Point Dume as the last remnant of significant terrestrial and riparian habitat on the Malibu Riviera Terrace. Coyote bush is the dominant species on the slopes and canyon bottom of the subject site.

The Point Dume canyons have been historically recognized as regionally significant biological resource areas, and were initially designated as part of the Point Dume Significant Ecological Area by Los Angeles County and were subsequently designated as a Disturbed Sensitive Resource Area (DSR) in the certified Malibu/Santa Monica Mountains Land Use Plan (LUP). The LUP recognizes these areas as those environmentally sensitive habitat areas that have been affected by the encroachment of development and that while no longer pristine ecosystems, these sensitive habitat areas are nevertheless environmentally significant due to their rarity in the context of the urbanized setting in which they occur. The canyon habitats of Point Dume are a vanishing refuge for wildlife, and provide critical wildlife corridors.

Point Dume has been described as one of two remaining areas in Los Angeles County where a diverse mixture of terrestrial and marine habitats can be found in close opposition. Significantly contrasting ecosystem types in close proximity to each other often result in unusual species assemblages and rare, transitional or fringe habitats that may be highly limited in occurrence.

The Point Dume headland extends into the Santa Monica Bay more than a mile beyond the rest of the Malibu coast, and is located in the Pacific Flyway. As a result, it is an important resting and jumping off point for migratory birds. Many of migratory

bird species therefore rely on the remaining terrestrial habitats in this refuge, including the coastal canyons affected by the subject development of Coastal Development Permit Application No. 4-99-211.

This unusual geographic context is limited in distribution in southern California, and provides critical habitat for breeding, feeding, resting, or migrating grounds for a wide variety of species. Point Dume remains an important habitat for a diversity of bird species, and has long been noted for the unusual number and variety of animal species, such as raccoons, coyotes, skunks, and foxes that continue to utilize the canyon bottoms despite the encroachment of development. One of the main reasons these species continue to flourish on Point Dume is that the canyon corridors, albeit highly disturbed, nevertheless remain essentially intact and offer small animals and birds the opportunity to move among the corridors in a relatively free manner.

Where the vegetative cover of the canyon slopes remains intact, and unmodified by fuel management programs that trim or clear the characteristic dense coastal sage and chaparral shrub stands, the thick resilient canopy, characteristically deep roots, and protective accumulation of understory residues, such as leaf detritis, collectively provide a highly effective natural filtering and buffering mechanism that protects coastal waters from the intrusion of sediments and other non-point source pollutants.

Such contaminants are commonly discharged from runoff associated with the impervious surfaces that accompany development, and are of intensified concern when such development is located immediately within a sensitive habitat area draining to a blueline coastal stream.

Each incremental increase in new construction or landscaping in previously undeveloped area increases the volume, velocity, and concentration of contaminants in discharged runoff. Development typically increases the discharge of chemical fertilizers, pesticides, soil amendments, eroded soil sediments, oil from automobile losses to driveways, and other sources of chronic non-point source pollution that ultimately enters stream corridors, and ultimately the Pacific Ocean, through the increased volume and velocity of rainfall runoff from developed sites.

Thus, development in or adjacent to sensitive habitat areas and stream corridors poses a range of potentially significant, adverse impacts that individually and cumulatively threaten the continued habitat value, and protective physical functions that contribute to ecosystem stability.

The applicant's consulting biologist, Edith Read, Ph.D. of Psomas and Associates, summarizes the canyon habitat of the site as biologically insignificant and dismisses the impacts of the proposed development as non-existent, asserting that the project will be a benefit to a habitat that will perish entirely if it is not developed in accordance with the applicant's plan. Dr. Read states that the applicant will plant native plant species on the canyon slopes and bottom as part of the required fuel modification plan, and that the implementation of fuel modification on the site will be a benefit of

developing the parcel. Dr. Read thereby concludes that the proposed project can only have beneficial effects.

To date the applicant has only submitted a preliminary plan, however, which does not contain a planting plan. However, species approved by the fire department for planting on the canyon slope are those which do not accumulate oils and resins in their tissues (thus increasing flammability), and that mature at a low height – or are artificially pruned to a low height (less than three feet). The majority of typical coastal sage scrub and chaparral species that are found on Point Dume but capable of exceeding three feet in height would generally not be acceptable to the fire department. Thus, the applicant's final fuel modification plan, which must be approved by the fire department, would result in a highly modified, artificial habitat at best, even if comprised of "native" species.

In addition, the Commission notes that Dr. Read's reports (Exhibits 15 and 16) minimize the value of the most predominant native shrub species on the subject site, coyote bush. Coyote bush, *Baccharis pilularis* is the predominant native shrub in the canyons of Point Dume and is widely cited by the literature on California plant communities as a typical component of coastal sage scrub communities (see various excerpts from the literature in Exhibit 9). In short, coyote bush is not a "depauperate" form of coastal sage scrub, but rather is what one expects to see under present conditions on Point Dume. Dr. Read may be correct that coyote bush flourishes in the coastal canyons as the result of increased water inputs from adjacent development, but it is also a naturally-occurring shrub in this area.

The presence of coyote bush as the dominant native shrub on the subject site offers an additional ecological benefit that Dr. Read overlooked: On Point Dume, when the predominant species is coyote bush, instead of sage or other flammable shrubs and small trees that are also native in the coastal canyons, the Los Angeles County Fire Department, Forestry Division, is willing to reduce the typical 200-foot fuel modification radius from structures that would ordinarily apply, to 100 feet. The fire department foresters have explained that coyote bush does not produce and accumulate flammable oils (terpenes) in its tissues that occur in other typical coastal sage scrub and chaparral shrub species in coastal southern California. Therefore, coyote bush is considered far less flammable than sage and other chaparral shrubs.

In addition to the more liberal treatment by the fire department that coyote bush-dominated habitat enjoys, mature habitat left unmodified for fire protection provides highly effective cover and refuge for small animals and birds, and can grow to a height of six feet or more in the sheltered canyon conditions of Point Dume. The architecture of such cover represents a significant habitat and wildlife corridor, even in a residentially developed area.

In addition, it is not true as the applicant's biological consultant suggests, that the applicant would not be required to improve the canyon habitat that occurs on site if this project is not constructed. As discussed in the summary section, the applicant has

undertaken grading and extensive vegetation clearance on the slopes of the subject parcel. An emergency coastal development permit was issued on November 30, 1999 for the placement of temporary slope stabilization measures, but the applicant has not applied for the followup regular coastal development permit for the grading, vegetation clearance, and development authorized by the emergency permit. The application was due in January but has not yet been submitted.

This application does not incorporate the regular permit approval that is required to make the development authorized under the emergency permit permanent. Staff previously invited the applicant to amend the proposed project to incorporate a slope restoration and replanting plan, but the applicant did not respond. Klaus Radtke, Ph.D., a qualified restorationist, and the applicant's former agent/attorney, Alan Block, met with staff on site to discuss the restoration of the slope and other project concerns. Dr. Radtke observed that the coyote bush was resprouting vigorously and appeared to be well established as the dominant native shrub on the applicant's lot. The applicant did not subsequently submit a restoration plan prepared by Dr. Radtke. In addition, the applicant had previously agreed to submit a final approved fuel modification plan incorporating a planting plan and the necessary restoration measures, but no plans were received. The staff received an approved preliminary fuel modification plan from the applicant on April 12, 2000 but the plan does not contain a planting plan.

Nevertheless, the applicant must obtain a regular permit from the Commission for the unauthorized development. Regular permits for grading and vegetation removal in sensitive resource areas obligate the applicant to take whatever actions the Commission determines are appropriate to restore the affected area, and generally require the preparation and implementation of a restoration plan. Therefore, the applicant is obligated to take actions the Commission determines are appropriate to restore the disturbed area with native plant species acceptable to the Commission regardless of the Commission's decision with regard to pending Coastal Development Permit Application No. 4-99-211, and contrary to the opinion of the applicant's consulting biologist.

In considering this proposal, the Commission evaluates it as though no grading had occurred and the resources are still present.

4.0 Previous unauthorized grading and vegetation removal will require future site restoration, thus rendering the proposed project's impacts to the sensitive canyon slopes more significant than Dr. Read has acknowledged.

Moreover, the habitat values Dr. Read finds deficient in the subject area will be largely remedied by the restoration requirements that are likely to be required under the followup permit consideration for the unauthorized grading and vegetation removal. Thus, though there is a temporal displacement between present site conditions and future restoration, the proposed project would affect environmentally significant habitat, even by Dr. Read's stated standards, if allowed to proceed in the area where the restoration will be required.

The applicant's unauthorized grading and vegetation removal is briefly discussed in the first section of the staff report, and more fully below.

A survey of the subject site was undertaken by the applicant's surveyor on July 7, 1998. The applicant told Commission staff and others attending the November, 1999 site visit that the grading and vegetation removal in question had been undertaken before the survey.

John Ainsworth, Malibu regulatory and enforcement supervisor, states that on a visit to the subject site on February 26, 1998 he observed that there was a clear break in the slope that was heavily vegetated with native and exotic species. The break was very clear and at about the 90 foot contour break on the surveys. At the November 1999 site visit, it appeared that the unauthorized grading had modified the site contours compared to the reported condition of the slope at the earlier site visit.

According to the planning staff of the City of Malibu, the City asked the applicant to revise initial project plans to set the project further back from the slope than the project is presently shown. The City staff indicate that the applicant challenged the City's definition of the "top-of-slope" and the ecological significance of the City's position regarding setbacks from the Environmentally Sensitive Habitat Area of the canyon (see Exhibits 11 and 13), and secured the referenced survey and subsequent City determination that the 80-foot contour would be used to determine top of slope, all within a period of a few months in June—August, 1998.

Exhibit 11 contains the initial argument made to the City by the applicant's biological consultant, Dr. Read, in a letter dated June 12, 1998, that the City's use of top-of-slope limits for development should not be considered relevant for her client's project:

> "...With the information available to me, I understand that the City considers the creek area, while disturbed, to qualify as an environmentally sensitive resource and for the purposes of IZO *(a reference to the City's interim zoning ordinance)* §9.3.03(6)(f). The City requires a minimum 100-foot setback from such resources. According to Craig A. Ewing, City Planning Director, in the past the City has at times requested that development take place on the "top of slope" to comply with the setback. (A. Morgenthaler *(Mrs. Lever)*, telephone conversation with C.A. Ewing, Planning Director, on 6 May, 1998). When delineating disturbed and non-disturbed environmentally sensitive areas, I expect the City could not survey every foot of every canyon/creek area to determine whether the 100-foot setback was necessary in every case. In many circumstances I would agree with this requirement, as a way to ensure that development does not encroach upon valuable flora or fauna, or adversely impact natural stream channels. However, I cannot determine any particular environmental reason for requiring that the footprint be moved to the "top-of-slope" in this instance..."

The survey which was done after the grading and vegetation removal on the subject site was then conducted in July 1998, less than a month after this letter was written.

Less than one month after the July survey, the applicant obtained a copy of a memorandum dated August 6, 1998 by City Planning Director Craig Ewing to his staff regarding the determination of top-of-slope. The memorandum directs staff that where a site has two distinct slope segments descending into a canyon (such as the applicant's site) if the slope aspect of the upper segment does not exceed 4 (horizontal):1(vertical) then the lower slope break will define top-of-slope.

Within three weeks of the date of Mr. Ewing's memorandum to staff, the applicant's attorney wrote a confirming letter to Mr. Ewing asserting that the 80-foot elevation contour should be used to determine the top-of-slope on the applicant's parcel. An unattributed attachment to the letter purports to show that the upper of two competing slope breaks on the applicant's site fails by a fraction to attain sufficient steepness to qualify as the top-of-slope by the City's 4:1 standard stated in Mr. Ewing's memorandum to staff. The "slope analysis" exhibit shows slopes in the relevant area of not more than 4.0:1 and 4.6:1, thus by elimination designating the 80-foot contour, rather than the 90-foot contour, to be considered the top-of-slope. A fractionally steeper slope aspect would have failed the City test and required the applicant's plans to setback the development envelope that could be authorized by the City to the upper, 90-foot contour.

A determination by the City that the approximately 80-foot contour should be used as the top-of-slope resulted in the authorization by the City staff of a building envelope on the northeastern canyon slope, where the unobstructable ocean view can be obtained without exceeding the City's 18 ft. building limit to protect neighboring private views, that is approximately 5,500 sq. ft. larger than the building envelope that would have been authorized if the 90-foot contour had been determined to represent the top-of-slope.

Based on the staff's site visit and observations of the site contours on February 26, 1998, and subsequently in November of 1999, it appears that the upper slope had been recontoured by the grading the applicant had done without necessary approvals. Despite the changes to the site, the staff concluded that the 90-foot contour still represents the physical top of slope. The Commission staff does not rely upon a mathematical ratio to determine top-of-slope, but rather on an informed, common sense judgment based on site-specific analysis and obvious topographic variations determined in the field and in consultation with topographic maps where relevant. The staff evaluation of feasible project alternatives, therefore, has been made on the basis of evaluating a building envelope that remains available despite setting the building footprint back at least 100 feet from the 90-foot elevation contour as described elsewhere in this report.

While the premature grading and vegetation removal may have yielded an increased building envelope for the proposed project during the City review process, there is no

similar result under the Commission's analysis of the project under the Chapter 3 policies of the Coastal Act. Although the applicant's consulting biologist has minimized, and virtually dismissed the biological significance of the portion of the Malibu Riviera Canyon disturbed sensitive resource area on the subject site, the applicant's obligation to obtain a followup regular coastal development permit remains, and will be subject to whatever measures the Commission determines necessary to secure the restoration of the slope.

Commission staff ecologist John Dixon, Ph.D., points out that a degraded habitat can be restored, but a lost habitat cannot. Dr. Dixon also states that a blueline stream corridor together with it's bordering "buffer" (defined as the canyon slopes and vegetation surrounding the coastal streams of Point Dume) should be considered collectively to be environmentally sensitive habitat area subject to the applicable protective policies of Chapter 3 of the Coastal Act.

Dr. Dixon finds little useful ecological significance to labeling some sensitive habitat areas as "disturbed," when such habitat occurs as a fragile, regionally rare remnant of once extensive habitat. The fact that the habitat is disturbed does not eliminate its ecological value or mean that it is not ESHA. The relative scarcity of the coastal canyon habitats interfacing between marine and terrestrial environments on the Point Dume headlands has been highlighted elsewhere in this report, and supports Dr. Dixon's criteria for considering so-called "disturbed" habitat areas as ESHA for the purposes of applying the protective policies of the Coastal Act.

Dr. Dixon regards the whole of the Point Dume sensitive coastal canyons as ESHA and believes that the fact that these areas are degraded by the intrusion of invasive exotic species, by development such as bridges, paths, fences, decks, and fuel modification—whether authorized or not—serves to underscore the importance of protecting and preserving—and eventually restoring, what remains of these habitat areas.

Thus, the habitat on the slopes of the applicant's site qualifies as sensitive habitat area regardless of its disturbed condition and the applicant's own actions have further disturbed the canyon slope. The applicant's obligation to obtain the necessary followup permits ensures that the Commission will have an opportunity to consider appropriate mitigation measures regardless of whether the presently proposed project is constructed in a separate permit consideration.

5.0 Proposed project poses avoidable adverse impacts to the canyon habitat

If the project is constructed in the location presently proposed, significant adverse impacts to the sensitive coastal canyon habitat may result. Much of the vegetation of the canyon slope would be permanently cleared, built upon, or converted to highly modified domestic landscaping that while composed of "native" species does not resemble the structure or function of an unmodified assemblage of native species.

As noted previously, the remaining native vegetation of the entire site would also be highly modified to achieve the requirements of the Los Angeles County Fire Department, which may enforce specific fuel modification requirements up to a zone extending 200 feet from any defensible structure (though on Point Dume, the fire department increasingly authorizes a fuel modification zone of up to 100 feet). The footprint of the applicant's proposed project would require fuel modification to within the stream corridor, even if the lesser 100-foot zone is authorized by the fire department.

The combined removal of the portion of the canyon habitat necessary to place the residence and decks descending the slope on the proposed plan and severe modification and artificial management that will be required for the balance of the canyon habit on the subject site will remove approximately 23,000 square feet of Disturbed Sensitive Resource Area (DSR) habitat permanently from any possible future restoration effort and will discontinue most of the habitat value represented by the area lost.

6.0 Affects of development on sensitive canyon habitat due to fuel modification

In 1996, the County Board of Supervisors adopted the Fuel Modification Ordinance which authorizes the fire department to implement significantly increased vegetation management standards in the Malibu/Santa Monica Mountains area – including requiring the removal or severe thinning of native shrubs, and to restrict the planting of many of the most characteristic coastal sage scrub and chaparral species that would ordinarily occur in these areas.

Prior to the fuel management program, the County only required the clearance of fine, dry fuels up to 100 feet from defensible structures. The County Fire Department, Forestry Division states that even now, structures built before the adoption of the 1996 ordinance are subject (on Point Dume) only to clearance of fine, dry fuels on the subject parcels. Green, healthy shrubbery on the canyon slopes is left untouched on such parcels.

But the new standards require a significant zone of disturbance that substantially exceeds the footprint of the actual structure – and unlike previous versions of the fire department requirements, may even extend offsite onto adjacent lands—in order to achieve compliance with the new fuel modification guidelines.

For these reasons, development authorized since 1996 carries with it the requirement of performing significant vegetation clearance, thinning, irrigation, and landscaping or restoring habitat with a highly restrictive palette of native species (most of the characteristic species of the locally native chaparral or coastal sage communities are unacceptable for new plantings within the fuel modification zones).

As the impacts of these requirements have begun to be felt in specific projects approved by the Commission since 1996, it has become clear that to avoid fuel

modification in sensitive habitats, such as the coastal canyons of Point Dume, proposed development must be evaluated for alternatives, such as relocation elsewhere on a particular site, and/or the redesign of some projects, that will avoid fuel modification in the canyons.

Thus, because of the Coastal Act policy requiring protection of sensitive coastal canyons and of the significant, adverse impacts visited upon the fragile, disturbed canyon vegetation and wildlife habitats by recent fuel modification requirements, the Commission has directed staff to identify project alternatives, where feasible, that will avoid these impacts to the canyon corridors.

Under the Coastal Act the Commission must also avoid the cumulative, adverse effects to the sensitive coastal canyon habitats that occur from construction within or adjacent to the canyon slopes. Individually, many projects in Point Dume seem relatively insignificant. Considered on a cumulative basis, however, significant impacts may occur as the result of minor changes on particular sites.

In response, staff has thoroughly evaluated the presently proposed project and determined that one or more feasible alternatives do exist that would avoid the most significant adverse impacts to the canyon habitats that would be expected if the proposed project is implemented.

7.0 Applicant opposes project alternative due to potential reduction or loss of ocean view

A substantial residence could alternatively be developed on the upper terrace of the subject site, thereby avoiding all adverse impacts to the canyon slope and stream corridor that would result from the building location presently proposed by the applicant. However, the applicant has not agreed to relocate or redesign the proposed project as suggested by staff. The applicant asserts that any degree of project relocation would reduce the private bluewater ocean views that the applicant seeks to obtain by building the proposed residence as presently designed and located on the canyon slope. If the project were relocated 100 feet streetward of the top-of-slope, thereby avoiding all direct adverse impacts to the sensitive habitat (including those caused by fuel modification), a residence of alternative design could likely be constructed, but it might not obtain bluewater views.

8.0 Conclusion:

For all of the reasons set forth above, the Commission finds that the proposed project would adversely affect environmentally sensitive habitat areas (ESHAs) and buffer areas adjacent to ESHAs and would therefore be inconsistent with the requirements of Coastal Act Section 30240. In addition, the adverse impacts of the proposed project would degrade the vegetation of habitat corridors adjacent to an environmentally sensitive, designated blueline stream that outlets to the Pacific Ocean and the offshore kelp beds of Point Dume, which are also designated as ESHAs in the certified

Malibu/Santa Monica Mountains Land Use Plan The biologically productive kelp beds off Point Dume are well known as a significant coastal resource adjacent to the rocky intertidal habitat along that section of the coastline. The kelp beds provide critical habitat underlying fisheries that help to support, for example, the population of sea lions that haul out nearby. Juvenile fish find cover from predators within the kelp fronds and hold-fasts, and an entire. The Regional Water Quality Control Board has designed the kelp habitat as an area of special biological significance and has identified this resource as particularly prone to damage by water and sediment pollution discharged into Santa Monica Bay from upstream sources.

The increased runoff from the proposed project combined with the reduction in habitat coverage and other affects outlined more specifically above would lead to erosion, increased infiltration into the stream of contaminated runoff, and loss of the buffering function of the canyon vegetation. Contaminated discharge and increased sediments from the stream would in turn contribute pollution to the nearshore waters upon which the health of the kelp beds, and their biological productivity depends. These impacts would compromise the biological productivity of coastal waters, and directly reduce the habitat value of environmentally sensitive habitat areas --all inconsistent with the policies of Coastal Act Sections 30230, 30231 and 30240 set forth above. The Commission therefore finds that the proposed project is inconsistent with the applicable policies of Chapter 3 of the Coastal Act protective of environmentally sensitive habitat, coastal waters, and marine resources.

B. Locating New Development; Hazards, Landform Alteration

Coastal Act **Section 30250** states in pertinent part that:

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

Coastal Act **Section 30251** states that:

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

Coastal Act **Section 30253** states in pertinent part that:

New development shall:

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

(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.

In addition, the Malibu LUP, which the Commission has utilized as guidance in past permit decisions, contains policies applicable to the proposed project:

P 82 Grading shall be minimized for all new development to ensure the potential negative effects of runoff and erosion on these resources are minimized.

P 86 A drainage control system, including on-site retention or detention where appropriate, shall be incorporated into the site design of new developments to minimize the effects of runoff and erosion. Runoff control systems shall be designed to prevent any increase in site runoff over pre-existing peak flows. Impacts on downstream sensitive riparian habitats must be mitigated.

P 91 All new development shall be designed to minimize impacts and alterations of physical features, such as ravines and hillsides, and processes of the site (i.e., geological, soils, hydrological, water percolation and runoff) to the maximum extent feasible.

P 147 Continue to evaluate all new development for impact on, and from, geologic hazard.

P 149 Continue to require a geologic report, prepared by a registered engineer.

P 154 Continue to review development proposals to ensure that new development does not generate excessive runoff, debris, and/or chemical pollution that would have a significantly negative impact on the natural hydrologic systems.

1.0 Proposed project includes 1,479 cu. yds. of grading on a canyon slope

As described previously, the applicant proposes to construct a 5,035 sq. ft. single family residence with a 1,034 sq. ft. garage; a guest unit with attached garage, a swimming pool and other appurtenant structures on a 1.05-acre site taking access off Grayfox Street, in the Point Dume area of Malibu. The applicant proposes to build the residence along and down the descending canyon slope of Malibu Riviera Canyon, which is an environmentally sensitive habitat area (ESHA) described in the previous

section. A designated blueline stream follows the contours of the canyon bottom, outletting to the Pacific Ocean less than one half mile downstream from the bottom of the slope on the subject site.

The applicant's proposal includes grading approximately 1,479 cu. yds. of material (1,181 cu. yds. cut, 298 cu. yds. fill). The applicant proposes to dispose of the excess cuttings (883 cu. yds.) at an unspecified area outside of the coastal zone.

2.0 Proposed project does not minimize the alteration of natural landforms within the meaning of Coastal Act Section 30251

Coastal Act Section 30251 states that among other requirements, permitted development shall be sited and designed to minimize the alteration of natural land forms. The applicant proposes to construct the proposed project in part on a canyon slope. Most of the proposed grading is for the purpose of excavating and preparing the slope area. As discussed extensively in previous sections, one or more feasible alternatives exist that would allow the construction of a single family residence on the relatively level building pad that already exists adjacent to the parcel entrance off Grayfox Street. Construction on the alternative project location, the level area of the site, would eliminate the need for most of the proposed grading, except for the minimal amount needed to excavate structural footings and swimming pool area, and to groom the construction pad. Thus, the project as proposed will result in excessive, avoidable alteration of the natural landform—the slope of Malibu Riviera Canyon. Therefore, the proposed project is inconsistent with the requirements of Coastal Act Section 30251.

3.0 Construction on canyon slope will create or increase erosion within the meaning of Section 30253 (b) and will result in individual and cumulative significant adverse effects on coastal resources within the meaning of Section 30250.

Coastal Act Section 30253 (b) states that new development shall neither create nor increase erosion. The proposed project, as stated, would construct a new single family residence on the slope of a coastal canyon designated as an environmentally sensitive habitat area. The proposal includes almost 1,500 cu. yds. of grading – the majority of which is excavation. The disturbance of grading on a fragile canyon slope will significantly increase the likelihood of slope erosion due to sheetflow rainfall runoff, in addition to drainage from the discharge of runoff from the increased impervious surfaces of the proposed new construction.

The proposal will also change site hydrology, expose soils on the natural slope to the erosive forces of rain and wind, require perennial fuel modification and landscaping, and reduce the extent and unmodified condition of natural vegetation in the canyon habitat area. The fire department fuel modification requirements will extend to the downslope blueline stream channel lining the canyon bottom at the lower boundary of the applicant's parcel.

In addition, it is now generally acknowledged that urban development, with increased impervious surfaces, oil-contaminated runoff from streets and driveways, and sedimentation of streams from construction-related erosion may be one of the most critical components of coastal water quality degradation. Thus providing sufficient setbacks from sensitive coastal canyons containing stream corridors is now understood as a key means of protecting the quality of coastal waters.

As discussed previously, the proposed project poses individually significant, avoidable adverse affects upon environmentally sensitive habitat in Malibu Riviera Canyon and threatens the water quality of the downslope intermittent stream. The project's impacts also pose cumulative impacts to coastal resources, reducing the habitat value of a critical link in a primary Point Dume wildlife corridor and threatening the quality and biological productivity of the kelp beds and intertidal habitat adjacent to the outlet of the canyon creek. The creek will be subject to increased sedimentation and infiltration by contaminated sediments in urbanized site runoff as the result of the proposed development on the canyon slope descending into the stream corridor on the subject site.

4.0 Conclusion

Feasible alternatives have been identified that would avoid the individual and cumulative adverse affects posed by the proposed project on sensitive coastal resources. In addition, relocation/redesign of the proposed project on the level terrace area of the subject site would eliminate all of the direct, adverse effects the project would have on the sensitive canyon habitat. These alternatives, which the Commission believes could be favorably considered if consistent with other applicable policies of the Coastal Act, have not been submitted by the applicant. Therefore, for all of the reasons set forth above, the Commission finds that the project as proposed is inconsistent with the applicable policies of Coastal Act sections 30250, 30251, and 30253.

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 which conforms with 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 effects and is found to be not consistent with the applicable policies contained in Chapter 3. Therefore, the Commission finds that approval of the proposed development 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. The Commission also finds that there are feasible alternatives to the proposed project that would substantially lessen the significant adverse effects on the environment. Therefore, the proposed project is determined to be inconsistent with CEQA and the policies of the Coastal Act.

MKH-4/25/00

List of Exhibits

Exhibit 1: Regional Map

Exhibit 2: Area Map

Exhibit 3: Parcel Map

Exhibit 4: Site Plan

Exhibit 5: 8-1/2 x 11-inch reductions of project plans

Exhibit 6: Illustrative cross section of slope elevations prepared by Commission staff

Exhibit 7: Appraisal report prepared April 7, 2000 by Adler Realty Advisors, Inc.

Exhibit 8: 16-page position paper prepared by Donald Schmitz, dated April 11, 2000, received April 12, 2000 at the Ventura District Office.

Exhibit 9: Excerpts from:"California Plant Life," by Robert Ornduff, University of California Press, 1974;"A Vegetation Classification System Applied to Southern California," U.S.D.A., Pacific Southwest Forest and Range Experiment Station, General Technical Report PSW-45, December 1980;"Terrestrial Vegetation of California," Chapter 13, "Southern Sage Scrub," by Harold A. Mooney, Department of Biological Sciences, Stanford University, 1977;"A Guide to Wildlife Habitats of California," California Department of Forestry and Fire Protection, October 1988.

Exhibit 10: Labeled Aerial Photographs of Point Dume Area prepared by applicant

Exhibit 11: Report of Applicant's Biological Consultant, Edith Read, Ph.D., Psomas and Associates, dated June 12, 1998, addressed to City of Malibu staff.

Exhibit 12: Letter of Dr. Read (see Exhibit 11) dated March 20, 2000, addressed to Commission staff.

Exhibit 13: Documents regarding top-of-slope determination.

Location Map

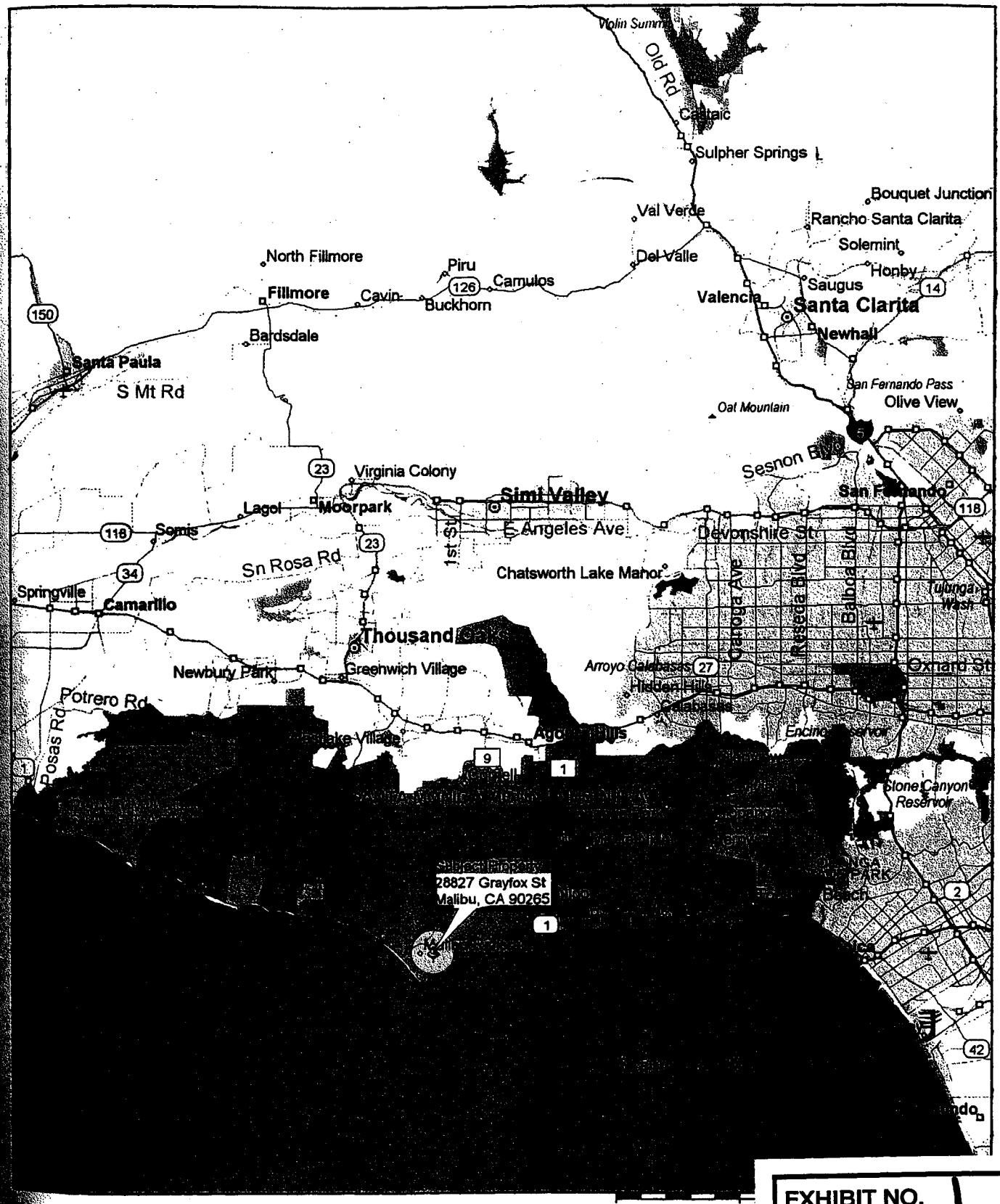

EXHIBIT NO. 1
APPLICATION NO. Lever
4-99-211
Regional Map

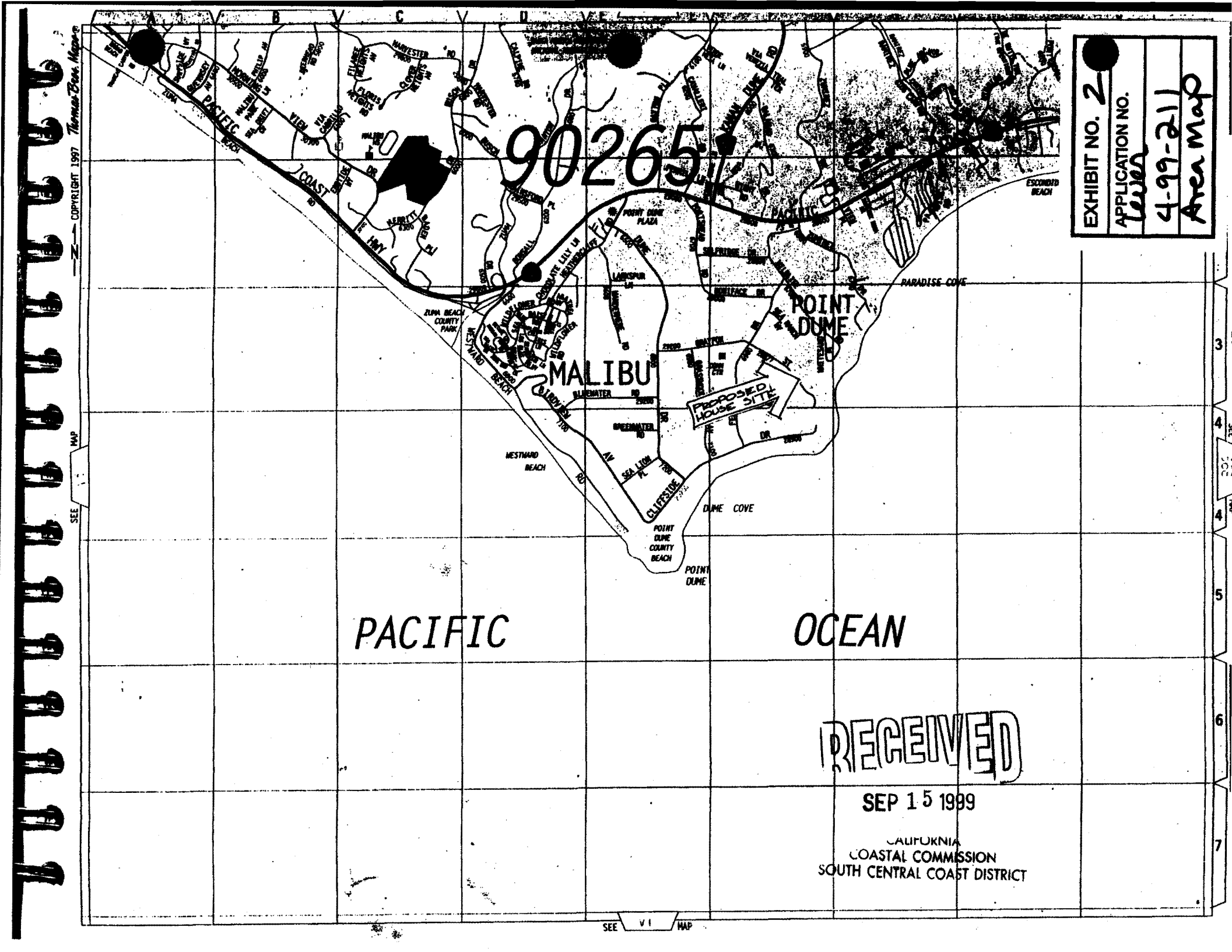
EXHIBIT NO. 2
APPLICATION NO. 4-99-211
Area Map
90265
PACIFIC COAST HWY
MALIBU
POINT DUME
PARADISE COVE
ESCONDIDO BEACH
ZUMA BEACH COUNTY PARK
WESTWARD BEACH
DUME COVE
POINT DUME COUNTY BEACH
POINT DUME
PROPOSED HOUSE SITE
PACIFIC OCEAN
SEE MAP
SEE V 1 MAP
COPYRIGHT 1997 Thomas Bros. Maps
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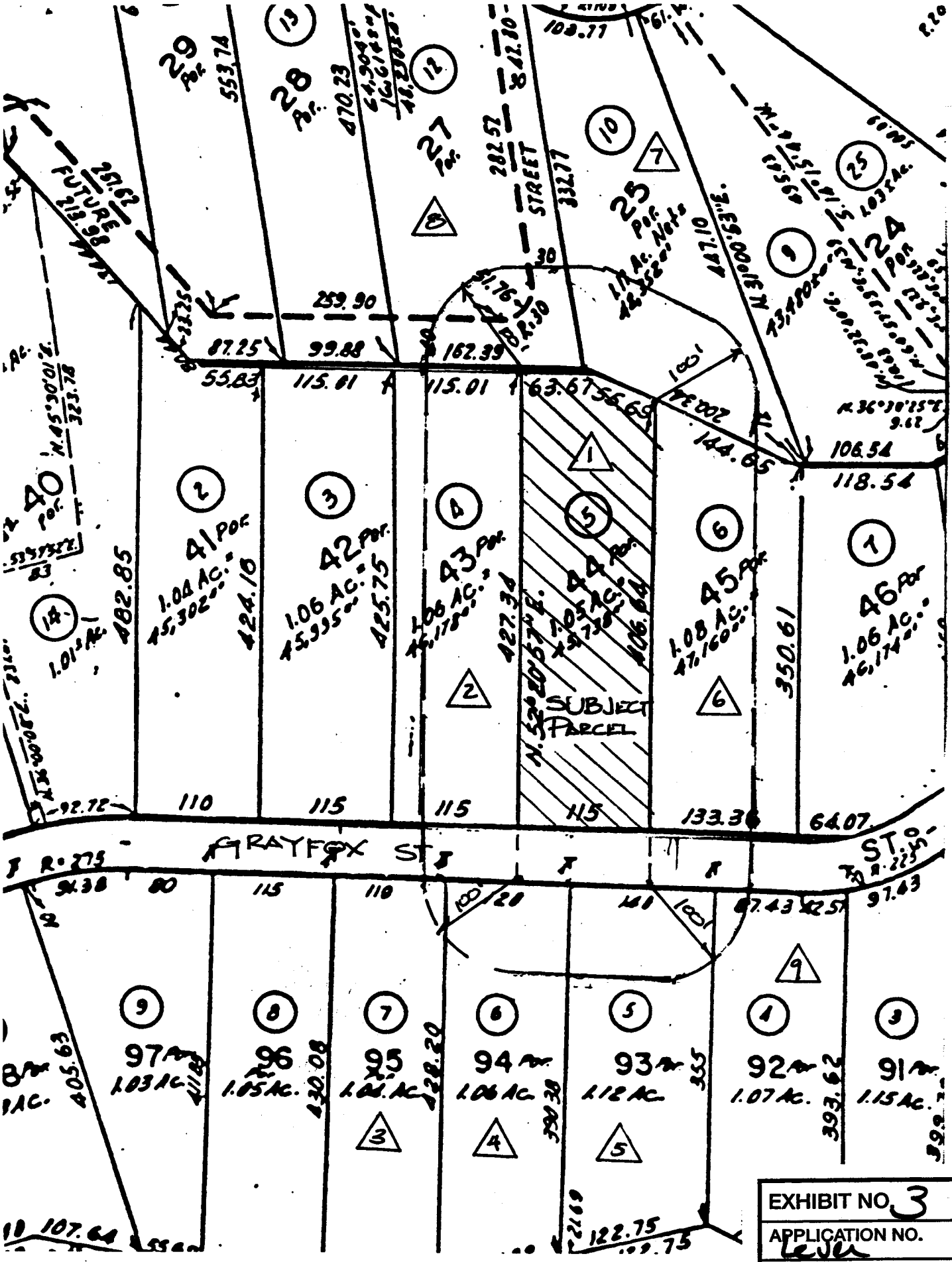
SOUTH CENTRAL COAST DISTRICT



100' RADIUS MAP PARCEL 4466-8-5, 28827 GRAYFOX ST

EXHIBIT NO. 3
APPLICATION NO. Levin
4-99-211
parcel map

PROJECT DATA

OWNER:
MARK LEVER

SITE ADDRESS:
22827 GRAYFOX STREET
MALIBU, CALIFORNIA

LEGAL DESCRIPTION:
PARCEL 44
RECORD SURVEY 57 PAGE 9 & 10

FRONT YARD SETBACK:
AVERAGE LOT DEPTH ..... 402.35 FT.
FRONT YARD SETBACK ..... 65 FT.

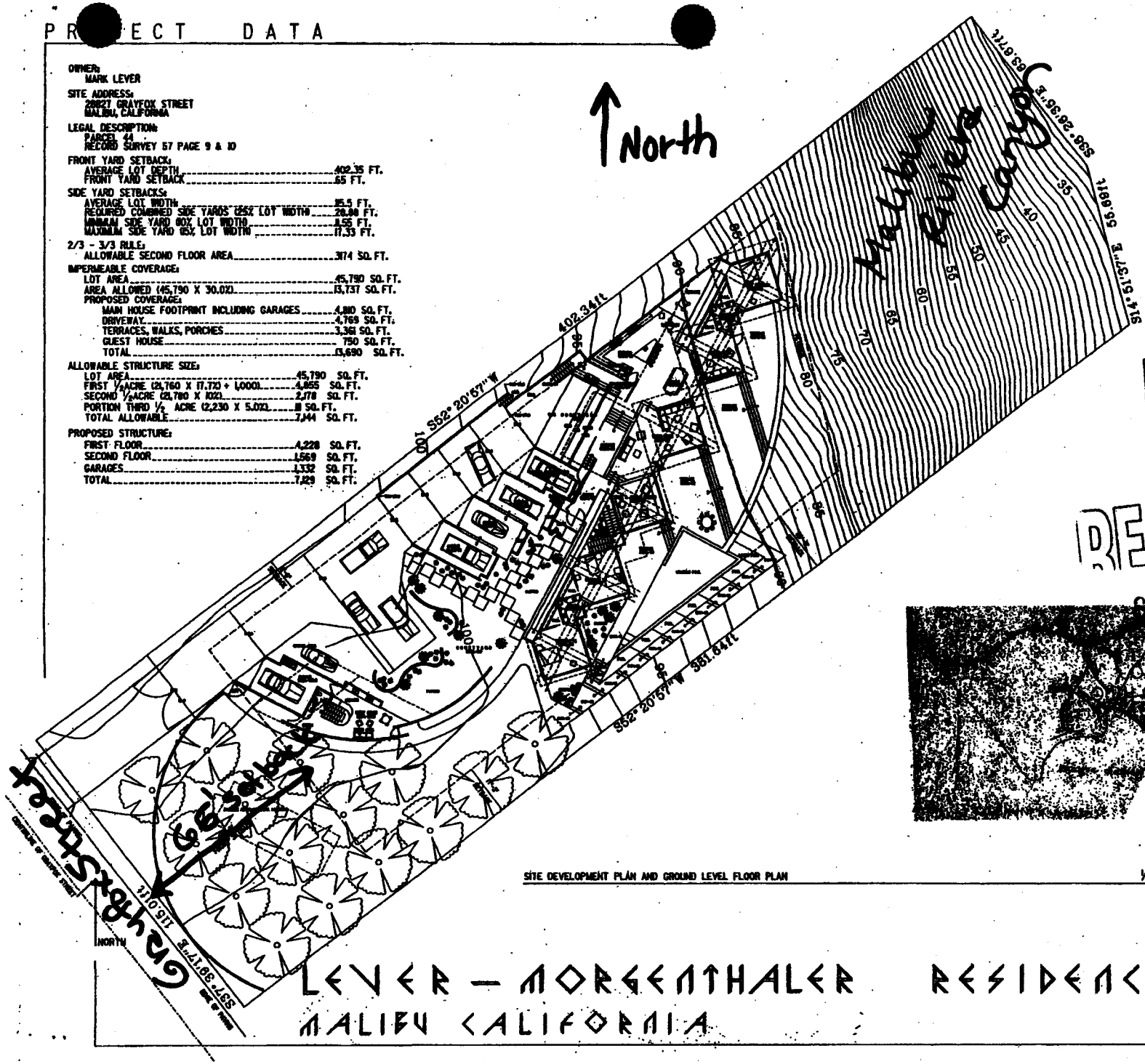
SIDE YARD SETBACKS:
AVERAGE LOT WIDTH: ..... 85.5 FT.
REQUIRED COMBINED SIDE YARDS (25% LOT WIDTH) ..... 20.88 FT.
MINIMUM SIDE YARD (10% LOT WIDTH) ..... 8.55 FT.
MAXIMUM SIDE YARD (15% LOT WIDTH) ..... 11.33 FT.

2/3 - 3/3 RULE:
ALLOWABLE SECOND FLOOR AREA ..... 3174 SQ. FT.

IMPERMEABLE COVERAGE:
LOT AREA ..... 45,790 SQ. FT.
AREA ALLOWED (45,790 X 30.0%) ..... 13,737 SQ. FT.
PROPOSED COVERAGE:
MAIN HOUSE FOOTPRINT INCLUDING GARAGES ..... 4,810 SQ. FT.
DRIVEWAY ..... 4,769 SQ. FT.
TERRACES, WALKS, PORCHES ..... 3,361 SQ. FT.
GUEST HOUSE ..... 750 SQ. FT.
TOTAL ..... 13,690 SQ. FT.

ALLOWABLE STRUCTURE SIZE:
LOT AREA ..... 45,790 SQ. FT.
FIRST 1/4 ACRE (21,780 X 17.72) + 1,000) ..... 4,855 SQ. FT.
SECOND 1/4 ACRE (21,780 X 10%) ..... 2,178 SQ. FT.
PORTION THIRD 1/2 ACRE (2,230 X 5.0%) ..... 111 SQ. FT.
TOTAL ALLOWABLE ..... 7,144 SQ. FT.

PROPOSED STRUCTURE:
FIRST FLOOR ..... 4,228 SQ. FT.
SECOND FLOOR ..... 1,569 SQ. FT.
GARAGES ..... 1,332 SQ. FT.
TOTAL ..... 7,129 SQ. FT.



SITE DEVELOPMENT PLAN AND GROUND LEVEL FLOOR PLAN 1/16" = 1'-0"

LEVER - MORGENTHALER RESIDENCE
MALIBU CALIFORNIA

EXHIBIT NO. 4
APPLICATION NO. 4-99-211
Site Plan

CITY OF MALIBU
PLANNING DEPARTMENT
APPROVAL IN CONCEPT
SIGNATURE
DATE
PLANNING REVIEW NO.
THIS IS NOT A PERMIT AND IS SUBJECT TO ANY CORRECTIONS LISTED BELOW

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CENTRAL COAST DISTRICT

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MALIBU - CALIFORNIA

3/12

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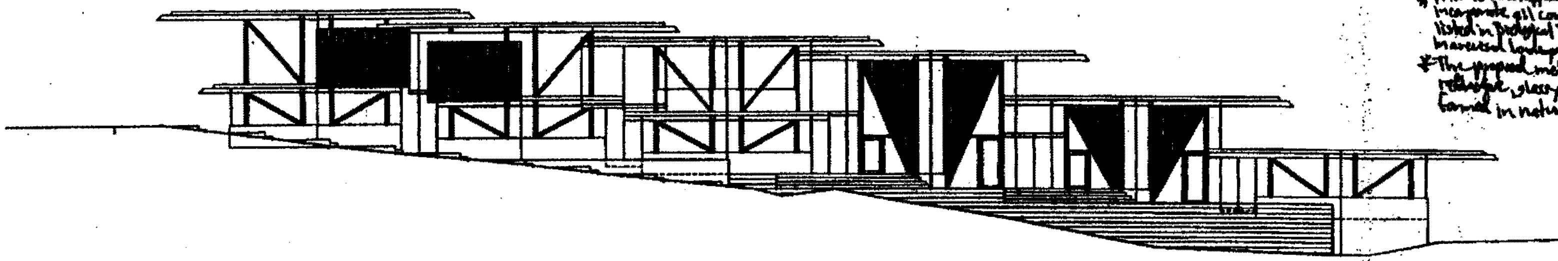
PLANNING DEPARTMENT
APPROVAL IN CONCEPT

EXHIBIT NO. 5 (11 Pages)
APPLICATION NO. Lever
4-99-211
Project Plans



SOUTHEAST BUILDING ELEVATION

1/8" = 1'-0"

LEVER – MORGENTHALER RESIDENCE
MALIBU CALIFORNIA

INDEX TO THE DRAWINGS

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COASTAL COMMISSION
SOUTH CENTRAL COAST DISTRICT

Revised

PPR 97-176

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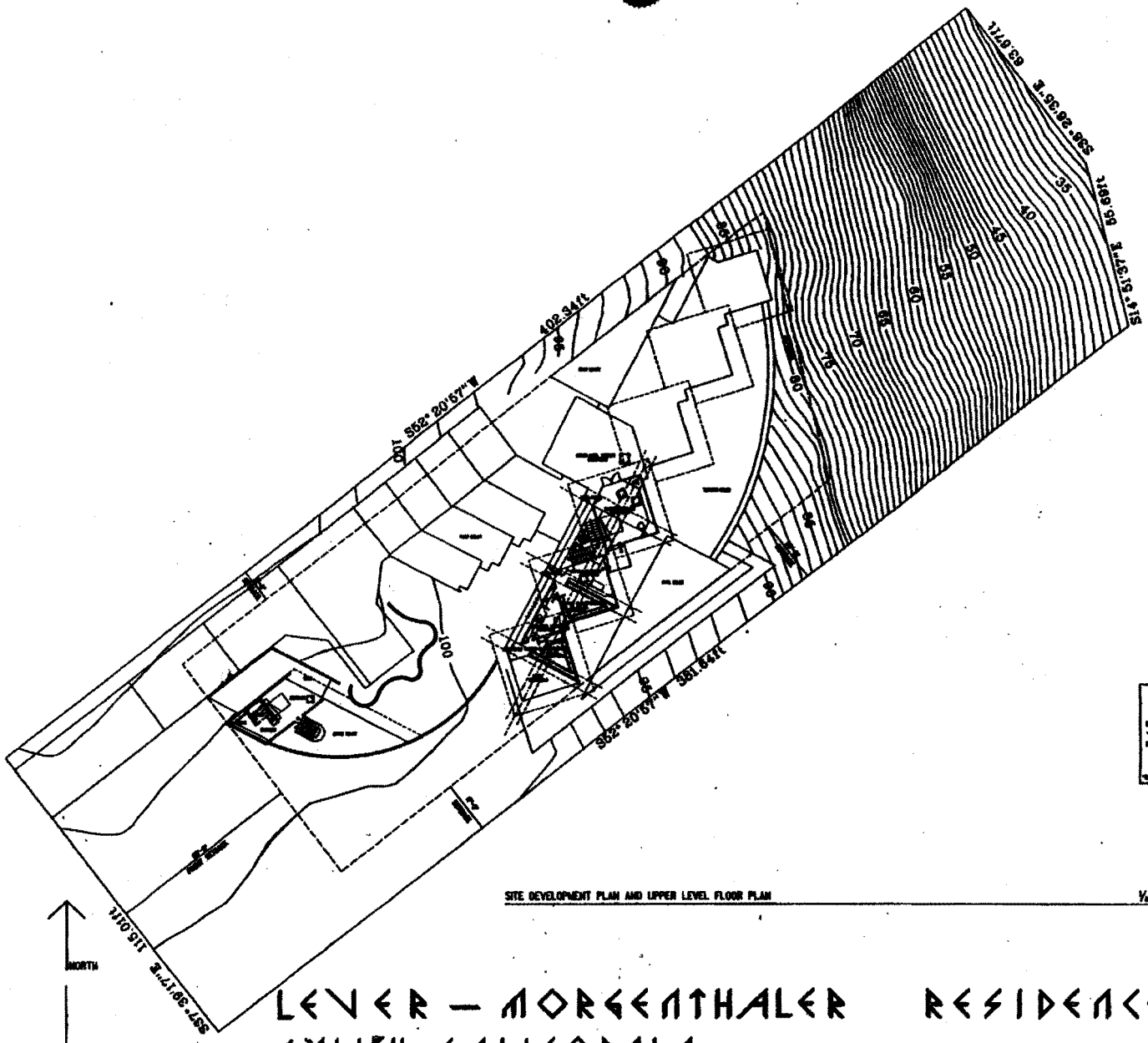
MALIBU · CALIFORNIA



CITY OF MALIBU
PLANNING DEPARTMENT
APPROVAL IN CONCEPT
SIGNATURE
DATE
PLANNING PERMIT NO.
THIS IS NOT A PERMIT
AND IS SUBJECT TO ANY
CONDITIONS LISTED HEREON

SITE DEVELOPMENT PLAN AND UPPER LEVEL FLOOR PLAN 1/16" = 1'-0"

LEVER – MORGENTHALER RESIDENCE
MALIBU CALIFORNIA

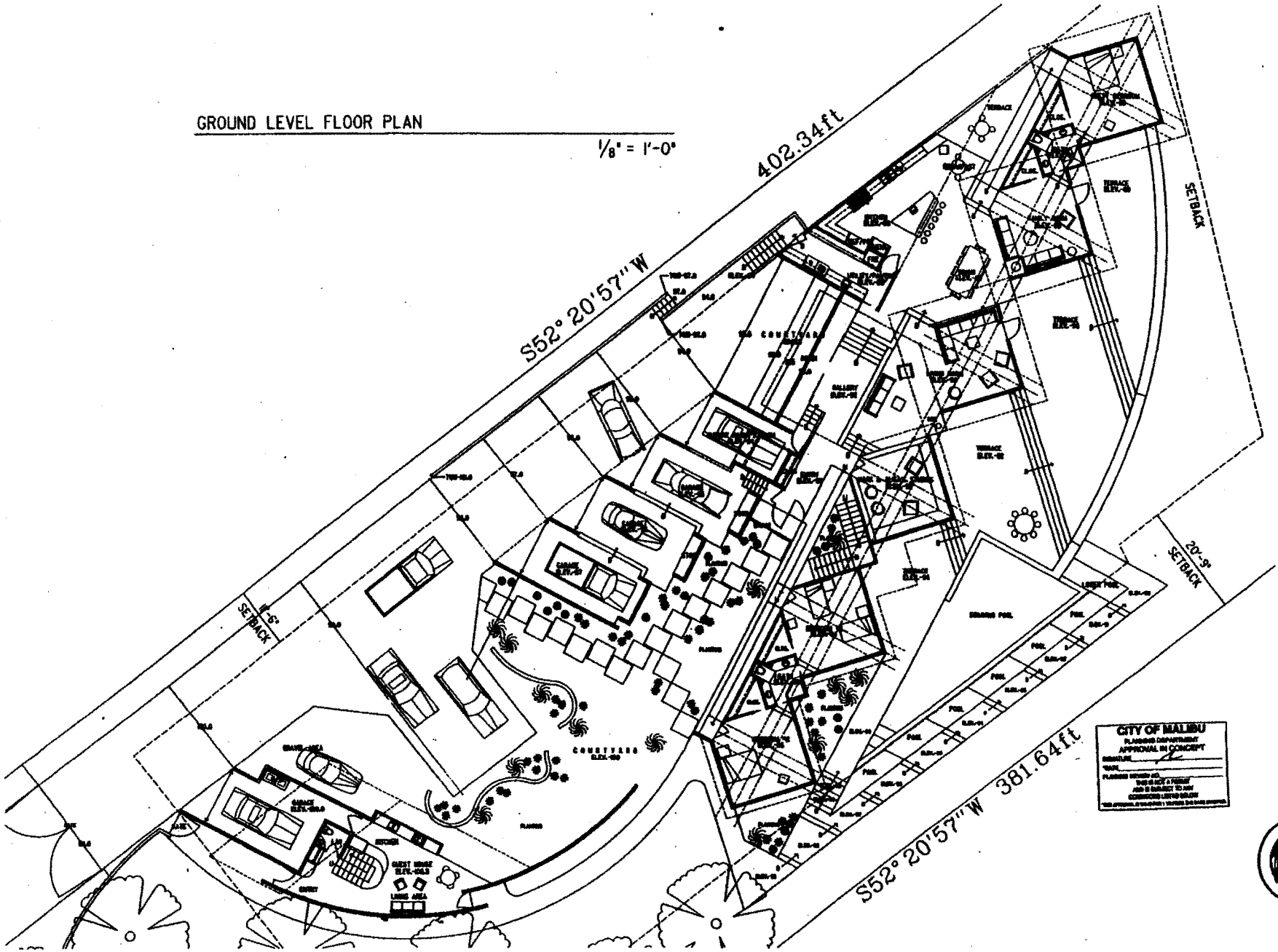
LEVER-MORGENTHALER RESIDENCE
MALIBU, CALIFORNIA

4/12

RD 2

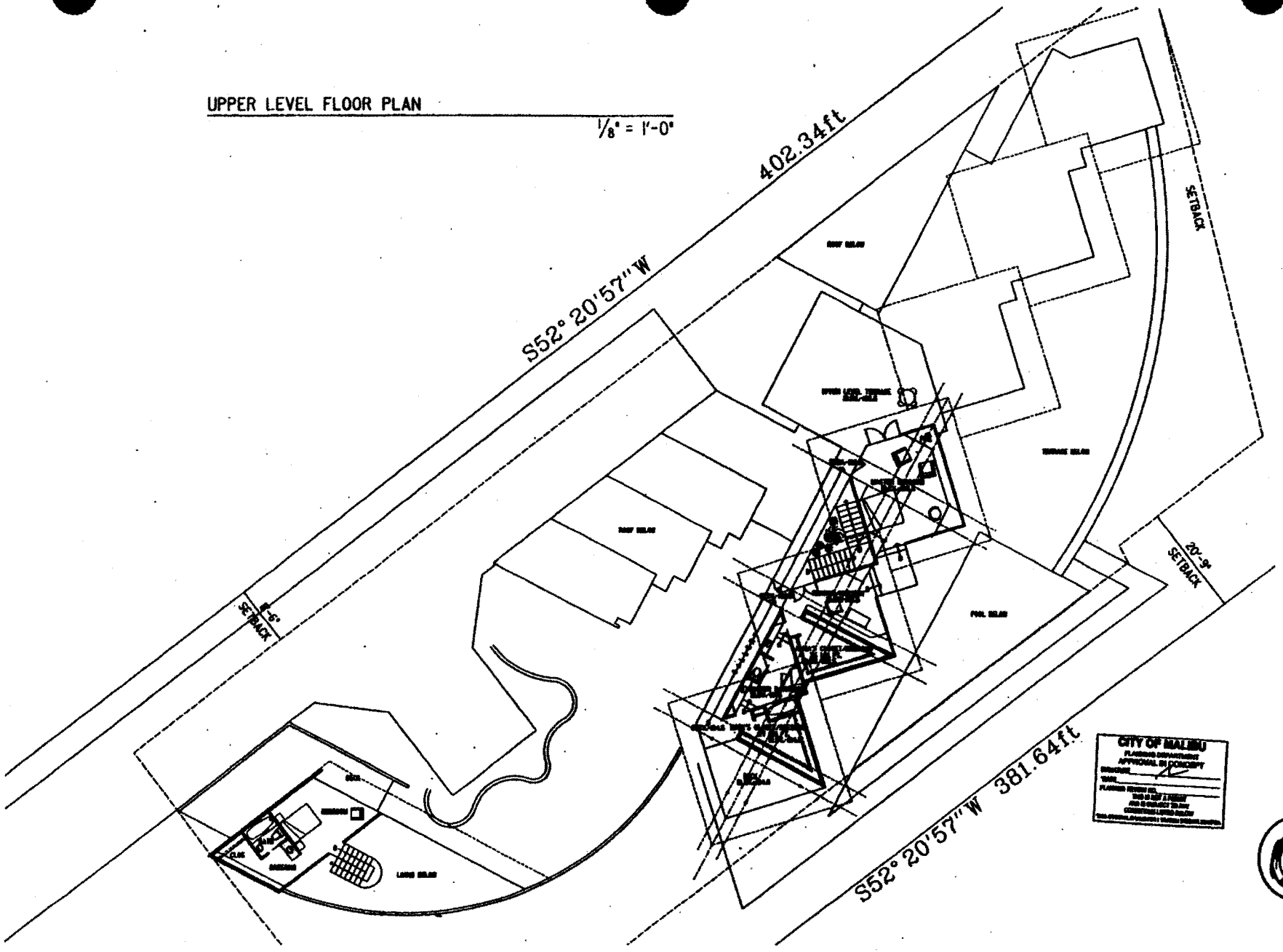
GROUND LEVEL FLOOR PLAN

1/8" = 1'-0"



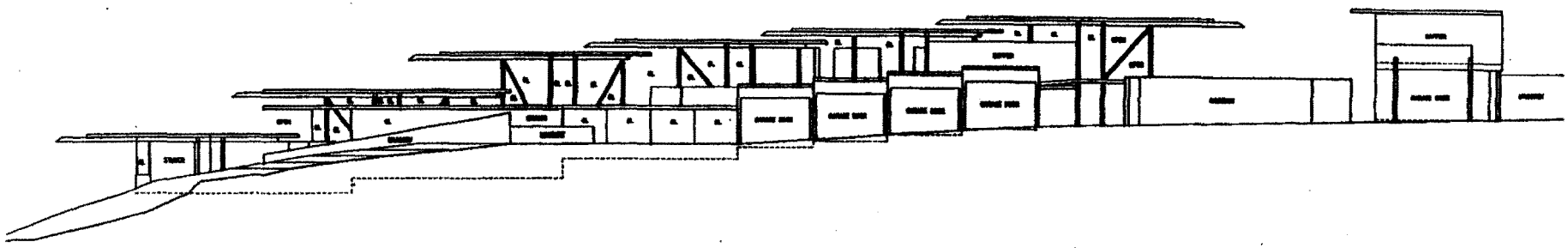
UPPER LEVEL FLOOR PLAN

1/8" = 1'-0"



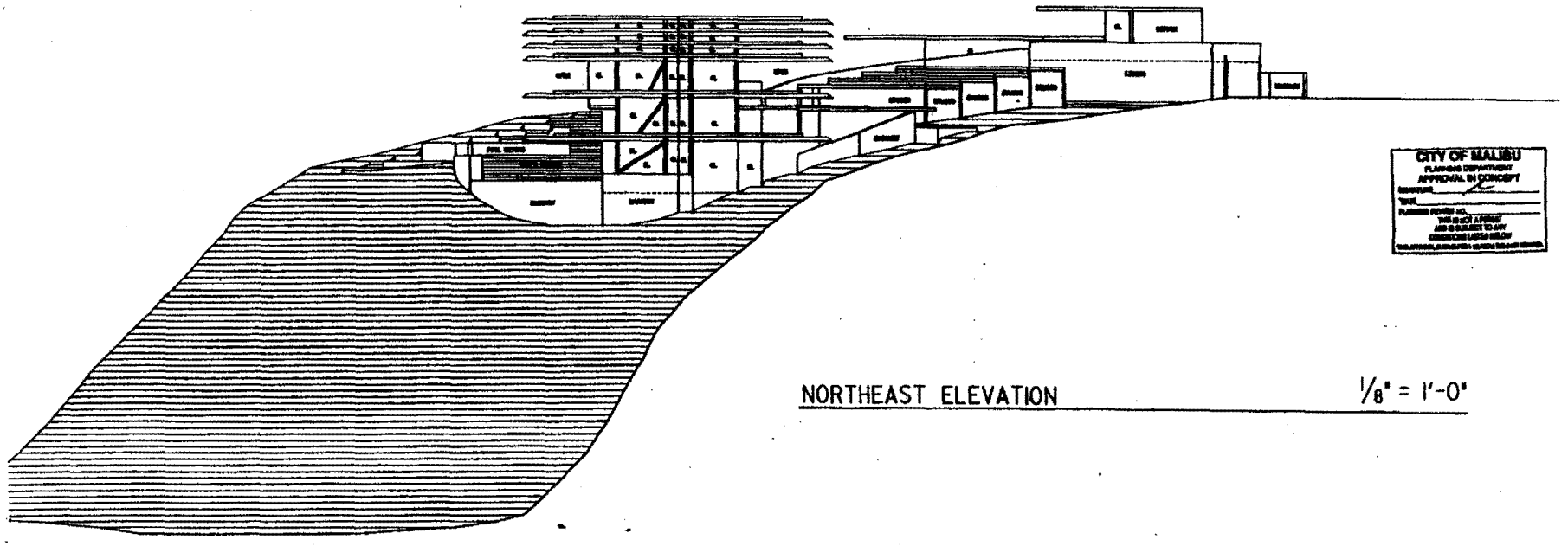
LEVER-MORGENTHALER RESIDENCE

MALIBU - CALIFORNIA



NORTHWEST ELEVATION 1/8" = 1'-0"

NOTE: BUILDING HEIGHTS ARE SHOWN IN PLAN ON ANOTHER SHEET IN THIS SET.



NORTHEAST ELEVATION 1/8" = 1'-0"

CITY OF MALIBU
PLANNING DEPARTMENT
APPROVAL IN CONCEPT
SIGNATURE
DATE
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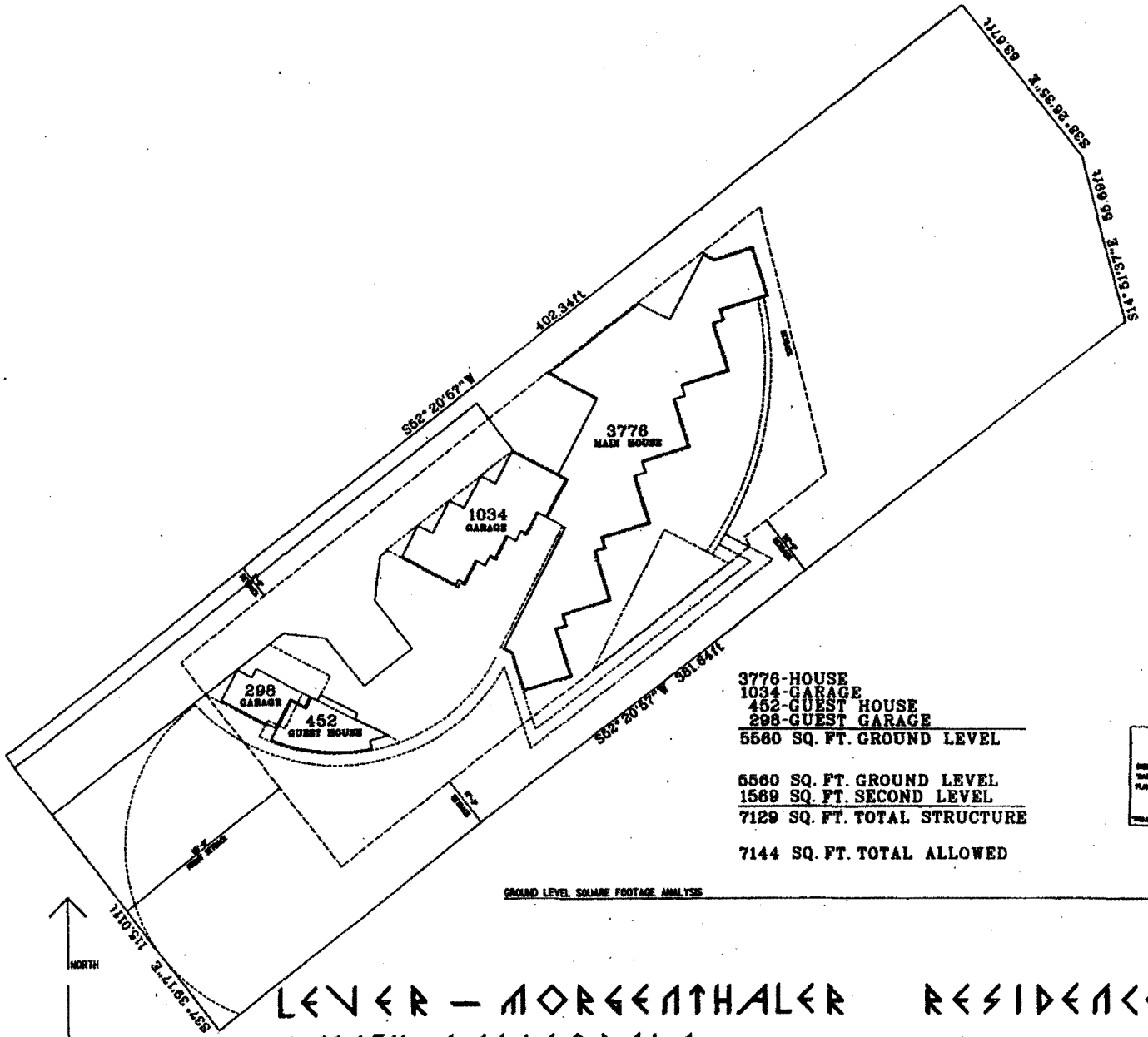
LEVER-MORGENTHALER RESIDENCE
MALIBU - CALIFORNIA

A-5

LEVER-MORGENTHALER RESIDENCE
MALIBU CALIFORNIA
NORTH
S37° 39'17"E 115.01ft
S14° 51'37"E 55.69ft
S56° 26'36"E 63.67ft
CITY OF MALIBU



3776-HOUSE
1034-GARAGE
452-GUEST HOUSE
298-GUEST GARAGE
5560 SQ. FT. GROUND LEVEL

5560 SQ. FT. GROUND LEVEL
1569 SQ. FT. SECOND LEVEL
7129 SQ. FT. TOTAL STRUCTURE

7144 SQ. FT. TOTAL ALLOWED

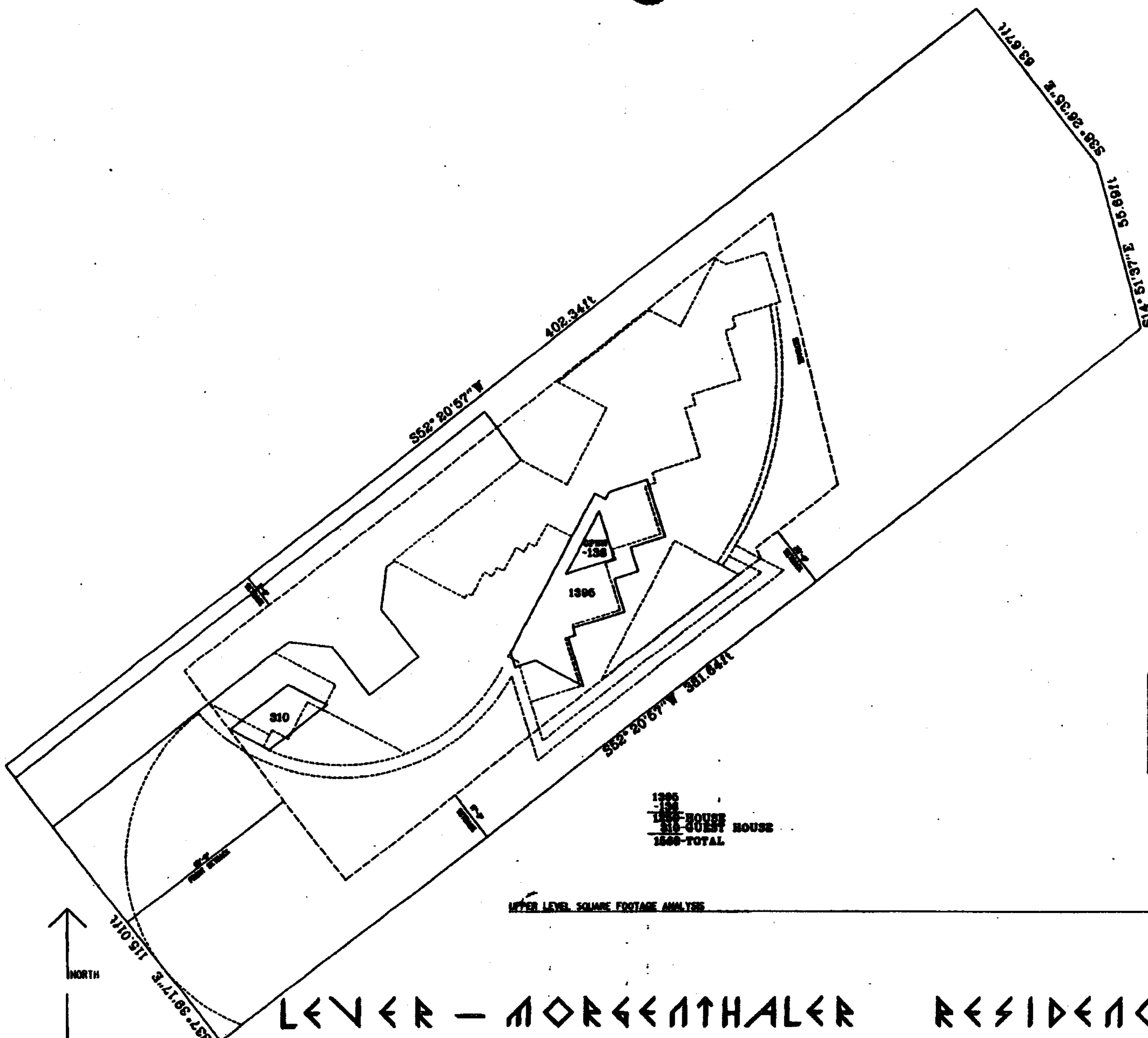
GROUND LEVEL SQUARE FOOTAGE ANALYSIS

CITY OF MALIBU
PLANNING DEPARTMENT
APPROVAL IN CONCEPT
REVIEWED:
DATE:
PLANNING REVIEW NO.
THIS IS NOT A PERMIT
AND IS SUBJECT TO ANY
CORRECTIONS NOTED BELOW

LEVER - MORGENTHALER RESIDENCE
MALIBU CALIFORNIA

LEVER-MORGENTHALER RESIDENCE
MALIBU · CALIFORNIA

3/12



UPPER LEVEL SQUARE FOOTAGE ANALYSIS

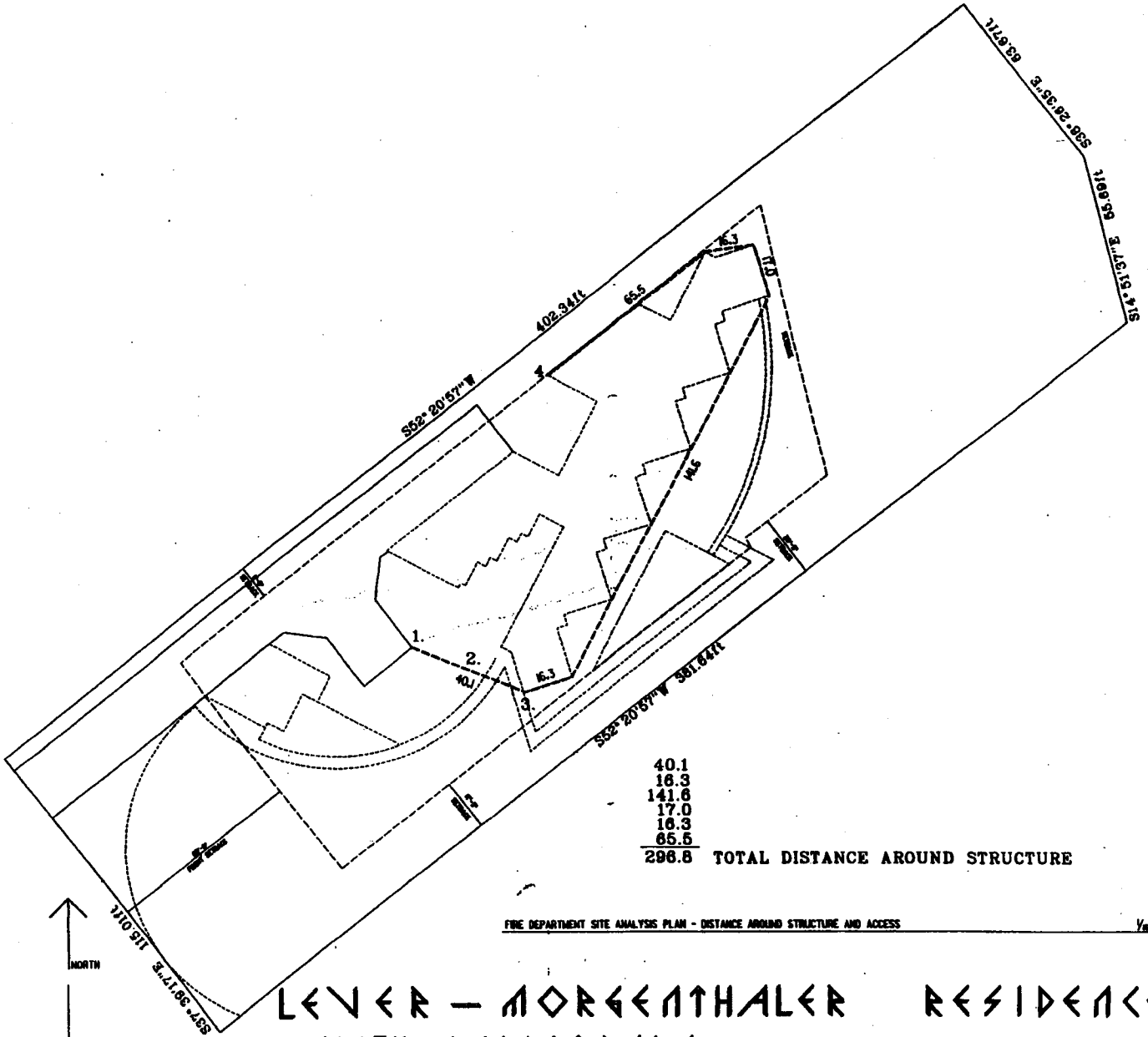
1395
-136
1259-HOUSE
310-GUEST HOUSE
1569-TOTAL

LEVER – MORGENTHALER RESIDENCE
MALIBU CALIFORNIA

CITY OF MALIBU
PLANNING DEPARTMENT
APPROVAL IN CONCEPT

LEVER-MORGENTHALER RESIDENCE
MALIBU · CALIFORNIA

Pg. 8



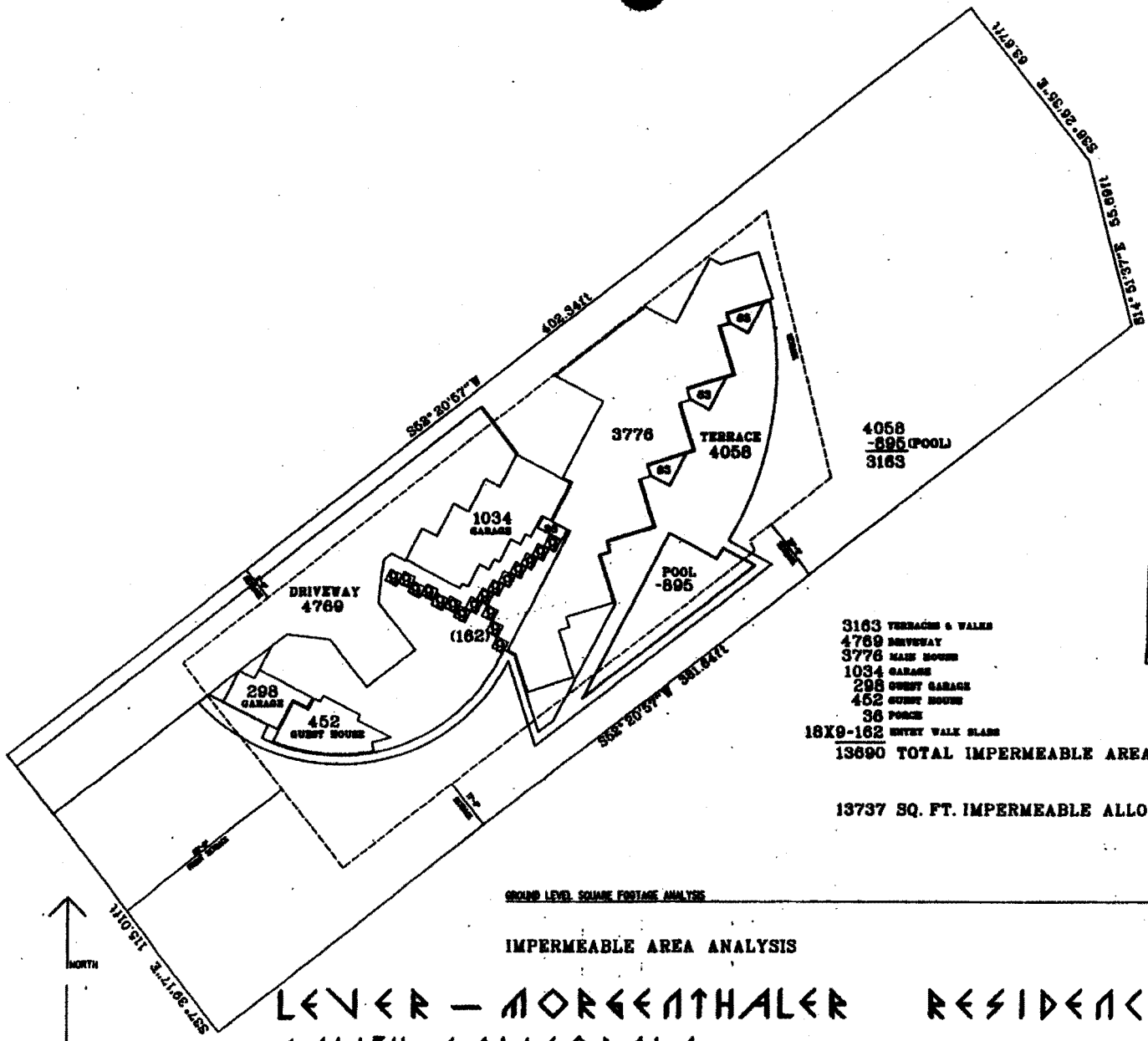
40.1
16.3
141.6
17.0
16.3
65.5
296.8 TOTAL DISTANCE AROUND STRUCTURE

FIRE DEPARTMENT SITE ANALYSIS PLAN - DISTANCE AROUND STRUCTURE AND ACCESS 1/8" = 1'-0"

LEVER - MORGENTHALER RESIDENCE
MALIBU CALIFORNIA

LEVER-MORGENTHALER RESIDENCE
MALIBU - CALIFORNIA

12/12



CITY OF MALIBU
PLANNING DEPARTMENT
APPROVAL IN CONCEPT

3163 TERRACES & WALKS
4769 DRIVEWAY
3776 MAIN HOUSE
1034 GARAGE
298 GUEST GARAGE
452 GUEST HOUSE
36 PORCH
18X9-162 ENTRY WALK SLABS
13690 TOTAL IMPERMEABLE AREA

13737 SQ. FT. IMPERMEABLE ALLOWED

GROUND LEVEL SQUARE FOOTAGE ANALYSIS

IMPERMEABLE AREA ANALYSIS

LEVER – MORGENTHALER RESIDENCE
MALIBU CALIFORNIA

LEVER-MORGENTHALER RESIDENCE
MALIBU · CALIFORNIA

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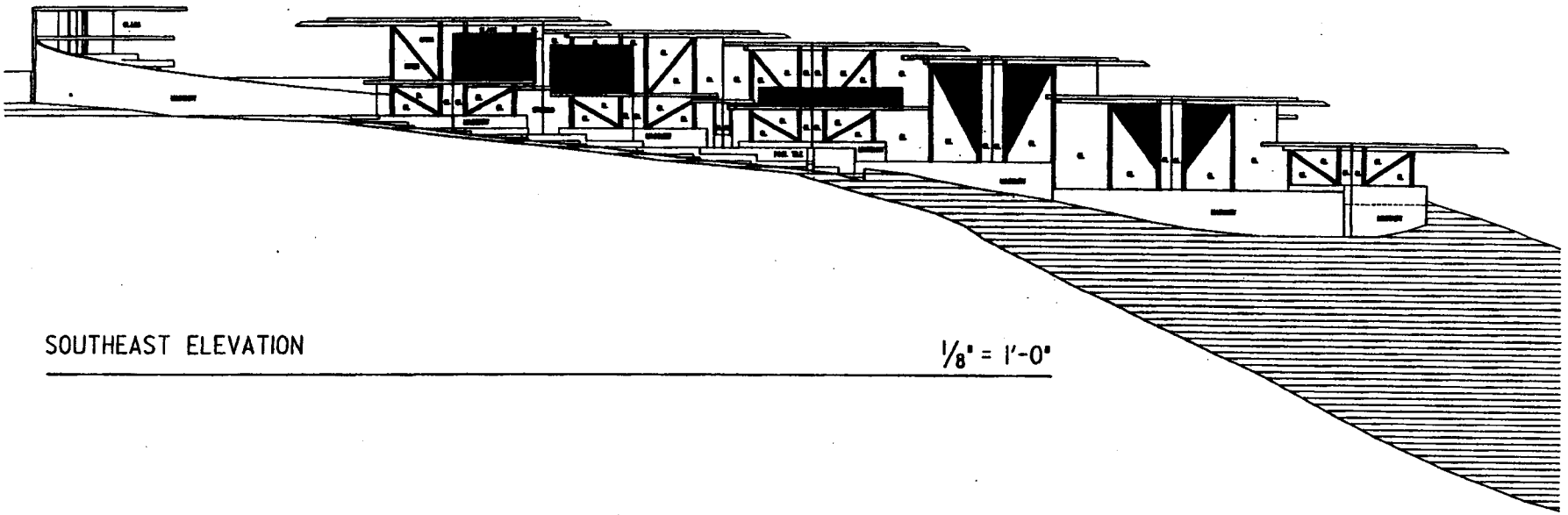
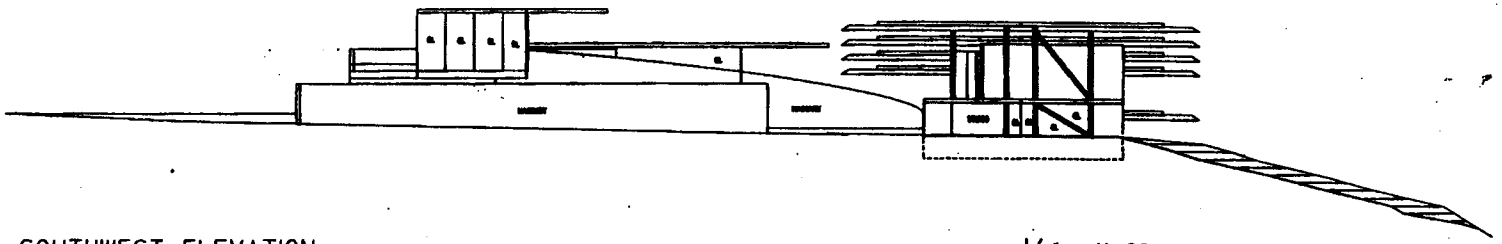


SOUTHEAST ELEVATION

1/8" = 1'-0"



SOUTHWEST ELEVATION

1/8" = 1'-0"

CITY OF MALIBU
PLANNING DEPARTMENT
APPROVAL IN CONCEPT
SIGNATURE
DATE
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LEVER-MORGENTHALER RESIDENCE
MALIBU · CALIFORNIA

Exhibit 6 (cross section of slope) will be submitted in forthcoming Addendum.

EXHIBIT NO. 6
APPLICATION NO.
Letter
4-99-211
(placeholder)

APPRAISAL OF REAL PROPERTY

Single Family Residence
28827 Grayfox Street
Malibu, California 90265

DATE OF VALUE:

March 14, 2000

DATE OF REPORT:

April 7, 2000

PREPARED FOR:

Mark and Alisa Lever
3019 3rd Street
Suite 304
Santa Monica, California 90405

PREPARED BY:

Adler Realty Advisors, Inc.
20700 Ventura Boulevard, Suite 327
Woodland Hills, California 91364

818-884-2200

-34 Exhibit Pages

EXHIBIT NO. 7
APPLICATION NO. Lever 4-99-211 Appraisal

ARA
Adler Realty Advisors, Inc.
Real Estate Appraisal • Advisory • Investment Management

Adler Realty Advisors, Inc.
Real Estate Appraisal • Advisory • Investment Management

April 7, 2000

Mark and Alisa Lever
3019 3rd Street
Suite 304
Santa Monica, California 90405

RE: Appraisal of Real Property
Proposed Single-Family Residence
28827 Grayfox Street
Malibu, California 90265

Dear Mr. and Mrs. Lever:

In accordance with your request, we have prepared a complete appraisal of the real property named above. This request is prompted by the recommendation of staff of the California Coastal Commission to move any proposed improvements on the property at least fifty feet from the 90-foot contour. Our analyses, opinions and conclusions were developed in conformity with the Code of Professional Ethics and the Standards of Professional Practice of the Appraisal Institute and the American Society of Appraisers, which incorporate the Uniform Standards of Professional Appraisal Practice (USPAP) of the Appraisal Foundation.

Our appraisal process conforms to Standard Rule 1 of the Uniform Standards of Professional Appraisal Practice. As such, the complete appraisal process was performed. Our analysis considers the physical aspects of the property, which are apparent to an appraisal inspection, and assesses its competitive position in the market. We employ the traditional valuation techniques considered appropriate to this valuation assignment.

This appraisal is presented in a summary format, which is intended to comply with the reporting requirements set forth under Standards Rule 2-2(b) of the Uniform Standards of Professional Appraisal Practice for a Summary Appraisal Report. As such, it presents summary discussions of the data, reasoning and analyses that were used in the appraisal process to develop the appraiser's opinion of value. Supporting documentation concerning the data, reasoning and analyses is retained in the appraiser's file. The depth of discussion contained in this report is specific to the needs of the client and for the intended use stated below. The appraiser is not responsible for unauthorized use of this report.

The purpose of this appraisal is to estimate the fee simple market value of the subject property under market conditions existing on the date of value. The function of this appraisal is to discern the differences in market value between the two proposed residential building plans: (i) the construction of a 5,171 square foot single family residence with partial ocean view and a 19,246.85 square foot buildable pad as set forth in the site plan approved by the City of Malibu; and (ii) the construction of a 3,000 square foot single family residence without any view and a decrease in the buildable pad from 19,246.85 to 10,010.18 square feet, as proposed by staff of

21700 Ventura Boulevard, Suite 327 · Tel: 818-884-2200
Woodland Hills, California 91364 · Fax: 818-884-2205

2/34

the California Coastal Commission. In determining the value of the 3,000 square foot single family residence, we have assumed that the City of Malibu's 65 foot setback from the street will continue to apply. This appraisal is void for any other function or use. The undersigned have the knowledge and experience required to perform this appraisal in accordance with the Competency Provision of USPAP.

A detailed description of the extent of the appraisal process is included in the accompanying report. The value opinion reported is qualified by certain assumptions, limiting conditions, certifications and definitions, which are set forth in the report.

As a result of our analysis, we have formed an opinion that the market value of the fee simple estate in the above-referenced property, subject to the assumptions, limiting conditions, certifications and definitions, as of March 24, 2000, assuming the construction of a 5,171 square foot single-family residence with partial ocean view and a 19,246.85 square foot buildable portion of the site, is:

TWO MILLION EIGHT HUNDRED THOUSAND DOLLARS
$2,800,000

As a result of our analysis, we have formed an opinion that the market value of the fee simple estate in the above-referenced property, subject to the assumptions, limiting conditions, certifications and definitions, as of March 24, 2000, assuming the construction of a 3,000 square foot single-family residence without any view and a decrease in the buildable portion of the site from 19,246.85 square feet to 10,010.8 square feet, is:

ONE MILLION SIX HUNDRED THOUSAND DOLLARS
$1,600,000

This letter is invalid as an opinion of value if detached from the report, which contains the text, exhibits and the Addenda.

Respectfully submitted,

ADLER REALTY ADVISORS, INC.

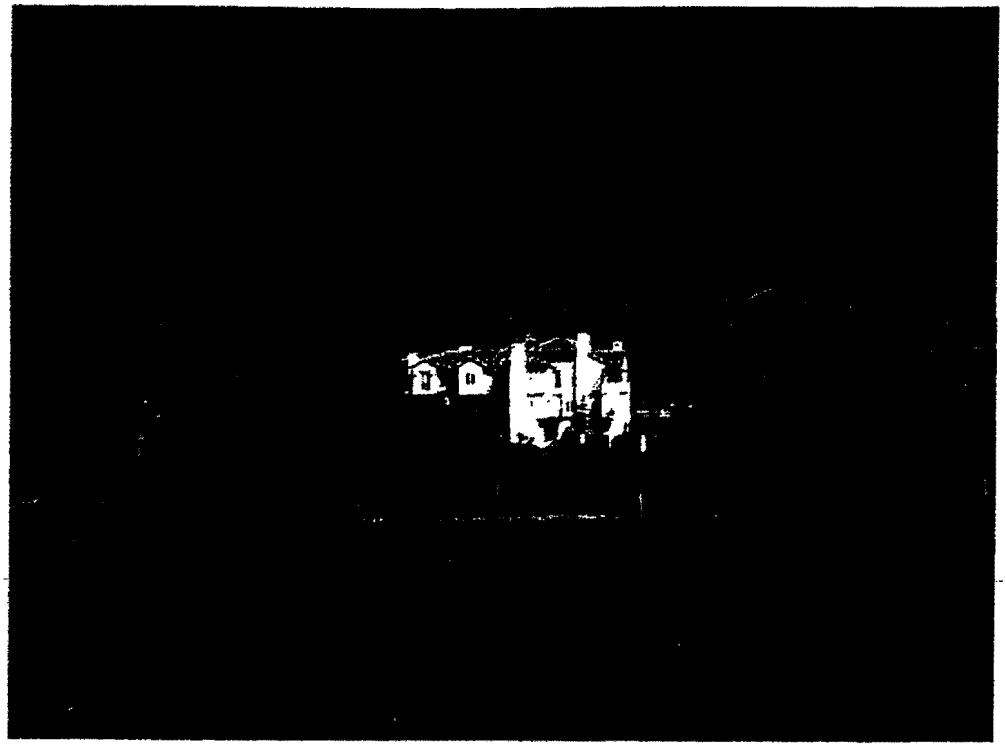
Michael S. Adler, MAI
Certified General Real Estate Appraiser
State of California Certification #AG006200

AMW:MA
Attach.

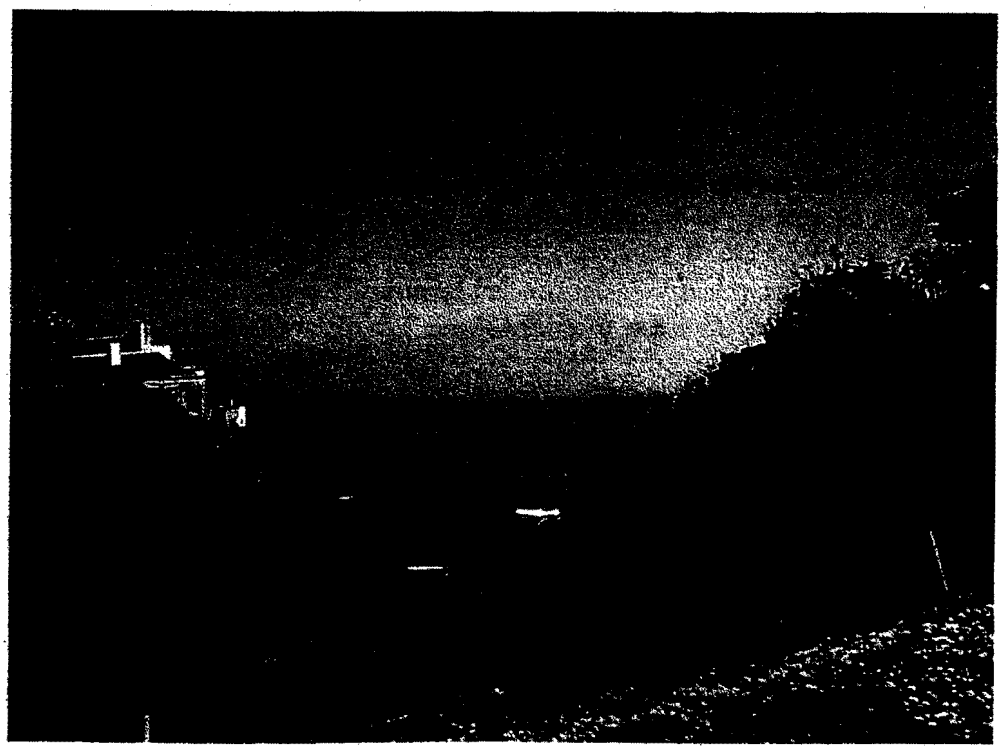
TABLE OF CONTENTS

PHOTOGRAPH OF THE SUBJECT PROPERTY

28827 Grayfox Street
Malibu, California



. View from coastal commission proposed building site



Ocean view from approved building site

Special Assumptions:

1. The values contained herein are based on architectural designs and information provided by the client. Since the residences subject to appraisal have not yet been constructed, it is assumed the construction will be in a workman like manner.

This appraisal report is subject to the following assumptions and limiting conditions:

That the dates of value to which the conclusion and opinions expressed in this report apply is set forth in the letter of transmittal. Further, that the dollar amount of any value opinion herein rendered is based upon the purchasing power of the American dollar existing on that date.

That the appraiser assumes no responsibility for economic or physical factors which may affect the opinions herein stated occurring at some date after the date of the letter transmitting this report.

That the appraiser reserves the right to make such adjustments to the valuation herein reported, as may be required by consideration of additional data or more reliable data that may become available.

That no opinion as to title is rendered. Title is assumed to be marketable and free and clear of all liens and encumbrances, easement and restrictions except those specifically discussed in the report. The property is appraised assuming it to be under responsible ownership and competent management, and available for its highest and best use.

That no engineering survey has been made by the appraiser. Except as specifically stated, data relative to size and area was taken from sources considered to be reliable and no encroachment of real property improvements is considered to exist.

That maps, plats and exhibits included herein are for illustration only as an aid in visualizing matters discussed within the report. They should not be considered as surveys or relied upon for any other purpose, nor should they be removed from, reproduced or used apart from this report.

That no opinion is expressed as to the value of subsurface oil, gas or mineral rights or whether the property is subject to surface entry for the exploration or removal of such materials except as is expressly stated.

That no opinion is intended to be expressed for matters that require legal expertise or specialized investigation or knowledge beyond that customarily employed by real estate appraisers.

In the event that Appraiser is subpoenaed for a deposition or judicial or administrative proceeding and is ordered to produce his appraisal report and files, Appraiser shall immediately notify Employer. Appraiser shall appear at the deposition or judicial or administrative hearing with his appraisal report and files and answer all questions unless Employer provides legal counsel who instructs Appraiser not to appear, or instructs Appraiser not to answer certain questions. It shall be the responsibility of Employer to obtain a protective order.

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That the Appraiser assumes that there are no hidden or unapparent conditions of the property, subsoil, or structures, which would render it more or less valuable. The Appraiser assumes no responsibility for such conditions, or for engineering which might be required to discover such factors.

Unless otherwise stated in the appraisal report, the existence of hazardous material, which may or may not be present on the property, was not observed by the appraiser. The appraiser has no knowledge of the existence of such materials on or in the property. The appraiser, however, is not qualified to detect such substances. The presence of substances such as asbestos, urea-formaldehyde foam insulation or other potentially hazardous materials may affect the value of the property. The value estimate is predicated on the assumption that there is no such material on or in the property that would cause a loss in value. No responsibility is assumed for any such conditions or for any expertise or engineering knowledge required to discover them. The client is urged to retain an expert in this field, if desired.

That testimony or attendance in court or at any other hearing is not required by reason or rendering this appraisal unless such arrangements are made a reasonable time in advance.

That the appraiser has personally inspected the subject property and finds no obvious evidence of structural deficiencies except as stated in this report; however, no responsibility for hidden defects or conformity to specific governmental requirements, such as fire, building and safety, earthquake or occupancy codes can be assumed without provision of specific professional or governmental inspections.

That no termite inspection report was available. The appraiser personally inspected the subject property and found no significant evidence of termite damage or infestation; however, no guarantee that none exists should be construed.

The Americans with Disabilities Act ("ADA") became effective January 26, 1992. We have not made a specific compliance survey and analysis of this property to determine whether or not it is in conformity with the various detailed requirements of the ADA. It is possible that a compliance survey of the property, together with a detailed analysis of the requirements of the ADA, could reveal that the property is not in compliance with one or more of the requirements of the Act. If so, this fact could have a negative effect upon the value of the property. Since we have no direct evidence relating to this issue, we did not consider possible non-compliance with requirements of ADA in estimating the value of the property.

Care has been taken to obtain all information from reliable sources. The authors cannot guarantee or be responsible for the accuracy of this information.

Possession of this report or a copy thereof does not imply right of publication, not use for any purpose by any other than the person to whom it is addressed, without the written consent of the authors.

Identification of Property

The subject property consists of a single-family residence located at 28827 Grayfox Street, Malibu, California.

Legal Description

Lot 44, Record of Survey in the City of Malibu, County of Los Angeles, State of California, as recorded in Map Book 57, pages 9-10 of maps, in the office of the Recorder of said County. Also known as Assessor's Parcel Number 4466-008-005.

Property Ownership and Recent History

The official records of the Los Angeles County Assessor indicate title to the subject property is vested in the Lever Family Trust Dated September 29, 1999. The Appraisal Institute's Code of Ethics and USPAP require the reporting of pending or prior sales of properties being appraised that have occurred within the last year. The subject property has not sold within the last year according to the records of the Los Angeles County Assessor. The subject property is not currently listed for sale according to the Greater Westside Association of Realtor's Multiple Listing Service.

Purpose and Function of the Appraisal

The purpose of this appraisal is to estimate the market value of the fee simple interest in the subject property. The function of this appraisal report is for dissolution of marriage purposes and is void for any other function or use.

Client and Intended User

Mark and Alisa Lever is our client and intended user of this Appraisal Report.

Extent of the Appraisal Process

In performing this appraisal assignment, the process and reporting was limited to:

- An inspection of the property and surrounding neighborhoods.
- Research and investigation of current market conditions relative to the property being valued as well as the market sector within which the subject is identified.
- Interviews with knowledgeable parties as well as relevant public agencies and governing bodies.
- Collection of comparable sales data, to indicate a value conclusion.
- A brief recapitulation of the appraiser's data, analyses and conclusions. Supporting documentation is retained in the appraiser's file.

Date of Value and Property Inspection

The value and conclusions of this report correspond to a March 14, 2000, date of value, the date the subject property was inspected by Alice M. Wollman and Michael S. Adler, MAI.

Property Rights Appraised

Fee Simple Estate

Definitions of Value, Interest Appraised, and Other Pertinent Terms

Market Value. The major focus of most real property appraisal assignments. Both economic and legal definitions of market value have been developed and refined. A current economic definition agreed upon by agencies that regulate federal financial institutions in the United States of America is:

> The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeable, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:
>
> 1. buyer and seller are typically motivated;
> 2. both parties are well informed or well advised, and acting in what they consider their best interests;
> 3. a reasonable time is allowed for exposure in the open market;
> 4. payment is made in terms of cash in United States dollars or in terms of financial arrangements comparable thereto; and
> 5. the price represents the normal consideration of the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.[1]

Fee Simple Estate. Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat.[2]

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[1] Office of the Comptroller of the Currency under 12 CFR, Part 34, Subpart C-Appraisals, 34.42 Definitions [f]

[2] Appraisal Institute, The Dictionary of Real Estate Appraisal, 3rd edition (1993), p. 140.

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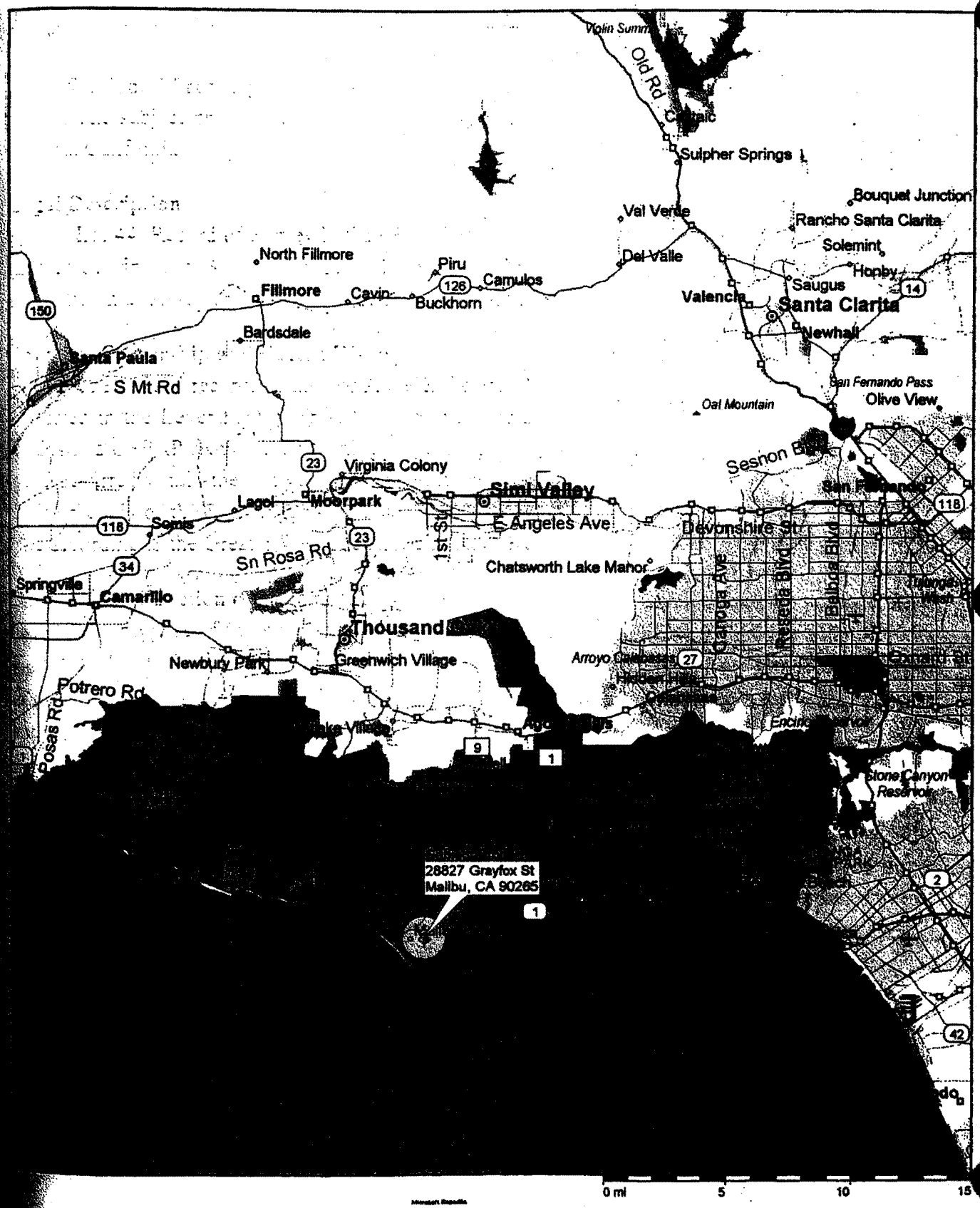
Location Map



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Due to the scope of this assignment, a detailed locational analysis of the subject area is not presented within this report. The following is a brief summary of the subject property's locational characteristics.

The subject property is located in the Southern California region within the City of Malibu in Los Angeles County. Malibu is located in the western portion of Los Angeles County and extends roughly 27 miles along the Pacific Ocean coastline, from the City of Los Angeles on the east to the Ventura County line on the west. The area contains approximately 44,819 acres and is roughly eight miles wide, from the ocean to the ridge of the Santa Monica Mountains. The topography includes rugged, mountainous land, sloping downward to the beach area, offering panoramic views of the Pacific Ocean. The coastline extends east/west and the ocean is generally located to the south of most properties.

Malibu contains ocean/beachfront and landside homes, with a clear distinction between the two. Properties located on the south side of Pacific Coast Highway, such as the subject property, are typically ocean/beachfront lots with white water ocean views, while properties located on the north side of the highway, are situated on the hills overlooking the ocean and coastline and do not have direct beach access. Ocean/beachfront properties typically range in value from $1,000,000 to $15,000,000+; landside properties typically range from $500,000 to $5,000,000. Malibu has been long considered one of the most desirable residential areas in the Los Angeles area due to its rural and suburban atmosphere and exclusive oceanfront location.

East Malibu is considered the area in and around Topanga Canyon, extending west to Los Flores Canyon. Developable land in this area is restricted because of steep cliffs adjacent to the Pacific Coast Highway, the only arterial to Malibu from the west-side of Los Angeles. East Malibu is a predominately residential, narrow strip where few homes are built. It is not unusual for houses to be directly adjacent to the highway, built on piers and overhanging the beach.

Central Malibu extends west from Los Flores Canyon to Corral Canyon and is delineated by the Pacific Ocean on the south and the Santa Monica Mountains on the north. This is the area where the majority of Malibu's commercial development exists. Major influences in this area include Pepperdine University; Hughes Research Center, a research and development "think tank"; and the Malibu city regional offices.

West Malibu extends from Corral Canyon to the Ventura County line. Prominent areas located within West Malibu are Trancas Canyon/Broad Beach, Point Dume, Bonsall Canyon and Ramirez Canyon. This area is primarily residential, and contains the subject property. The subject property is located in the Point Dume section of Malibu.

After much publicity and legal difficulties, the City of Malibu was incorporated in March 1991. In March 1992, the City of Malibu extended a growth moratorium, which was adopted the previous year on commercial and residential development, to March 1993. According to Ordinance 58U, approved on March 17, 1992, a moratorium was in effect for the construction of any new development and issuance of building permits, grading permits, conditional use permits, variances, zone changes, tentative tract maps, subdivision approvals, development permits, approvals in concept, and entitlements for the use or development of land in the city. As a result of the moratorium, development in Malibu has been very slow since 1991.

It has been well documented that the many properties in the city of Malibu have suffered damage in recent years as a result of natural disasters, including fires and mudslides due to heavy rains. There appears to be some short-term buyer resistance to those areas in Malibu that were affected by these disasters, however the long-term forecast is more promising due to its exclusive location. The City of Malibu is a stable community that has experienced steady economic and population growth within the past ten years. The long-term outlook is favorable, based on continuing population growth and its prime beachfront location.

Neighborhood

The subject property is located in the western portion of Malibu, approximately thirty-three miles northwest of the Downtown Los Angeles Civic Center. The subject area is located west of Paradise Cove and east of Zuma Beach, on Point Dume. Nearby beaches include Westward, Point Dume State and Zuma Beaches. Point Dume is comprised of bluff, inland properties, with some of the canyon adjacent properties, including the subject, having direct beach access, although most do not. However, most residential properties on Point Dume, including the subject, have deeded beach right access through five gates to the various private beaches. Bluff and some canyon adjacent properties typically have excellent ocean and coastline views, whereas inland properties tend to have more obstructed views. The topography on Point Dume consists of level and gently rolling terrain, with homesites typically ranging in size from ½ to 2-acres. Properties on Point Dume are heterogeneous, ranging in age from new or recently renovated to fifty years, in quality from average to luxury, and in

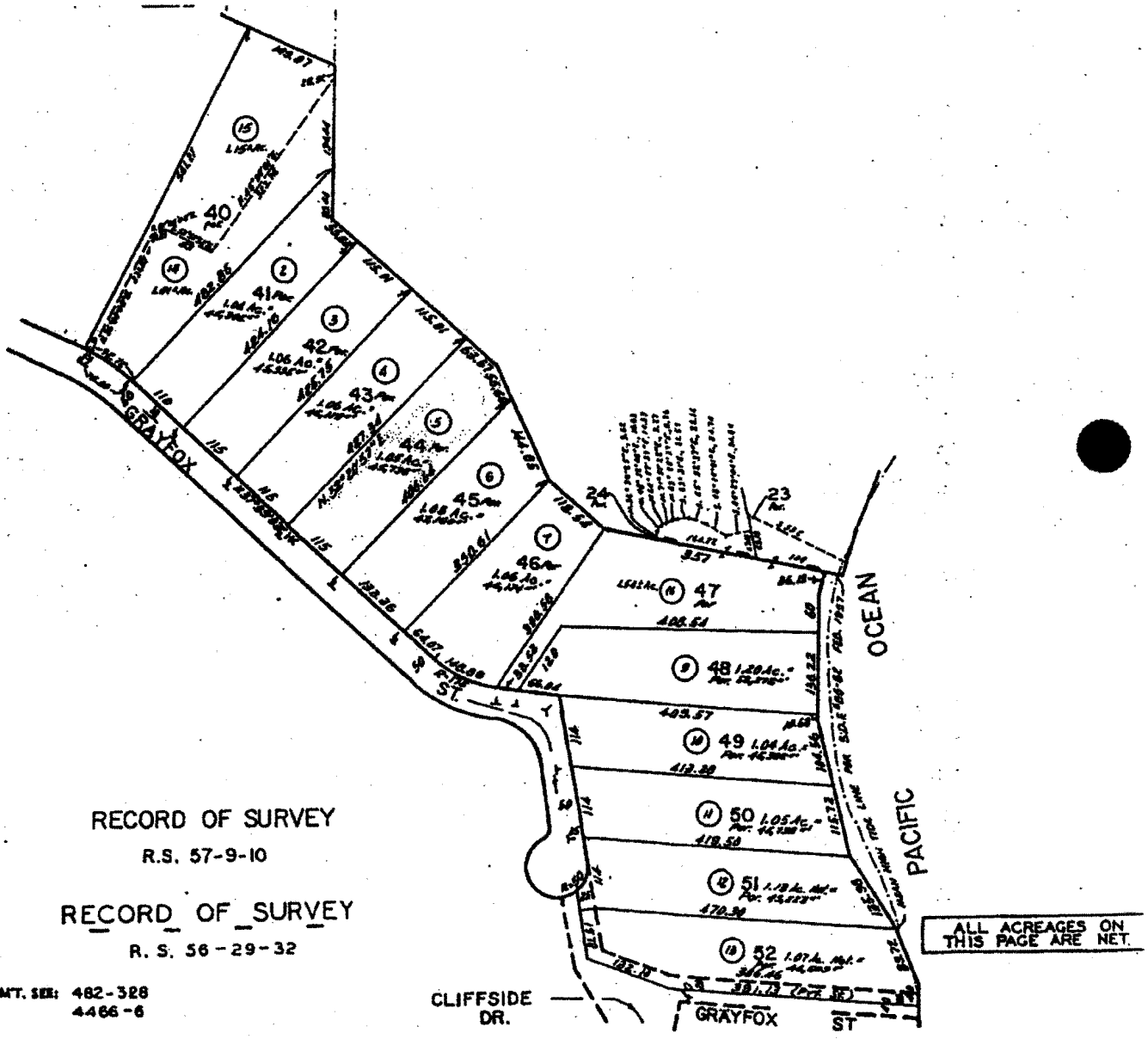
size from 1,500 to 10,000+ square feet. Property values in the neighborhood range from $700,000 to $15,000,000, with the predominant range being less than $2,000,000.

Real Estate Market Conditions

Currently, the real estate market activity is showing continued signs of improvement, as evidenced by increased sales activity and shorter marketing periods, when compared to 1996/1997 conditions. Many areas of Los Angeles are currently experiencing an upward trend in residential real estate property values, including the subject's Malibu sub-market. Although property values are not increasing at the same rate of appreciation that occurred in 1989-1990, the market data suggests that home prices in Malibu have increased during the past 6 to 12 months. The rate of appreciation has slowed considerably during the second half of 1999 and early 2000. With the continued increase in interest rates anticipated through the summer of 2000, the slower appreciation in property values is anticipated to continue.

Estimated Exposure Time for the Subject Property

The subject is located in a desirable section of Malibu. Due to the proximity to local employment support within West Los Angeles as well as the close proximity to several recreational areas, there has been a steady demand for homes in this market area that commonly reflect a marketing time of two to twelve months for appropriately priced properties. A highly motivated seller can lower the marketing time considerably, as can a reasonable listing price on a property in relation to its market value. It is our opinion that the estimated marketing time of the subject property, if reasonably priced, is two to twelve months.



RECORD OF SURVEY
R.S. 57-9-10

RECORD OF SURVEY
R. S. 56-29-32

REV. ASSM'T. SEE: 482-328
4466-6

Location	North site of Grayfox Street, at the stem of a cul-de-sac.
Size	115 feet of street frontage, by a depth of 406.64 feet along the easterly line, by 120.36 feet along the northerly (rear) line, by 427.34 feet along the westerly lot line. According to the records of the Los Angeles County Assessor 1.05 acres or 45,735± square feet of gross land area.
Shape	Rectilinear
Topography	The site consists of level to steep sloping terrain.
View	Within the subject's original building plan as approved by the City of Malibu, the site is enhanced by canyon and limited ocean/coastline views with a northeasterly orientation. Assuming the proposed improvements are moved upslope fifty feet from the 90-foot contour, the site proposed improvements would be enhanced by no marketable view.
Soil Conditions	We have not been provided with a soils report and cannot comment specifically on the soil conditions, but because of the surrounding development, we assume that no soil condition exists that would adversely affect future development of the subject site.
Utilities	All of the usual public utilities will service the site, except for sewers as each site is to be serviced by a private septic system.
Easements and Restrictions	We have not been provided with a detailed survey of the property and a title policy was not provided for review. No other detrimental easements or restrictions have been observed. The subject site has deeded beach rights, and access through Riviera Gate #3.
Real Estate Taxes	Real estate taxes for the 1999-tax year, including direct assessments, total $1,403.62. The Tax Limitation Initiative of 1978 allows a property to be reassessed to its current market value only upon a sale or major renovation, at which time the applicable taxes will be adjusted.
Zoning	The subject property is zoned for single-family residential use. The corresponding zone classification is RA1.

The original and approved plans with the City of Malibu were designed by noted architect Bart Prince, who was named by Architectural Digest in its January 2000 edition as one of the top architects in the world. The plans consist of a Contemporary style single-family residence, which contours to the topography of the rear slope and is enhanced by a partial ocean view. The proposed residence was to have four main bedrooms, a sitting room, study, and three bathrooms in 5,171 square feet of main building area. The bedrooms, family room, and living room were to have access to several terraces, which would all have been enhanced by ocean or canyon views. An 895 square foot infinity pool was also planned with the contour of the site slope, maximizing the view potential of the entertainment areas. In addition, the site was to be improved with a three-car garage with attached 250 square foot maid's room, containing 1,034 square feet of area and a detached two-car guest garage containing 298 square feet; and a guesthouse containing 750 square feet of building area.

If a new building plan is to be implemented in accordance with the recommendation of staff of the Coastal Commission that the proposed improvements be moved fifty feet upslope of the 90 foot contour, the building envelope will be substantially reduced, thereby reducing the potential improvement size to the proposed single-family dwelling. In addition, the ocean and canyon views would also be eliminated. Based upon the recommendations, according to Bart Prince, Architect, the new improvement size would be limited to approximately 3,000 square feet of main living area with a 900 square foot garage and a 16 x 36 swimming pool.

According to The Appraisal of Real Estate, 10th edition, page 275, published 1992, by the Appraisal Institute, the highest and best use may be defined as:

> The reasonably probable and legal use of vacant land or an improved property, which is physically possible, appropriately supported, financially feasible, and that results in the highest value.

The highest and best use analysis has two major sections: 1) the highest and best use as though vacant; and 2) the highest and best use of the property as currently improved. The highest and best use both as though vacant and as currently improved must meet four criteria. The highest and best use must be legally permissible, physically possible, financially feasible and maximally productive.

Highest and Best Use

The highest and best use of this site as though vacant is to construct a good to luxury quality single-family residence in accordance with the General Plan for the city of Malibu.

The appraisal problem is to estimate the market value of the subject property in accordance with its highest and best use.

For the purpose of estimating the market value for the subject property, the appraisers may utilize one or more of the three traditional appraisal techniques to develop a reasonable opinion of value. The techniques are:

- The Cost Approach
- The Sales Comparison Approach
- The Income Approach

In the Cost Approach, the appraiser estimates, through support sources, the current costs of replacing the improvements and determines all forms of depreciation (that is, physical, functional and external obsolescence) to arrive at a depreciated value of the improvements. Land value is determined through an analysis of current market transactions and added to the depreciated value of the subject structure to arrive at a value estimate via the Cost Approach.

In the Sales Comparison Approach, the appraiser searches the local market for recent sales of similar properties. After gathering the information, the appraiser analyzes the data to relate the subject's unique characteristics to those of the comparable sales to estimate a value.

In the Income Approach, the appraiser looks at the property's ability to produce an income by analyzing the property's capability of producing income and subtracting fixed and variable operating expenses to estimate the net income. The appraiser then capitalizes the net income into a value estimate.

The final step of the appraisal process is to correlate the evidence gathered and the conclusions reached for each approach. A final value conclusion is then estimated.

Since the subject property is a single family residence, the primary approach to value is the Sales Comparison Approach. The market of potential purchasers for this type of property is dominated by intended owner/occupants. Sale prices are typically dominated by intended owner/occupants. Sale prices are typically set by consideration of recently consummated transactions for similar properties, as best reflected by the Sales Comparison Approach; therefore, we have focused on the Sales Comparison Approach to value. Because single family residences are typically not purchased on their income-producing capabilities, the Income Approach to value is not an appropriate means of valuing the subject property.

The Cost Approach was not deemed appropriate for this assignment for two significant reasons:

- Participants in the subject market do not generally utilize the Cost Approach to value in making purchase and sale decisions for property similar to the subject.

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The Sales Comparison Approach is an appraisal technique in which the market value estimate is predicated upon prices paid in actual market transactions and current listings, the former fixing the lower limit of value in a static or advancing market (pricewise) and the latter fixing the higher limit in any market. It is a process of correlation and analysis of similar recently sold properties. The reliability of this technique is dependent upon (a) the degree of comparability of each property with the property under appraisal, (b) the time of sale, (c) the verification of sale data, and (d) the absence of unusual conditions affecting the sale.

Market Data

The appraiser has made an extensive market investigation concerning the sales activity for single family residences in Point Dume, the neighborhood in which the subject property is located. The appraiser utilized data from the Los Angeles County Recorder, the Los Angeles County Assessor, the Greater Westside Association of Realtor's Multiple Listing Service, and various real estate agents in the West Los Angeles area.

Comparable sold properties, including those documented herein, were investigated. Based upon abstractions taken from the marketplace, sales were adjusted for significant differences between the sold properties and the subject. Emphasis is given, not to the cost (if determinable) of a difference, but to value, as indicated by the data, to a typical buyer. Sold properties were compared to the subject, and also analyzed in relation to each other.

In this section we will analyze the impact on value of a 3,000 square foot, non-view residence versus the City of Malibu approved 5,171 square foot residence with ancillary improvements. A summary of the sales appears on the following page with more detailed descriptions to follow thereafter.

SUMMARY OF COMPARABLE SALES

No.	Location	Sale Date	Sale Price	Bldg. Area	Year Built	Lot Size View	Bdrms/Baths Other
1	6712 Portshead Road	12/10/99	$1,355,000	4,000	1987	1.21-Acres Limited Ocean/Cyn	6 Br/5 Ba 3-Bedroom Guesthouse
2	7120 Grasswood Avenue	12/2/99	$1,750,000	4,697	1974	1.05-Acres Mountains	4 Br/4½ Ba Pool/Spa/Tennis Court
3	29119 Cliffside Drive	7/19/99	$2,215,000	5,743	1977	1.22-Acres Limited Ocean/Cyn	6 Br/8½ Ba Pool/Spa/Guesthouse
4	29075 Grayfox Street	12/10/98	$2,149,500 $2,472,000X	4,160	1994	1.47-Acres Canyon/Min Ocean	5 Br/6 Ba Pool/Spa/Guesthouse
5	6716 Zumirez Drive	11/3/98	$2,200,000 $2,552,000X	4,253	1954	1:42-Acres Ocean	5 Br/5 Ba Pool/Spa/2-Guesthouses
6	29131 Cliffside Drive	10/25/99	$2,400,000	4,944	1955	1.49-Acres Ocean Vu from Master	3 Br/3½ Ba Pool/Spa/Guesthouse/Studio
7	7052 Dume Drive	10/28/98	$3,000,000 $3,480,000X	10,561	1992	.61-Acres Ocean	6 Br/6½ Ba Pool/Spa
8	28837 Grayfox Street	Expired Listing 6/99	$2,495,000	4,610	1989	1.12-Acres Part Ocean/Canyon	6 Br/7 Ba Pool/Spa/Cabana/Guesthouse
9	28820 Grayfox Street	Listing Since 9/99	$2,995,000	5,999	1988	1.07-Acres Canyon/Min Ocean	6 Br/5 Ba Pool/Spa/Tennis/2 Guesthouses
Subj.	28827 Grayfox Street	----	----	5,171* 3,000**	2000	1.05-Acres Part Ocean/Canyon* None**	4 Br/Study/3 Ba Pool/Guesthouse/Maids, 5-Garage* Pool/3 Garage**

*Approved with the City of Malibu **Per Coastal Commission requirements X-Adjusted for Appreciation

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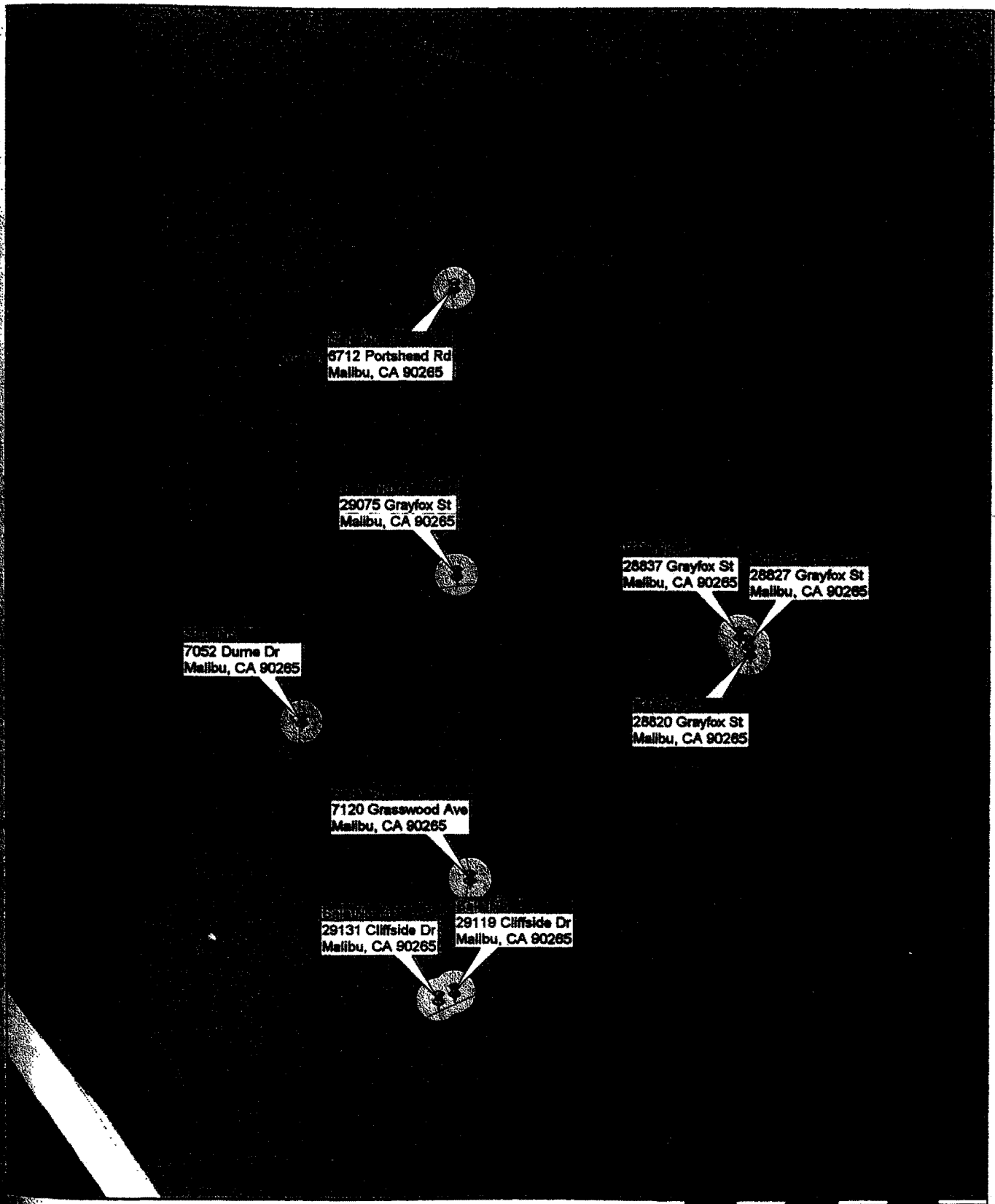
Comparable Sales Map



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Discussion and Analysis of Comparable Sold Properties

Comparable No. 1 – 6712 Portshead Road was listed for sale on July 6, 1997 for $1,385,000 with Joan Plummer of Fred Sands Realtors of Malibu. The property entered escrow after a 615-day marketing period and closed escrow on December 10, 1999 for a total consideration of $1,355,000 (Document No. 2280809). Improvements consist of a two-story, Contemporary style single-family residence with two-car garage constructed in 1987. The residence provides for six bedrooms, five bathrooms, in 4,000 square feet of living area (per agent). The site is a 1.21-acre lot with deeded beach access and enhanced by distant ocean views. The improvements were indicated to be in good, but mostly original condition as of the date of sale. Mechanical elements include forced air heating. Ancillary improvements include a three-bedroom, one-bathroom guesthouse. The improvements appear to be of good quality construction.

When compared to the subject's 5,171 square foot plan, the improvement size, ancillary improvements, effective age, and view amenity are inferior. Overall, this comparable is considered inferior to the subject's proposed 5,171 square foot house. When compared to the subject's 3,000 square foot plan, the improvement size and view amenity is superior. The ancillary improvements and effective age are inferior. Overall, based on the subject's 3,000 square foot plan, this comparable would still be slightly inferior to the subject.

Comparable No. 2 – 7120 Grasswood Avenue was listed for sale on September 17, 1999 for $1,875,000 with Susan Monus of Coldwell Banker. The property entered escrow after a 73-day marketing period and closed escrow on December 2, 1999 for a total consideration of $1,750,000 (Document No. 2220009). Improvements consist of a two-story, Contemporary style single-family residence with double carport constructed in 1974. The residence provides for four bedrooms, four bathrooms, in 4,697 square feet of living area. The site is a 1.05-acre lot enhanced by a mountain view. The improvements were indicated to be in average condition as of the date of sale, with no recent updating or remodeling. Mechanical elements include forced air heating. Ancillary improvements include a pool, spa, and tennis court. The improvements appear to be of good quality construction.

When compared to the subject's 5,171 square foot plan, the improvement size, view, effective age, condition, and appeal are inferior. Overall, this comparable is considered inferior to the subject. When compared to the subject's 3,000 square foot plan, the improvement size is superior. The effective age and condition are inferior. The view amenity is similar. After adjusting for differences in physical characteristics, this comparable is considered superior to the subject, assuming the 3,000 square foot building plan.

Comparable No. 3 –29119 Cliffside Drive was listed for sale on August 3, 1998 for $2,650,000 with Ellen Francisco of Coldwell Banker. The property entered escrow after a 339-day marketing period and closed escrow on July 19, 1999 for a total consideration of (per agent) $2,215,000 (Document No. 1323866). Improvements consist of a three-story, Mediterranean style single-family residence with six-car garage constructed in 1977 and updated in later years. The residence provides for six bedrooms, eight and one-half bathrooms, in 5,743 square feet of living area, including an attached guesthouse. The site is a 1.22-acre lot enhanced by an ocean view (opposite of bluff-side). The improvements were indicated to be in remodeled condition as of the date of sale. Many of the rooms have vaulted ceilings, French doors and windows, hardwood and marble flooring, and there is a fireplace located in the family room, living room, and master bedroom. Mechanical elements include forced air heating, central air conditioning, and a central vacuum system. Ancillary improvements include expansive decks, pool, spa, east-west tennis court, and guesthouse with ¾ bathroom and fireplace. The improvements appear to be of good quality construction.

When compared to the subject's 5,171 square foot plan, the ancillary improvements are superior. The effective age and condition are inferior. The total improvement size includes the guesthouse, thus the effective main home size is approximately 5,200 square feet, or very competitive with the subject property. After adjusting for differences in physical characteristics, this comparable is considered inferior to the subject due primarily to its inferior effective age and condition. When compared to the subject's proposed 3,000 square foot house, the physical characteristics of this property are substantially superior.

Comparable No. 4 – 29075 Grayfox Street was listed for sale on September 21, 1998 for $2,395,000 with Ellen Francisco of Coldwell Banker. The property closed escrow on December 10, 1998 for a total consideration of $2,149,500. This sale has been adjusted upward in order to reflect the appreciation in market conditions over the past year to $2,472,000. Improvements consist of a three-story, Tuscan style single-family residence with two-car garage constructed in 1994. The residence provides for five bedrooms, six bathrooms, in 4,160 square feet of building area. The site is a 1.47-acre lot with rear downslope, enhanced by mountain and very limited ocean view. The site is located across the street from a school with some adverse impact on market survey. The improvements were indicated to be in very good condition as of the date of sale. Floor coverings include carpet, hardwood and stone. There is a fireplace located in the kitchen and living room. Mechanical elements include forced air heating. Ancillary improvements include a pool, spa, and two-story guesthouse with separate entry. The improvements appear to be of good quality construction.

When compared to the subject's proposed 5,171 square foot plan, the improvement size is inferior. The condition and quality are similar. The effective age is competitive. After adjusting for differences in physical characteristics, this comparable is considered inferior to the subject due primarily to its inferior improvement size. When compared to the subject's proposed 3,000 square foot residence, the physical characteristics are substantially superior to the subject.

Comparable No. 5 – 6716 Zumirez Drive was listed for sale on August 25, 1997 for $2,495,000 with Christopher Cortazzo of Coldwell Banker. The property entered escrow after a 441-day marketing period and closed escrow on November 3, 1998 for $2,200,000 (Document No. 2016194). This sale has been adjusted upward in order to reflect the appreciation in market conditions over the past year to $2,552,000. Improvements consist of a two-story, Contemporary style single-family residence with two-car attached garage constructed in 1967. The site is a 1.42-acre sloped lot with the only gated drive going directly to the beach on Point Dume. The improvements were indicated to be well maintained but were in need of updating as of the date of sale. There is a fireplace located in the living room, family room, kitchen, and master bedroom. Floor coverings include carpet and tile. Mechanical elements include forced air heating with central air conditioning. Ancillary improvements include a pool, spa, and two separate guesthouses. The improvements appear to be of good quality construction.

When compared to the subject's proposed 5,171 square foot residence, the improvement size, condition and effective age are inferior. The secondary guesthouse amenity is superior. The view amenity is slightly superior. After adjusting for differences in physical characteristics, this comparable is considered inferior to the subject due primarily to its inferior effective age and improvement size.

Comparable No. 6– 29131 Cliffside Drive was listed for sale on August 3, 1999 for $2,650,000 with Ellen Francisco of Coldwell Banker. The property entered escrow after a sixty-two day marketing period and closed escrow on October 25, 1999 for a total consideration of $2,400,000 (per agent/not publicly recorded). Improvements consist of a two-story, Mediterranean style single-family residence with two-car garage constructed in 1955 and remodeled in recent years. The residence provides for three-bedrooms, three and one-half bathrooms, in 4,944 square feet of living area. The site is a 1.49-acre lot located on the land side of Cliffside, offering a view only from the master suite. The improvements were indicated to be in excellent and remodeled condition as of the date of sale. Floor coverings include carpet, stone and tile. There is a fireplace located in the master bathroom, living room and family room. Mechanical elements include forced air heating with central air conditioning. Ancillary improvements include a pool, spa, guesthouse and separate studio. The improvements appear to be of good quality construction.

When compared to the subject's proposed 5,171 square foot residence, the improvement size and effective age are inferior. The view amenity and level lot area is similar. After adjusting for differences in physical characteristics, this property is considered inferior to the subject due primarily to its inferior effective age and improvement size. In comparison to the subject's proposed 3,000 square foot residence, this comparable is substantially superior to the subject.

Comparable No. 7– 7052 Dume Drive was listed for sale on January 14, 1998 for $3,195,000 with Paul and Sara Grisanti of Coldwell Banker. The property entered escrow after a 253-day marketing period and closed escrow on October 28, 1998 for a total consideration of $3,000,000 (Document No. 1970254). This sale has been adjusted upward in order to reflect the appreciation in market conditions over the past year to $3,480,000. Improvements consist of a three-story, Mediterranean style single-family residence with five-car garage constructed in 1992. The residence provides for six bedrooms, six and one-half bathrooms, in 10,560 square feet of living area. The site is a .61-acre lot enhanced by unobstructed ocean views. The improvements were indicated to be in excellent condition as of the date of sale. The residence has six fireplaces, marble and stone flooring, and a gourmet kitchen with commercial grade appliances. Mechanical elements include forced air heating. Ancillary improvements include a pool and spa. The improvements appear to be of good quality construction.

When compared to the subject's proposed 5,171 square foot residence, the level lot area and ancillary improvements are inferior. The view amenity and improvement size is substantially superior. Overall, this comparable is considered superior to the subject property due primarily to its superior view and substantially larger improvement size.

Comparable No. 8–28837 Grayfox Street was listed for sale on December 14, 1998 for $2,495,000 with Cori Cooper-Lowe of Coldwell Banker. The listing was withdrawn on June 3, 1999, after the property was leased for $16,000 per month. The lack of market response at this price level does indicate a high list price. Improvements consist of a Mediterranean style single-family residence with three-car garage constructed in 1989. The residence provides for six bedrooms, seven bathrooms, in 4,610 square feet of living area. The site is a 1.12 acre foot lot enhanced by a partial ocean view. The improvements were indicated to be in refurbished condition as of the offering period. Mechanical elements include forced air heating with central air conditioning. Ancillary improvements include a guesthouse, two pool houses with full bathrooms, and an infinity pool. The improvements appear to be of good quality construction.

When compared to the subject's proposed 5,171 square foot residence, the improvement size and effective age are inferior. The usable site area and view are similar. After adjusting for

differences in physical characteristics, this comparable is considered inferior to the subject due primarily to its inferior effective age and improvement size. When compared to the subject's proposed 3,000 square foot residence, this comparable is considered substantially superior to the subject property.

Comparable No. 9– 28820 Grayfox Street was listed for sale on September 16, 1999 for $2,995,000 with Christopher Cortazzo of Coldwell Banker. There has been no market interest at this price level, which would indicate a high list price. Improvements consist of a two-story, Mediterranean style single-family residence with four-car garage constructed in 1988. The residence provides for six bedrooms, five bathrooms, in 5,999 square feet of living area. The site is a 1.07-acre lot with no view available from the main living area. There is a full view available from a "view tower" offering limited enhancement on this property. The improvements were reported to be in good condition. Ancillary improvements include a pool, spa, lighted tennis court, motor court, wine cellar, two guesthouses, and open terraces. The improvements appear to be of good quality construction.

When compared to the subject's proposed 5,171 square foot residence, the improvement size and ancillary improvements are superior. The improvements are not set back from the street, lessening the degree privacy. The view amenity is inferior. After adjusting for differences in physical characteristics, this comparable is considered similar to the subject. When compared to the subject's proposed 3,000 square foot residence, this property is substantially superior to the subject.

Conclusion

The seven sold properties and two listings included in our data have unadjusted prices ranging from $1,355,000 to $3,000,000. After adjusting for appreciation, this range is increased to $1,355,000 to $3,480,000. As discussed earlier, there has been an increase in market activity and property values in the subject's market area. In comparison to the subject's proposed 5,171 square foot residence and taking into consideration timing of the sale and the physical characteristics of the sites and improvements, we are of the opinion that the subject property is superior to Comparable Sale Nos. 1, 2, 3, 4, 5, 6, and 8, is inferior to Comparable No. 7, and after adjusting for differences in physical characteristics, is similar to Comparable No. 9.

When comparing the subject's proposed 3,000 square foot residence, the subject property is superior to Comparable Sale No. 1, is clearly inferior to Comparable Nos. 2-9.

As a result of our analysis, we have formed an opinion that the market value of the fee simple estate in the above-referenced property, subject to the assumptions, limiting conditions, certifications and definitions, as of March 24, 2000, assuming the construction of a 5,171 square

foot single-family residence with ocean view and a 19,246.85 square foot buildable portion of the site, is:

TWO MILLION EIGHT HUNDRED THOUSAND DOLLARS
$2,800,000

As a result of our analysis, we have formed an opinion that the market value of the fee simple estate in the above-referenced property, subject to the assumptions, limiting conditions, certifications and definitions, as of March 24, 2000, assuming the construction of a 3,000 square foot single-family residence without ocean view and a decrease in the buildable portion of the site from 19,246.85 square feet to 10,010.8 square feet, is:

ONE MILLION SIX HUNDRED THOUSAND DOLLARS
$1,600,000

Loss in Profit Analysis

Within the Sales Comparison Approach we analyzed the market value difference of the subject property assuming the two different proposed building plan scenarios, a 5,171 square foot view residence with approximately 750 square feet of guest house and 250 square foot maids quarters (total of 6,171 sq. ft.), versus a 3,000 square foot non-view residence. Based on the information provided by Quentin Dart Parker, AIA, an architect specializing in Malibu residences, the cost on a per square foot basis for the larger proposed home is $150 per square foot, including ancillary improvements; and $225 per square foot for the smaller residence, including ancillary improvements. We have allocated the profit potential of each plan as follows:

Plan I

6,171 SF single-family residence at $150 per square foot	$ 925,650
Land Value (based on prior report, adjusted for time)	$ 700,000
Total Costs	$1,625,650
Market Value of Residence	$2,800,000
Profit	$1,174,350

Plan 2

3,000 SF single-family residence at $225 per square foot	$ 675,000
Land Value (based on prior report, adjusted for time)	$ 700,000
Total Costs	$1,375,000
Market Value of 3,000 Square Foot Residence	$1,600,000
Profit	$ 225,000

Conclusion

Based upon the above analysis, the lost profit because the implementation of the larger view plan cannot be realized is $949,350, or $950,000 (rounded).

29/3

I certify, to the best of my knowledge and belief, that...

- the statements of fact contained in this report are true and correct.
- the report analyses, opinions and conclusions are limited only by the reported assumptions and limiting conditions, and are our personal, unbiased professional analyses, opinions and conclusions.
- we have no present or prospective interest in the property that is the subject of this report and we have no personal interest or bias with respect to the parties involved.
- our compensation is not contingent upon the reporting of a pre-determined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.
- the appraisal assignment was not based on a requested minimum valuation, a specific valuation or the approval of a loan.
- our analyses, opinions and conclusions were developed, and this report has been prepared in conformity with Uniform Standards of Professional Appraisal Practices, the Codes of Professional Ethics and the Standards of Professional Practice of the Appraisal Institute and the American Society of Appraisers.
- the use of this report is subject to the requirements of the Appraisal relating to review by its authorized representatives.
- the undersigned have the knowledge and experience required to perform this appraisal in accordance with the competency provision of USPAP.
- Alice M. Wollman and Michael S. Adler, MAI, have personally inspected the property that is the subject of this report.
- under the direct supervision of Michael S. Adler, MAI, Alice M. Wollman assisted in the research and analyses contained within this report.

Alice M. Wollman

Michael S. Adler, MAI

PROPERTY INFORMATION

Property: 28827 GRAYFOX ST, MALIBU CA 90265-4252 C019

APN:	4466-008-005			Use:	RESIDENTIAL LOT
County:	LOS ANGELES, CA	Tax Rate Area:	10860	Total Value:	$97,578
Census:	8004.02	Prop Tax:	$1,403.70	Land Value:	$97,578
Map Pg:	110-C5	Delinq Tax Yr:		Imprv Value:	
Thom Pg:	667-F3	Exemptions:		Assd Yr:	1999
Phone:	310/459-8664			% Improved:	
Owner:	LEVER TRUST PT				
Addr:	3019 3RD ST #304; SANTA MONICA CA 90405-5489 C021				

SALES INFORMATION

	LAST SALE	PRIOR SALE
Transfer Date:	04/21/1999	02/24/1999
Sale Price/Type:		
Document #:	693283	301823
Document Type:	DEED	DEED
1st TD/Type:		
Finance:		
Junior TD:		
Lender:		
Seller:	LEVER MARK J	
Title Company:		
Buyer Info:		
Parcels/Last Sale:		

SITE INFORMATION

Zoning:	LCRA1*	Lot Size:	A1. 5
Land Use:	010V	Lot Area:	45,738
Tax Class:		Parking:	
FEMA Panel:	065043-0768C	Park Spaces:	
		Site Influence:	

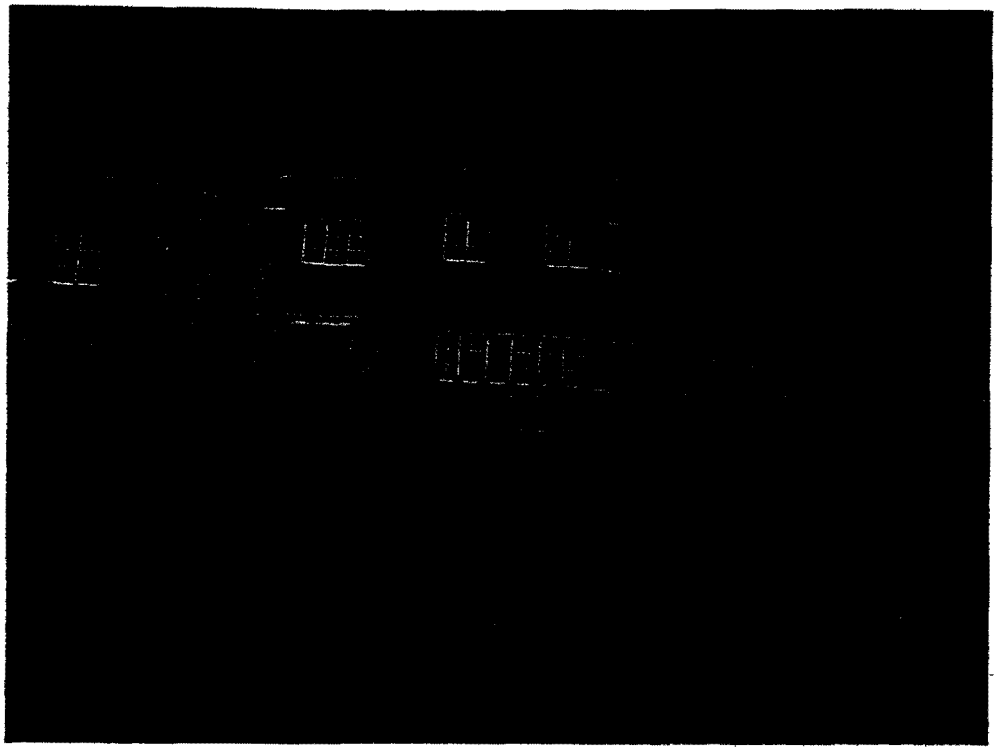
Legal Chars:

L44/RECORD OF SURVEY AS PER BK 57 PG 9 1

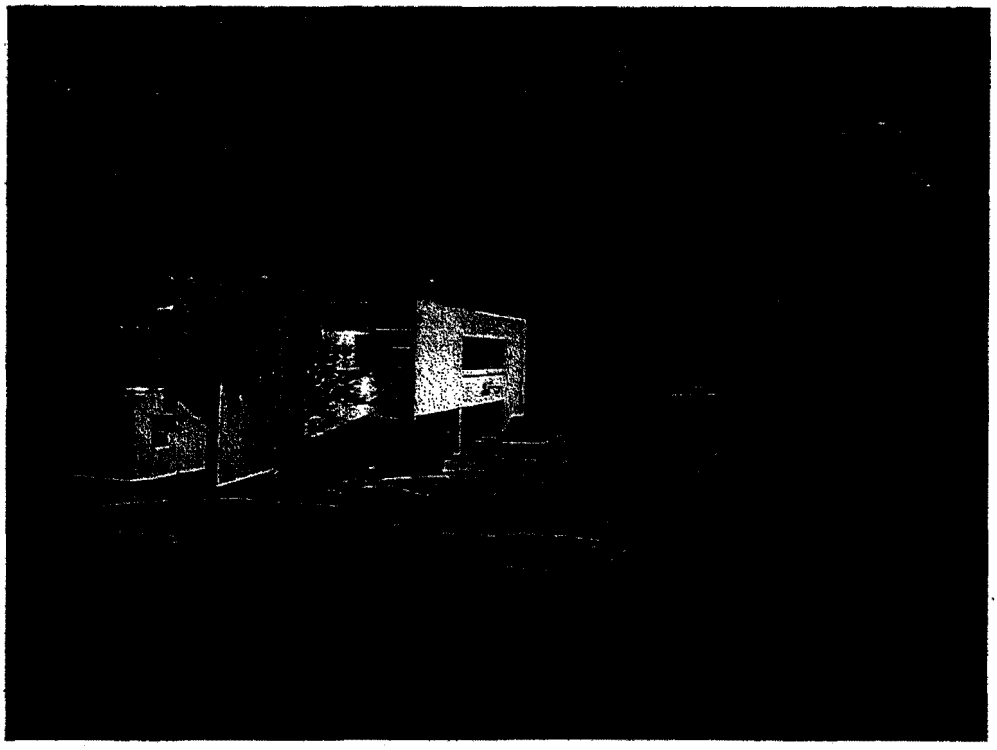
Comments: USABLE LOT:A1.05

IMPROVEMENTS

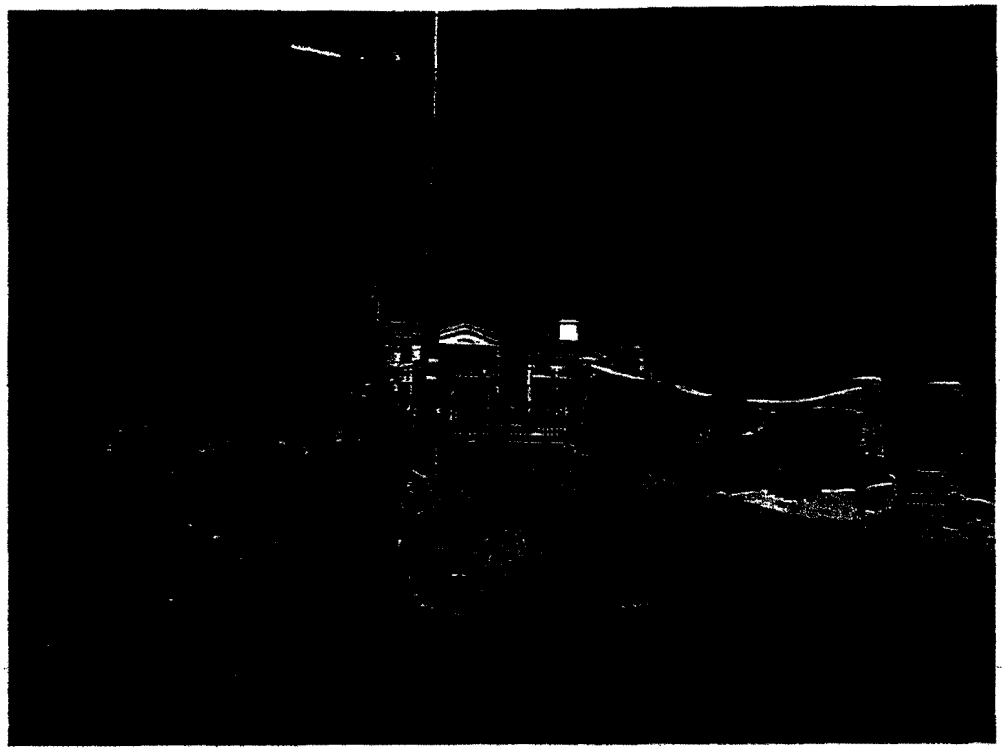
Bldg/Liv Area:
Units:
Bldgs:
Stories:
$/SF:
Yrblt/Eff:
Total Rms:
Bedrms:
Baths(F/H):
Fireplace:
Pool:
Bsmt Area:
Construct:
Flooring:
Air Cond:
Heat Type:
Quality:
Condition:
Style:
Other Rooms:



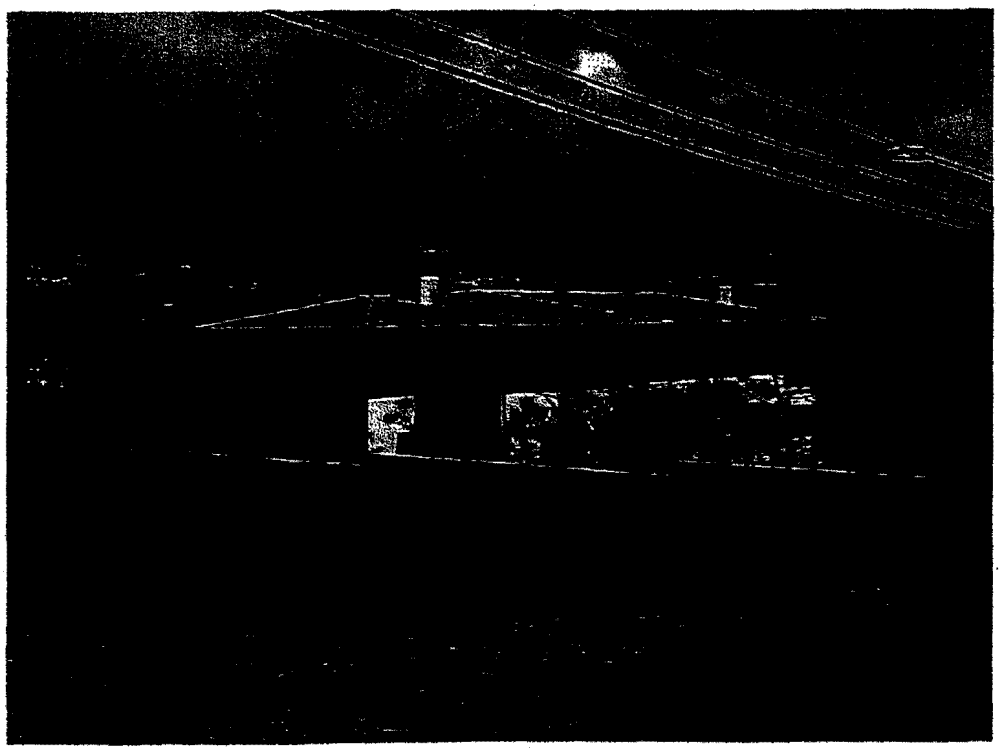
Sale No. 1 – 6712 Portshead Road



Sale No. 2 – 7120 Grasswood Avenue



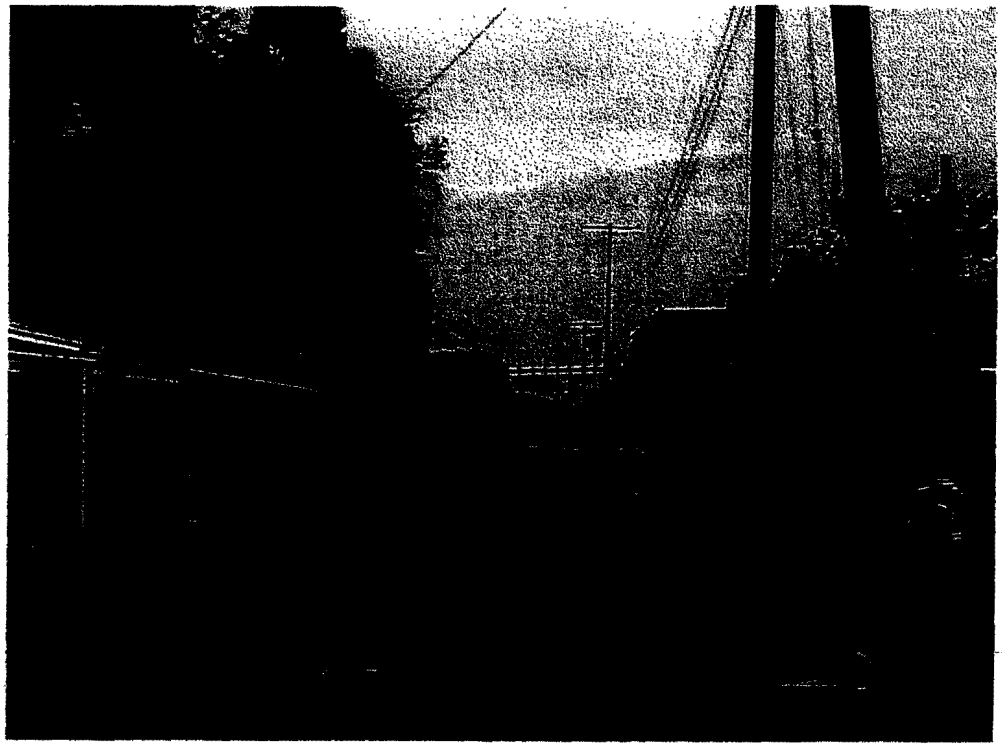
Sale No. 3 – 29119 Cliffside Drive



Sale No. 4 – 29075 Grayfox Drive

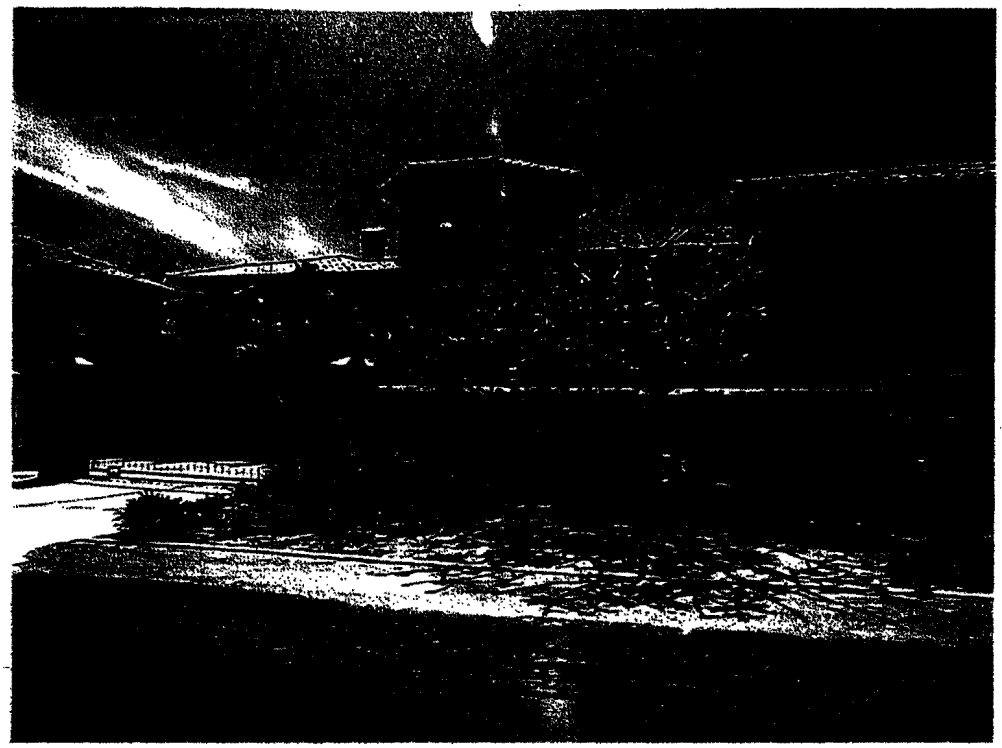
Sale No. 5 – 6716 Zumirez Drive

Sale No. 6 – 29131 Cliffside Drive



Sale No. 7 – 7052 Dume Drive

Sale No. 8 – 28837 Grayfox Drive



Sale No. 9 – 28820 Grayfox Street

April 11, 2000

California Coastal Commission
89 South California Street, Suite 200
San Buena Ventura, CA 93001

Attention: Jack Ainsworth/Melanie Hale

RE: BACKGROUND ISSUES, COASTAL ACT AND SANTA MONICA MOUNTAINS/MALIBU LAND USE PLAN (LUP) POLICIES APPLICABLE TO PROPOSED 5,171 SQ. FT. SINGLE-LEVEL, 18 FOOT HIGH, SINGLE-FAMILY RESIDENCE WITH A FOUR CAR GARAGE, 750 SQ. FT. GUEST HOUSE, POOL, SEPTIC SYSTEM AND 947.6 CUBIC YARDS OF GRADING AT 28827 GRAYFOX (LEVER), MALIBU, CDP 4-99-211

Dear Jack and Melanie:

The following analysis is submitted in connection with the above-referenced application, and demonstrates that approval of such application is appropriate. While the report is lengthy, a summary of the report is provided to facilitate your review of it.

I. SUMMARY OF REPORT.

The subject property is located on Point Dume in the City of Malibu. It was inherited by the applicant and has been owned by his family for three generations. The proposed development was designed by noted architect Bart Prince, who was recently listed as one of the top architects in the world by Architectural Digest Magazine. It is a single level, single family residence, which is smaller than the newer surrounding homes, and is protective of private and public views as it is no higher than 18 feet from grade. The subject property has a small level area which gradually descends into a ravine draining in an arroyo or intermittent streambed. An unspecified portion of the ravine has been designated as a "Disturbed Sensitive Resource Area" (DSR) on the Land Use Plan for the City of Malibu (LUP). Thus, the Coastal Commission's (CCC) review of this application concerns whether the location of the proposed single family residence, which has been approved by the City of Malibu, is appropriate in terms of the development's proximity from the ravine.

16 pages

The CCC has not adopted any policy for determining the scope of the DSR on the subject property. Planning departments have customarily limited development adjacent to canyons designated as DSR's to the "top-of-slope" of such canyons. The CCC has not developed a definition for the top-of-slope in the Coastal Act or in the LUP and has no maps for the subject property that delineate the DSR (as the scale on the LUP map is too large for accurate interpretation). However, the City of Malibu has developed a methodology for determining the top-of-slope for properties such as the subject, which gradually descend into a ravine and may have more than one possible top-of-slope, and the proposed house will not exceed such top-of-slope. The City of Malibu's determination is consistent with the opinion of a licensed surveyor.

Furthermore, the CCC has established a standard for development in the area surrounding the proposed residence, and the location of the residence is consistent with such standard. This standard has approved developments that are located closer to the streambed and deeper in the ravine than the proposed development. For example, the CCC recently approved the development of the house immediately adjacent to the east of the project, which is located 30.5 feet closer to the streambed; the house located across the ravine from the subject which is located 26.4 feet closer to the streambed; and the house located several parcels to the west of the subject, which is located 18.5 feet closer to the streambed. Accordingly, in the absence of a policy determining the scope of the DSR of the subject property, the CCC should apply the methodology adopted by the City of Malibu and its prior applicable precedent to approve the application.[1]

Approval of the application also is supported by the analysis conducted by the applicant's consulting biologist, Dr. Edith Read of PSOMAS, and the determination of the Environmental Review Board of the City of Malibu (ERB). Dr. Read and the ERB have concluded that the arroyo contains very limited native vegetation as the native habitat has been invaded by exotic vegetation from surrounding development. As a consequence, Dr. Read has opined that the scope of the DSR is limited to the streambed and that the proposed development will have no impact on the DSR because the proposed development is located at least 116.5 feet from such streambed. Indeed, Dr. Read has concluded that the applicant's Preliminary Fuel Modification

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[1]The CCC has recognized that it has no policy for determining the top-of-slope for canyons and ravines on Point Dume and has stated that new development should be set back as far as adjacent development. In particular, in the staff report recommending approval of CDP 4-95-230, staff stated as follows: "[a]lthough the [CCC] has not developed a specific distance that development must be set back from the canyons of Point Dume, the [CCC] has required new development to be set back at least as far as existing adjacent development."

Plan and Landscape Plan, which provides for removing the exotic vegetation located in the arroyo and replacing it with native vegetation, will enhance the DSR. The Fuel Modification Plan and Landscape Plan has been approved by the City of Malibu and the Los Angeles County Fire Department.

Furthermore, there is no basis for imposing any setback to the proposed development for anticipated fuel modification requirements. The proposed development will not result in any additional fuel modification requirements in the DSR beyond those which would apply to any development on the subject, including one located at the street. Furthermore, the DSR on the subject property is already subject to fuel modification requirements because it is located within the fuel modification zones of the houses located immediately adjacent to it. In addition, the applicant's Preliminary Fuel Modification Plan will not require the removal or thinning of native vegetation in the DSR. In any event, should the CCC approve this application, the applicant will agree to a condition requiring them to remove all exotic vegetation from the ravine and replace it with native plants.

Finally, should the proposed development be moved closer to the street as CCC staff has proposed, the applicant will have to redesign the proposed residence, and there will be a significant diminution of value in the subject property. In particular, the build-portion of the subject property will be reduced approximately fifty percent (50%) – from 19,246.85 square feet to 10,010.08 square feet – and the value of the finished residence will be reduced by $1,200,000, resulting in a loss of profit of $950,000. Accordingly, given that relocating the proposed residence will have no beneficial impact on the DSR, it would be arbitrary and capricious of the CCC to damage the applicant by requiring him to relocate the proposed residence upslope.

II. STATEMENT OF FACTS/DESCRIPTION OF EXHIBITS.

The foregoing facts justify approval of the application.

A. The Proposed Residence Is Consistent With The Prevailing Pattern of Surrounding Development.

The proposed house is consistent with the prevailing pattern of surrounding development in terms of its proximity to the adjacent arroyo (Exhibit #1:Aerial Charts of Recent Development Along Ravine). At its closest point, the residence provides a setback of 116.5 feet from the arroyo and is located at the top 81.4 foot contour, while many structures in the immediate vicinity are deeper in the ravine and much closer to the streambed, including (i) the house located immediately adjacent to the east of the subject, which is 30.5 feet closer to the toe of the

streambed and deeper in the ravine (78.9 foot contour); (ii) the house located across the ravine from the subject which is located 26.4 feet closer to the toe of the streambed and deeper in the ravine (80.4 foot contour); (iii) the house located next door to that house which is located 18.1 feet closer to the top of the streambed and deeper in the ravine (73.3 foot contour); and (iv) the house located several parcels west of the subject which is located 18.5 feet closer to the streambed and deeper in the ravine (73.1 foot contour). (Exhibit #2: Survey of Adjacent Parcels dated March 30, 2000).

B. The CCC Has No Policy For Determining The Scope Of The DSR On The Subject Property.

The CCC has not adopted any policy for determining the scope of the DSR on the subject property. The CCC has not developed a definition for top-of-slope for ravines in the Coastal Act or in the LUP. In addition, the CCC has no definitive maps for the subject property that delineate the scope of the DSR, as the scale on the LUP is too large for accurate interpretation (Exhibit #3: Land Use Plan for City of Malibu).

C. The City of Malibu Has Developed A Policy To Determine The Scope Of The DSR On The Subject Property And The Proposed Development Is Consistent With Such Policy.

The City of Malibu has adopted a fair, impartial, and consistent means for determination of top-of-slope for properties such as the subject (Exhibit #4: Memorandum from Craig Ewing to the City of Malibu Planning Staff dated August 6, 1998) and the proposed house will not encroach beyond the top-of-slope as defined by the City of Malibu (Exhibit #5: Letter from Alisa Morgenthaler to Craig Ewing dated August 20, 1998). The City of Malibu's determination is supported by the opinion of a licensed surveyor which identifies the top-of-slope of the subject property (Exhibit #6: Survey of Subject Property dated July 1998).

D. The Proposed Development Does Not Provide For Any Ancillary Structures Located Downslope Of The Proposed Residence.

The applicant is not proposing any fencing, yard area, pools, patios and hardscape, stairs, gazebos or other ancillary structures downslope from the proposed house in the arroyo, even though this is within the prevailing scope of development for the area (Exhibit #7: Aerial Chart of Fencing Along Ravine).

E. The DSR On The Subject Property Is Limited To The Streambed.

The arroyo is in an extremely disturbed state, with limited depauperate native vegetation, and an abundance of exotic vegetation that is aggressively invading the remnant native species. This has been independently confirmed by both the City of Malibu Biologist, Dr. Marti Witter (Exhibit #8: Biological Review by City of Malibu dated August 3, 1998 and ERB Resolution No. 98-05 at 2), and the applicant's consulting biologist, Dr. Edith Read of PSOMAS (Exhibit #9: Report dated June 12, 1998, Exhibit #10: Report dated March 20, 2000). (See also Exhibit #11: photos depicting invasive exotic vegetation and structures located closer to the arroyo than the subject). Thus, Dr. Read has concluded that the DSR on the subject property is limited to the streambed.

F. The Proposed Development Will Enhance The DSR.

The project will significantly improve the habitat values of the arroyo, in that the applicant has been conditioned by the City of Malibu to remove all the exotic species and revegetate the arroyo with native species approved by the City and consulting biologist, and the applicant will agree to a similar condition in the CCC permit if the application is approved. The applicant has satisfied this condition with his Preliminary Landscape Plan and Fuel Modification Plan which has been approved by the City of Malibu and Los Angeles County Fire Department (Exhibit #12: Biographical Review from City of Malibu dated July 26, 1999, and Preliminary Landscape Plan listing approved native plant species). As Dr. Read stated in her June 1998 report, "I find that the proposed project will result in environmental improvement to the property" and "implementation of the landscape/fuel modification plan would actually enhance the plant species diversity, and structural diversity, of the slope adjacent to the creek, and therefore would be a beneficial environmental impact. " If the CCC requires the applicant to move the proposed residence upslope, the applicant will not agree to this condition, and the CCC will not be able to impose it because such condition will be disproportionate pursuant to Dolan v. Tigard.

G. There Will Be No Impact On The DSR From Drainage Connected With The Proposed Development.

The applicant is voluntarily proposing a filtration device (Exhibit #13: Brochure on DreamPac Storm Drain Filter) that will cleanse all runoff from the residential development of hydrocarbons, silt and debris, thereby diminishing any impact on the arroyo resulting from drainage. In any event, there will be some impact from drainage connected with any development on the property, including development located at the street.

H. Moving The Proposed Residence Upslope Will Result In A Significant Diminution Of Value In The Subject Property.

If the proposed development is moved upslope as CCC staff as suggested, the applicant will be required to redesign the project and there will be a significant diminution of value of the subject property. The build-able portion of the subject property will be reduced approximately fifty percent (50 %) – from 19,246,85 square feet to 10,010.8 square feet – and the value of the finished residence will be reduced by $1,200,000 resulting in a loss of profit of $950,000 (Exhibit #14: Appraisal by Adler Realty Advisors, Inc. dated April 7, 2000).

I. Applicable CCC Precedent Mandates Approval Of The Application.

The CCC has established a standard for development in the area surrounding the proposed residence, and the location of the residence is consistent with such standard. In particular, the CCC approved developments which are immediately adjacent to the proposed development and involve the identical habitat although such developments are located closer to the ravine than the subject in terms of distance and slope. The CCC did not require any setback for fuel modification requirements in connection with these approvals. Application of this precedent mandates approval of this application (Exhibit #15: CDP 5-89-368, Exhibit #16: CDP 5-90-718, Exhibit #17: CDP 5-89-959, 5-89-959A).

J. There Is No Basis For Imposing Any Setback For Fuel Modification Requirements.

There is no basis for imposing any setback to the proposed development for anticipated fuel modification requirements. The proposed development will not result in any additional fuel modification requirements in the DSR beyond those which would apply to any development on the subject, including one located at the street. Furthermore, the DSR on the applicant's property is already subject to fuel modification requirements because it is located within the fuel modification zones of the houses located immediately adjacent to it. The applicant's Preliminary Fuel Modification Plan, which has been approved by the City of Malibu and the Los Angeles County Fire Department, will not require the removal or thinning of native vegetation in the DSR (Exhibit #18: Preliminary Fuel Modification Plan and Fire Department approval dated March 21, 2000). In any event, the applicant has committed to remove all exotic vegetation from the ravine and replace it with native plants if the application is approved.

III. THE COASTAL ACT AND LAND USE POLICIES SUPPORT APPROVAL OF THE APPLICATION.

A. The Coastal Act Provides That The Application Should Be Approved.

Section 30230 of the Coastal Act states in part - Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance.

As discussed in the attached biological reports, the subject arroyo is not of special biological significance, and no marine resources have been identified as existing in the arroyo. In any event, the project will enhance the arroyo since applicant will commit to revegetate the arroyo with native vegetation. As Dr. Read has concluded, absent the proposed development, the 60-year trajectory of degradation of the arroyo will continue.

Section 30231 of the Coastal Act states in part - The biological productivity and the quality of coastal waters, streams, wetlands , estuaries, and lakes appropriate to maintain optimum populations of marine organisms shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, . . . maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30240 of the Coastal Act states in part -

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values (emphasis added).

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas) (emphasis added).

There is no environmentally sensitive habitat area (ESHA) adjacent to the subject property. Rather, it is adjacent to an extremely disturbed sensitive resource area (DSR) which is entitled to less protection than that specified in Sections 30231 and 30240. In any event, the applicant will be removing invasive exotic vegetation, restoring the arroyo habitat with all native species and maintaining it in perpetuity, and controlling and filtering runoff into the arroyo, and will in no way alter the intermittent stream. Accordingly, he is not only protecting the arroyo, he

is enhancing it.

B. Land Use Policies Provide That The Application Should Be Approved.

Although the Malibu Santa Monica Mountains LUP is no longer certified for the incorporated area of Malibu, it is still advisory and often cited in staff reports. As mentioned earlier, an unspecified portion of the arroyo is a DSR and is subject to a number of specific policies within the LUP.

P 79 - To Maintain natural vegetation buffer areas that protect all sensitive riparian habitats. As required by Section 30231 of the Coastal Act, all development other than driveways and walkways should be set back at least 50 feet from the outer limit of designated environmentally sensitive riparian vegetations.

As noted in the City of Malibu ERB findings and the PSOMAS biota review dated June 12, 1998, the arroyo below the proposed house is denuded of native vegetation and chocked with invasive exotics. Thus, Dr. Read has opined that the sensitive habitat area is limited to the streambed. She states on page 2 of the 1998 attached report, that "in my view, the sensitivity of the resource at this location is limited to the creek bed itself." Accordingly, the development is located more than twice the 50 feet required in P 79 of the LUP.

In addition, the CCC has limited the scope of the DSR to the streambed or close to the streambed in approving development surrounding the subject property. In particular, the CCC has approved developments which are located as close as 86 feet from the streambed, only 16 feet from the 50-foot setback provided for by P 79 (Exhibit #2, CDP 5-87-482). Accordingly, the CCC has limited the scope of the DSR to the streambed for the purposes of applying P 79 to development in the vicinity of the subject property. There is no basis for the CCC to change this policy in connection with the instant application.

P 80 - The following setback requirements shall be applied to new septic systems: (b) at least 100 feet from the outer edge of the existing riparian or oak canopy for seepage pits.

Dr. Read did not find the existence of any riparian habitat in the arroyo. Furthermore, the proposed seepage pits approved by the City of Malibu Health Department are over 350 feet from the streambed which is more than three (3) times the setback required by P 80.

P 81 - To control run off into coastal waters, wetlands and riparian areas, as required by Section 30231 of the Coastal Act, the maximum rate of storm water run off into such areas from

new development should not exceed the peak level that existed prior to development.

Assuming that the subject property is adjacent to a riparian area, which Dr. Read did not find, the applicant has designed his project in accordance with P 81.

P 84 - In disturbed areas, landscape plans shall balance long term stability and minimization of fuel load. Within ESHA's and Significant Watersheds, native plant species shall be used, consistent with fire safety requirements.

As discussed above, the applicant's Preliminary Landscape Plan, which has been approved by the City of Malibu and the Los Angeles County Fire Department, provides for removing the exotic species invading the arroyo and revegetating the arroyo exclusively with native, non-combustible species.

P 86- A drainage control system, including on-site retention or detention where appropriate, shall be incorporated into the site design of new developments to minimize the effects of run off and erosion. Impacts on downstream sensitive riparian habitats must be mitigated. As stated above, the project will not result in an increase of run off into the arroyo from the site beyond that which would be present with any development on the property, including one located at the street; all runoff will be filtered for hydrocarbons, silt and debris.

C. Table 1 Provides That The Application Should Be Approved.

P 63 - Uses shall be permitted in ESHA's, DSR's, Significant Watersheds, and Significant Oak Woodlands, and Wildlife Corridors in accordance with Table 1 and all other policies of this LUP (emphasis added).

The Table 1 of the LUP has a specific subsection for the DSRs. Please note the following;

- In disturbed riparian areas, structures shall be sited to minimize removal of riparian trees.

No riparian trees will be removed for this project or, in fact, exist on the subject property.

- In disturbed oak woodland and savannah areas, structures shall be sited in accordance with the LA County Oak Tree Ordinance.

No oak trees will be affected by this project of, in fact, exist on the subject property.

- Removal of native vegetation and grading shall be minimized.

As discussed previously, the project will not only minimize removal of native vegetation, it will result in a significant net increase in native vegetation. As discussed in further detail below, the applicant's Fuel Modification Plan does not require any thinning or removal of native vegetation.

- Site grading shall be accomplished in accordance with the stream protection and erosion policies.

No grading will occur within the arroyo or affect the streambed directly or indirectly, consistent with the stream protection and erosion policies.

- Streambeds in designated ESHA's shall not be altered except where consistent with Section 30236 of the Coastal Act.

The project will not alter the streambed.

- Disturbed, sensitive ravines and ravines at Point Dume should be retained in their existing condition or restored.

As documented above, the project will not only preserve the ravine, it will enhance it by replacing exotic vegetation with native vegetation.

- Approval of development shall be subject to review by the Environmental Review Board.

As set forth in Exhibit #7, the subject application was reviewed and approved by the City of Malibu ERB, which has the strictest environmental protection policies in place today.

IV. MOVING THE PROPOSED DEVELOPMENT CLOSER TO THE STREET WOULD RESULT IN A CONFLICT WITH CITY OF MALIBU REQUIREMENTS.

The subject lot is subject to a sixty-five (65) foot setback from the street by the City of Malibu. Accordingly, should the proposed house be moved closer to the street as proposed by CCC staff, a variance will be required from the City of Malibu, an expensive proposition with little likelihood of success. Furthermore, the applicant would be forced to redesign the proposed residence, which would no longer fit on the build-able area on the lot, and replace it with a much

smaller, two-level, much higher structure which would no longer provide maximum protection for public and private views and be located closer to the street. Such a dwelling would be inconsistent with the City of Malibu's policies for homes built in the City of Malibu.

V. MOVING THE PROPOSED DEVELOPMENT UPSLOPE WOULD RESULT IN A REDESIGN OF THE PROPOSED RESIDENCE AND SIGNIFICANT DIMINUTION OF VALUE TO THE PROPERTY.

Should the proposed development be pushed further back from the arroyo and located to where the CCC staff has postulated, the applicant would be forced to redesign the proposed residence and the value of the finished home would be reduced by $1,200,000 resulting in a loss of $950,000 in profit from the development according to an appraisal recently prepared by Adler Realty Advisors, Inc. (Exhibit #13). This is due to the fact that the build-able portion of the lot would be reduced from 19,246.85 square feet to 10,010.8 square feet taking into account the setbacks mandated by the City of Malibu, including the front yard setback. This represents a reduction of 9,235.05 square feet or approximately fifty percent (50%) of build-able area. According to the applicant's architect, Bart Prince, such reduction would limit the applicant to building an approximately 3,000 square foot home with a small pool; there would be no property available for a guest house or any other ancillary structures.

Furthermore, moving the proposed development as CCC staff has proposed would eliminate all of the white and blue water views to the ocean, and all ravine views, leaving the residents with only a view of the large house across the ravine. This represents a tremendous devaluing of the applicant's property, with no quantifiable improvement to any public resource. This is unjustified and unfair.

VI. APPLICABLE CCC PRECEDENT MANDATES APPROVAL OF THE APPLICATION.

The CCC approved the following developments located adjacent to the subject although each is located closer to the ravine in terms of distance and slope than the subject. For example, development at 6957 Whitesands Place, which is located across the ravine from the subject property, was allowed to take place 90.1 feet from the toe of the streambed and at the 80.4 foot contour; development at 28761 Grayfox Drive was allowed to take place 98 feet from the toe of the streambed and at the 73.1 foot contour; and development at 28913 Grayfox was allowed to take place at the 86 foot contour. Furthermore, the CCC did not impose any setback for fuel modification requirements in approving these developments. There has not been a substantive amendment to the Coastal Act since the approval of the following precedents which would

justify disregarding them. Accordingly, application of these precedents mandates approval of the subject application.

A. CDP 5-89-368/6957 Whitesands Place (Exhibit #14).

On June 15, 1989, the CCC granted a permit for the demolition of an existing single family dwelling and construction of a two-story 6,200 square feet, 35 foot-high single family residence with four-car garage, septic system, swimming pool and 1,3141 cubic yards of grading located at 6957 Whitesands Place. 6957 Whitesands Place is located directly across the ravine from the proposed residence and involves the identical habitat. The CCC approved the addition of a guest house, servants quarters and a wine cellar on April 25, 1991 (CDP 5-89-368).

The CCC approved the application although it recognized that a portion of the property is designated as Mountain Land (M2) and as a DSR in the LUP and that a majority of the property drained into a ravine area which contained a USGS identified blue line stream. The CCC ruled that only two conditions were necessary to protect the area of the property containing the M2 and DSR. These conditions were: (i) that all proposed on-site development be re-sited north of contour interval 80 (which staff determined was the "edge of the ravine"); and (ii) that the landowner map and record a deed restriction which provides that the portion of the applicant's property downslope of contour interval 80 be precluded from future development for open space and habitat protection. In reaching its recommendation that the foregoing limitations would be sufficient, CCC staff reasoned that the slope descending into the ravine had been cleared of most of the indigenous vegetation and replaced with non-indigenous vegetation (primarily ice plant).

The CCC did not require any setback to take into account any clearance or thinning requirements that may be imposed by the Fire Department. Indeed, the CCC anticipated that clearance of vegetation around the residence and thinning of vegetation in the ravine would be required but nevertheless approved the application. In particular, the permit provided that the required deed restriction should specify that clearance of vegetation of up to 30 feet around the residence and selective thinning of vegetation within a 100 foot radius of the house is allowed for fire protection purposes and will not require a new permit.

Application of this precedent to the instant application calls for its approval. The proposed residence is smaller in size than 6957 Whitesands Place and involved the identical habitat as the subject, including the existence of invasive exotic vegetation such as ice plant. As demonstrated in the survey attached as Exhibit #2, 6957 Whitesands Place is located closer to the ravine in terms of both distance and slope. In particular, at its closest point, 6957 Whitesands Place is located 90.1 feet from the toe of the streambed and at the 80.4 foot contour while the

proposed residence is located 116.5 feet from the toe of the streambed and at the 81.5 contour. Furthermore, the Whitesands Place house is built on a slope ratio of 2: 1 while the applicant is not building on any slope steeper than 4:1. There has been no substantial amendment to the Coastal Act since 1989 and there are no other facts which justify disregarding this precedent. Thus, the proposed residence should be approved in the same manner as 6957 Whitesands Place.

As in 6957 Whitesands Place, the CCC should not impose any setback here in light of requirements of the Fire Department There are no facts justifying a change in the CCC's position on this issue. The Fire Department's requirements are substantially similar now to those that were in place in 1989 and the area does not pose a greater fire hazard now than it did in 1989. Thus, there is no basis for the CCC to require a setback for fuel modification requirements in connection with this application.

B. CDP 5-90-718/28761 Grayfox Drive (Exhibit #15).

On November 13, 1990, the CCC approved the demolition of an existing carport, the construction of a 4,054 square foot, 31.5 foot tall single-family residence with a 2,500 square foot screening room and the conversion of an existing 735 square foot residence into a guesthouse. The CCC approved an addition of a 750 square foot basement below the screening room on April 25, 1995, allowing for a 3,250 square foot structure. The staff report recommending approval of 28761 Grayfox Drive recognized that the ravine on the property contained a designated significant Oakwood land and Savannah and a blue line stream but concluded that the proposed development would "pose no negative impacts" on this area.

Application of this precedent supports the approval of the instant application. The residential compound at 28761 Grayfox is larger in size than the proposed residence and involves the same habitat (i.e, 28761 is located two parcels away from the subject property). The attached survey (Exhibit #2) demonstrates that 28761 Grayfox is located closer to the ravine in terms of distance and slope than the proposed development. In particular, it is located 98 feet from the toe of the streambed and at the 73.1 foot contour while the proposed development is located 116.5 feet from the ravine and at the 81.5 foot contour.

Furthermore, as in the case with 6957 Whitesands Place, the CCC did not require any setback in light of anticipated Fire Department clearing or thinning requirements. Indeed, the permit expressly provided for clearing in the ravine. It stated that "[c]learing of vegetation within 100 feet of structure as required by Los Angeles County for fire protection is permitted." Accordingly, imposing setbacks for fuel modification requirements is not consistent with applicable prior precedent, and there is no basis for imposing such a setback in connection with

the proposed development.

C. CDP 5-89-959, 5-89-959A/28913 Grayfox Street (Exhibit #16).

On November 15, 1989, the CCC granted a permit for the construction of a one-story, 30-foot high, 5,000 square foot single family residence, with attached three-car garage, septic system, and 1,200 cubic yards of grading and the remodeling of a 1,600 square foot single family residence into a 750 square foot architect studio and a 750 square foot guest unit. 28913 Grayfox is located in the same block as the subject property and involves the identical habitat. The CCC approved the addition of a dispersal wall at the top-of-slope of the property on November 11, 1991.

As in 6957 Whitesands Place and 28761 Grayfox, the CCC approved the application although it recognized that a portion of the property is designated as M2 - Mountain Land - and as a DSR and that a large portion of the property drained into a ravine area which contained a USGS identified blue line stream. Once again, the CCC ruled that only two conditions were necessary to protect the area of the property containing the M2 and the DSR. These conditions were: (i) that all proposed on-site development be re-sited north of contour interval 86 (which staff determined was the "top-of-slope" of the ravine) and (ii) that the landowner map and record a deed restriction which provides that the portion of the applicant's property downslope of contour interval 86 be precluded from future developments for open space habitat protection.

Application of this precedent supports the approval of the instant application. The development at 28913 Grayfox is larger in size than the proposed residence and involves the same habitat. Furthermore, the development at 28913 Grayfox, which is located at the 86 foot contour, is no farther from the ravine than the proposed development, which is located at the 81 foot contour.

Furthermore, as in the case of 6957 Whitesands Place and 28761 Grayfox, the CCC did not require any setback in light of fuel modification requirements. The permit expressly provided for clearing in the ravine. It stated that "[c]learing of vegetation up to 100 feet around the residence for fire protection is permitted." Once again, there is no basis for the CCC to require a setback for fuel modification requirements in connection with this application.

VII. THERE IS NO BASIS FOR IMPOSING ANY SETBACK FOR FUEL MODIFICATION REQUIREMENTS IN THE DSR.

The CCC staff has expressed concern that the proposed residence would require fuel

modification within the DSR. As demonstrated by the applicant's Preliminary Fuel Modification Plan, which has been approved by the City of Malibu and the Los Angeles County Fire Department, staff's concerns are unfounded. The proposed development will not result in any additional fuel modification requirements in the arroyo beyond those which would be required by any development even one located at the street. Furthermore, the DSR on the applicant's property is already subject to fuel modification requirements since it is located within the fuel modification zones of the houses adjacent to it. Thus, fuel modification requirements provide no basis for requiring the applicant to move his house upslope as staff has proposed.

The applicant's Fuel Modification Plan (Exhibit #17) does not require any removal or thinning of native vegetation within the arroyo. The only potential area on the subject property where thinning could conceivably be required is on a small portion of the property located immediately adjacent to the streambed which has been designated as a "Zone C" area on the Fuel Modification Plan. However, this designation will not require any thinning since the development is located a long distance (i.e., 116.5 feet) from the streambed (i.e., As explained in the Zone requirements attached to the Fuel Modification Plan, thinning of natural vegetation in Zone C is not required if the zone is located some distance from the development). Moreover, none of the "undesirable plant species" which the Fire Department requires to be removed from Zone C areas is located on the subject property's Zone C area. In any event, any fuel modification requirements imposed by the Fire Department's designation of Zone C and Zone B areas in the arroyo would apply regardless of where the applicant's house is sited and is not a basis for relocating the proposed development.

The applicant is committed to minimizing the impact that fuel modification requirements may have on the arroyo and enhancing the arroyo with their native revegation plan. He seeks to cooperate with the CCC on this issue and are willing to obtain additional findings from the Fire Department or agree to appropriate conditions to eliminate this concern, including one requiring them to remove the exotic vegetation and replace it with native plants.

The CCC will not be able to impose a condition that the applicant revegetate the arroyo should the house be pushed back to the area contemplated by the CCC staff. Requiring property owners to completely revegetate a ravine to mitigate the selective removal of a few (mostly) invasive exotic species would be the very definition of a disproportionate condition and prohibited by Dolan v. Tigard. The applicant would plainly be able to demonstrate that revegetation of the arroyo would exceed any impact to the native habitat that the CCC might identify and would be opposed to such condition.

A. The DSR Is Located Within The Fuel Modification Zone Of Adjacent Properties.

Please review Exhibit #1 which illustrates that the proposed home is immediately adjacent to existing houses located at 28837 Grayfox, 6957 Whitesands Place and 28815 Grayfox, and that the fuel modification zones for these structures will essentially overlap. Accordingly, pushing back the proposed residence will not eliminate the brush clearance in the arroyo on their property, as it is already cleared to protect existing adjacent structures.

VIII. CONCLUSION.

The foregoing demonstrates that placement of the house in the location proposed by the applicants, in conjunction with the condition that they revegetate the arroyo, will enhance and restore the DSR. Relocating the proposed residence further back from the arroyo will devastate the utility and value of the property, be inconsistent with the neighborhood character, be inconsistent with recent precedent established by previous CCC permits on adjacent and nearby properties, and effectuate the ultimate death of the arroyo through the proliferation of invasive exotics. Accordingly, the proposed project design is the preferable alternative, and most consistent with the applicable Chapter 3 policies of the Coastal Act.

Thank you for your time and consideration regarding this matter. Please do not hesitate to contact us should you require any additional information or materials.

Sincerely,

SCHMITZ & ASSOCIATES

Donald W. Schmitz, Jr.

cc: Mark Lever
Alisa Morgenthaler, Esq.
Clare Bronowski, Esq.

CHAPTER

13

SOUTHERN COASTAL SCRUB

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17 Pages

EXHIBIT NO. 9a
APPLICATION NO. Teiber
A-99-211
Southern Coastal Scrub - Mooney

INTRODUCTION

Even though coastal scrub is extensively distributed throughout California, and many universities and colleges are located within this type, remarkably little information is available on the characteristics and dynamics of this distinctive vegetation. This is particularly unfortunate, since many coastal scrub stands are disappearing because of the activities of man.

Coastal scrub consists of three phases: northern coastal scrub, coastal sage scrub, and coastal sage succulent scrub. Of these three phases, most is known about coastal sage scrub, and this phase serves as the central focus of this discussion. Northern coastal scrub is treated in more detail in Chapter 21.

In order to interpret the adaptive characteristics of the components of coastal scrub, comparisons will be made where possible with vegetation types occupying slightly different environments, principally chaparral.

DISTRIBUTION AND COMPOSITION

General

Munz and Keck (1959) recognized a northern coastal scrub extending, often interrupted, along a narrow coastal strip from southern Oregon to Pt. Sur. Characteristic species of this type are *Baccharis pilularis, Mimulus aurantiacus, Castilleja latifolia, Rubus vitifolius, Lupinus variicolor, Heracleum lanatum, Eriophyllum staechadifolium, Gaultheria shallon, Anaphalis margaritacea, Artemisia suksdorfii,* and *Erigeron glaucus.*

To the south and continuing to Baja California, also principally along the coast and at elevations lower than those for chaparral, Munz and Keck recognized coastal sage scrub, characterized by *Artemisia californica, Salvia apiana, S. mellifera, S. leucophylla, Eriogonum fasciculatum, Rhus integrifolia, Encelia californica, Horkelia cuneata, Haplopappus squarrosus, H. venetus,* and *Eriophyllum confertiflorum* (Fig. 13-1). Chapter 7 pointed out the inclusion of some dune scrub dominants within this vegetation type as recognized by Munz and Keck.

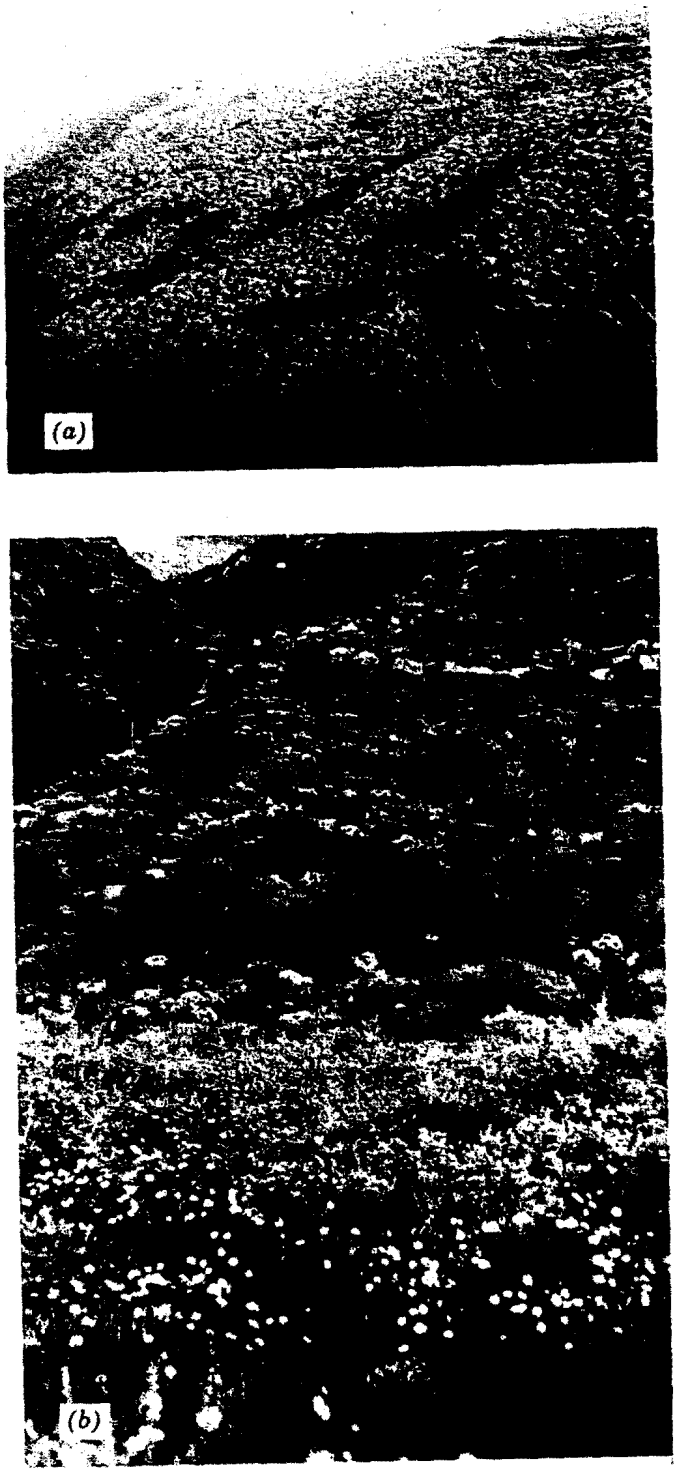

Figure 13-1. Coastal sage scrub at Point Mugu, Ventura Co. A, aspect of hillsides; B, detail of above, showing *Artemisia californica*, *Salvia mellifera*, and *Encelia californica* as dominants.

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To the south of San Diego, extending to El Rosario, again at elevations below those for chaparral, is another distinctive coastal scrub type, which can be termed coastal sage succulent scrub (Fig. 13-2). In addition to some of the above species, such as *Artemisia californica, Eriogonum fasciculatum, Rhus integrifolia, Encelia californica,* and *Eriophyllum confertiflorum,* it contains such distinctive and characteristic species as *Aesculus parryi, Adolphia californica, Bergerocactus emoryi, Agave shawii, Rosa minutifolia, Viguiera laciniata,* and *Salvia munzii.* This vegetation has been studied to only a limited degree (Shreve 1936; Epling and Lewis 1942; Mooney and Harrison 1972).

Limited quantitative analyses of coastal sage scrub and coastal sage succulent scrub have been made. Table 13-1 presents data for stands at 100 and 400 m in the San Pedro Mártir and near sea level at Camp Pendleton, California. The low-elevation San Pedro Mártir stand is rich in succulents and in desert-related elements such as *Simmondsia* and *Franseria.* Growth form diversity is high and plant cover low. At the somewhat moister locality higher in the San Pedro Mártir, the vegetation grows denser, loses the succulents, and becomes more similar in physiognomy and composition to the coastal sage scrub of southern California. Here *Salvia munzii,* a vicariad of the more northerly *S. mellifera,* is codominant with the relatively narrowly distributed *Viguiera laciniata* as well as *Lotus scoparius.* The Camp Pendleton stand is more or less characteristic of the vegetation of much of the coastal regions of southern California. Here total cover is high. *Salvia mellifera* and *Artemisia californica* are the dominant drought-deciduous species, along with the evergreen *Rhus laurina* and *Eriogonum fasciculatum.* At Camp Pendleton, in contrast to the more southerly stands, evergreens make up a proportionately greater part of the cover. This trend toward increasing evergreenness with decreasing aridity would no doubt be even more pronounced if data were available for northern coastal scrub.

Figure 13-2. Coastal sage succulent scrub north of Ensenada, Baja California.

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TABLE 13-1. Percent cover and leaf type of perennial plants encountered in transects of coastal sage succulent scrub (San Pedro Mártir, two elevations) and coastal sage scrub (Camp Pendleton). From Mooney and Harrison (1972) and Keeley (unpublished data). Numbers refer to percentage plant cover; P notes presence of species. Letters in parentheses refer to plant leaf types: E = evergreen; D = drought-deciduous; and S = stem succulent

	Coastal Sage Succulent Scrub		Coastal Sage Scrub
	100 m	400 m	
Agave shawii	7.90 (S)		
Machaerocereus gummosus	4.00 (S)		
Echinocereus maritimus	0.25 (S)		
Mammillaria dioica	0.33 (S)		
Bergerocactus emoryi	1.16 (S)		
Dudleya ingens	0.83 (S)		
Myrtillocactus cochal	P (S)		
Opuntia rosarica	P (S)		
Franseria chenopodifolia	17.63 (D)		
Euphorbia misera	0.41 (D)		
Harfordia macroptera	1.91 (D)		
Lycium californicum	P (D)		
Galvezia juncea	P (D)		
Rhus integrifolia	P (E)		5.13 (E)
Rosa minutifolia	15.73 (D)	2.91 (D)	
Viguiera laciniata	P (D)	15.46 (D)	
Simmondsia chinensis	7.25 (E)	P (E)	
Eriogonum fasciculatum	0.83 (D)	8.95 (D)	7.15 (E)
Ephedra californica	P (E)	1.45 (E)	
Rhus laurina	P (E)	P (E)	16.58 (E)
Acalypha californica		0.16 (D)	
Eriogonum sp.		0.21 (D)	
Artemisia californica		2.49 (D)	13.31 (D)
Encelia californica		P (D)	
Aesculus parryi		P (D)	
Salvia munzii		15.83 (D)	
Lotus scoparius		27.69 (D)	
Cneoridium dumosum		P (E)	2.51 (E)

TABLE 13-1 [continued]

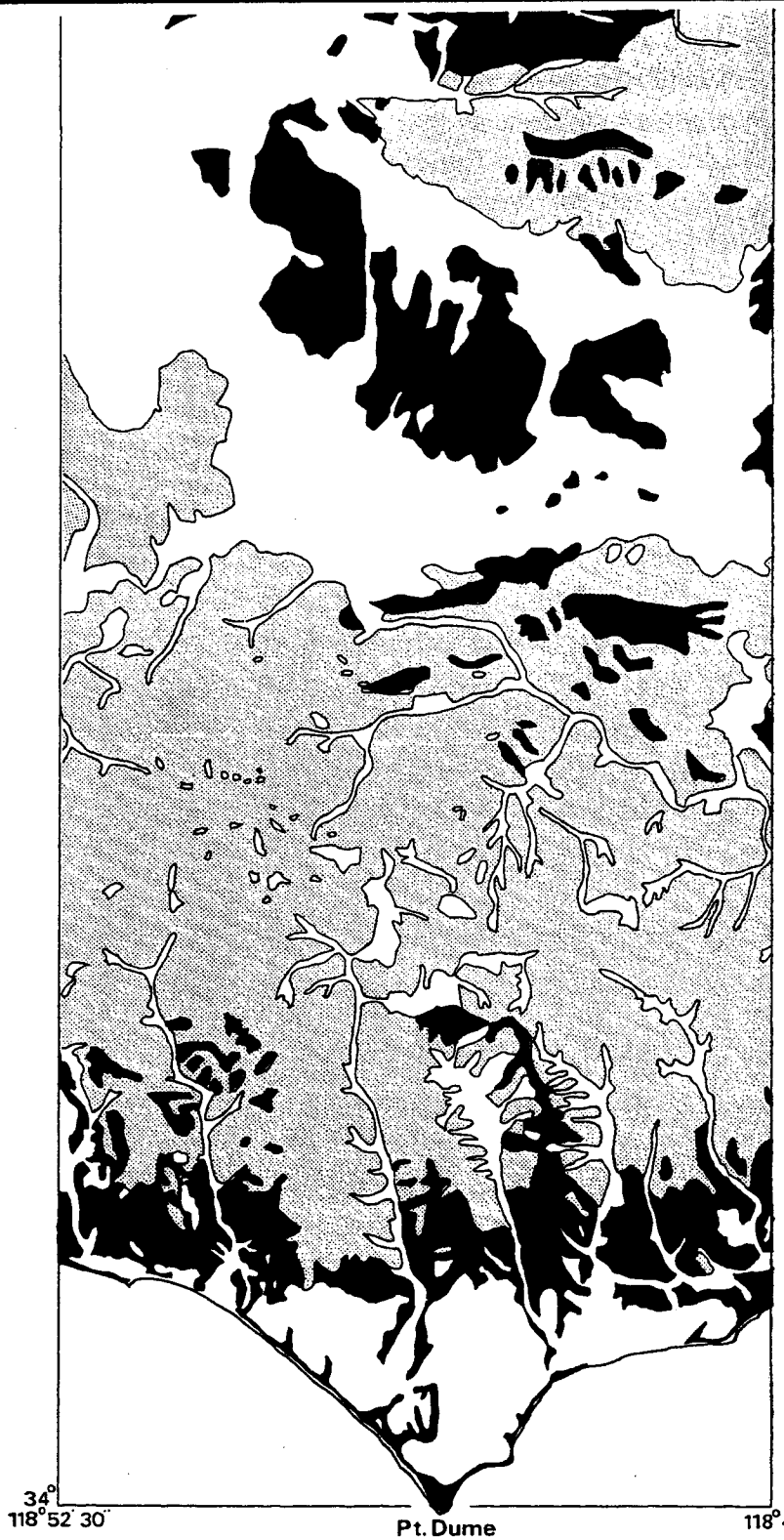
	Coastal Sage Succulent Scrub		
	100 m	400 m	Coastal Sage Scrub
Opuntia occidentalis		0.03 (S)	
Salvia mellifera		53.43 (D)	
Quercus dumosa		0.94 (E)	
Yucca whipplei		0.31 (E)	
Galium nuttallii		0.08	
Dudleya farinosa		0.03 (S)	
Total plant cover (%)	58.23	75.15	99.50
Relative cover (%) by plant leaf types:			
Stem succulents	24.8	0	0.06
Drought-deciduous	62.7	98.1	67.1
Evergreen	12.5	1.9	32.8

where the evergreen *Baccharis pilularis* predominates. The carbon balance implications of these trends are discussed in a subsequent section.

Local Patterning

Harrison et al. (1971) discussed the patterning of coastal sage scrub in respect to chaparral on a statewide as well as a local basis. They found that coastal sage always occurred on sites with less seasonal moisture availability, because of either lower rainfall or such substrate or habitat characteristics as finely textured soils or slope face. A common pattern in southern California coastal mountains is a predominance of coastal sage on the lower slopes of the mountains facing the ocean, interrupted by chaparral on the higher, more mesic slopes, and then a reoccurrence of sage on the rain shadow lower slopes of the mountain interior (Fig. 13-3). The interior stands of sage may differ in composition from the coastal stands. In particular, *Salvia apiana* may replace *S. mellifera* in more interior sites.

Similar patterning due to substrate mosaics can be seen in certain regions where stands of coastal sage on shale are embedded in a matrix of chaparral on sandstone soils. There are many instances, however, where the presence of coastal sage cannot be so simply related to habitat aridity. This is due to the fact that coastal sage scrub not only is "preclimax" to chaparral but may also be successional to it (Cooper 1922). Thus it will temporarily occupy disturbed sites. The principal woody sage species crown-sprout after fire, as do most of the chaparral species. Because of the



Point Dume

Figure 13-3. Distribution of the coastal sage (black) and chaparral (gray) vegetation in the Point Dume region of the Santa Monica Mts., according to the U.S. Forest Survey of 1930–34. The sage is limited to the lower elevations both on the coastal (lower) and interior (upper) regions of the mountains. Many of the areas in white were agricultural in 1930–34 and probably represented an even greater extent of sage. Suburban development has subsequently occupied much of this agricultural area.

rapid regrowth of sage species and their small, wind-dispersed seeds, they are often fire successional to chaparral (Wells 1962).

The complex relationships that can exist between community type, substrate, and disturbance history, particularly fire, have been discussed in detail by Wells (1962).

In other situations, which deserve more study, islands of coastal sage occur within the chaparral where there are no obvious patterns of disturbance, substrate, or slope change (Bradbury 1974). There is documentation that these islands have persisted in precisely their same positions for over 40 yr (Fig. 13-4).

Because of the successional nature of coastal sage elements, they are generally increasing in abundance on southern California landscapes as a result of the increased activities of man (Bradbury 1974). At the same time, the potential "climax" habitats are disappearing, since they generally occur on the lowest slopes of the coastal mountains in the most favorable building sites.

The Sage–Grassland Ecotone

Coastal sage scrub often makes direct contact with the annual grassland, or in many cases islands of sage may be embedded in a grassland matrix. The ecotone between these physiognomically distinctive vegetation types has been of considerable interest

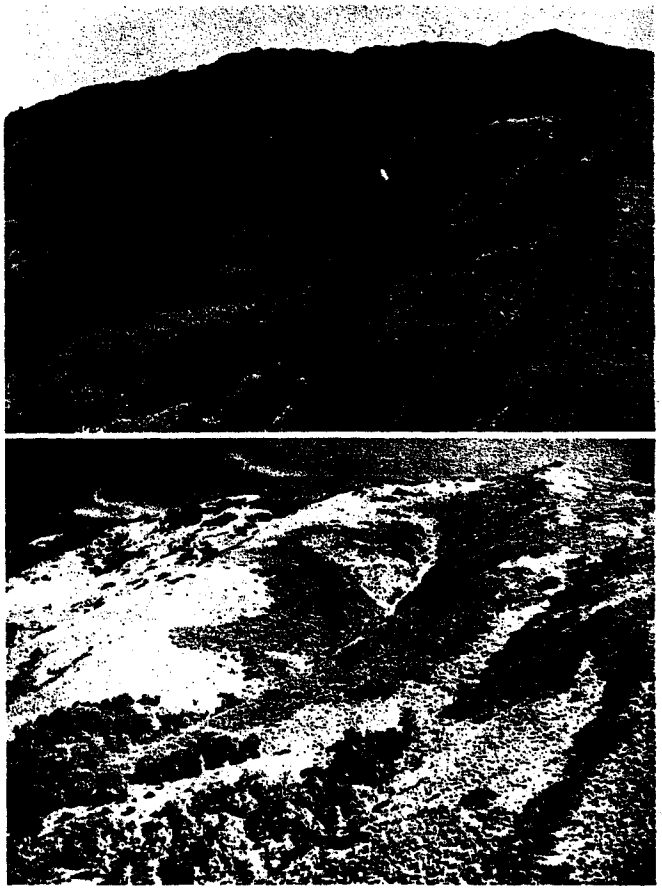


Figure 13-4. Sage and chaparral patterning on the Banner Grade of San Diego Co. The top photo was taken in 1931, and the bottom one in 1972. From Bradbury (1974).

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to ecologists. The characteristic pattern of the ecotone was first described by C. Muller et al. (1964). They noted that between the scrub and the grassland there was a transition zone nearly 1 m wide with no vegetation (the "bare zone"), and then toward the grassland a further zone of stunted herbs extended up to 9 m. In this initial description they attributed this patterning to the inhibitory effects of volatile terpenes from the sage species *Salvia leucophylla, S. apiana,* and *Artemisia californica.* Furthermore, they reported some success in cold-trapping atmospheric terpenes which inhibited germination, and hence they proposed dew as a principal mode of transfer of the volatiles to the zone of inhibition.

C. Muller, W. Muller, and their collaborators subsequently reported a number of studies that identified the inhibitory compounds, traced their probable routes of environmental transfer, and determined their modes of plant inhibition. Muller and Muller (1964) found six terpenes in *S. mellifera, S. leucophylla,* and *S. apiana,* of which cineole and camphor were the most abundant and also the most toxic as determined by bioassay. C. Muller (1965) further identified camphor and cineole from atmosphere collections within, and as far as 30 m from, *S. leucophylla* and *S. mellifera* shrubs. However, because of the low solubility of terpenes in water, he proposed a direct transfer of the volatiles from the sage to cuticular lipids of germinating seedlings, thus effecting toxicity without a dew transfer. This hypothesis was based on the high solubility of terpenes in paraffin.

Still later, C. Muller and del Moral (1966) proposed yet another transfer hypothesis, which was based on the accumulative adsorption of terpenes on soil during periods of high volatilization from the shrubs when they are in full leaf and temperatures are high (spring and summer). By this hypothesis, subsequent inhibition of the annual herbs occurred during germination on these charged soils during the fall rains. In this paper, they first suggested that, although *Salvia* terpenes are mandatory in producing the ecotone patterning, small animal activity, soil type, and microclimate may also be significant contributors.

Further evidence that volatiles were primarily involved in the patterning was given by C. Muller in 1966. He concluded that the edaphic factor was not important, since shrub roots did not extend into the zone of inhibition, ruling out competition for water as a possible cause. Furthermore, no physical or mineral soil differences in adjacent zones could be found. Apparently, cattle manure deposits did not alter the "bare zone" phenomenon, although they did enhance growth in the grassland. Since inhibition zones were noted uphill from the shrub contact, Muller concluded that volatile rather than soluble toxins were involved. He also noted that animal grazing, although occurring with greater preference near the shrubs, was rarely responsible for seedling mortality. Thus he suggested that grazing could augment the pattern but could not initiate or maintain it.

W. Muller detailed the mode of action of the volatiles through a series of papers. In 1965 he found that the inhibitory effect of volatiles from *Salvia leucophylla* was greatest during germination of assay plants. Both cell division and elongation were adversely affected. Subsequently, he and others (W. Muller et al. 1968, 1969) found that cineole, one of the *S. leucophylla* terpenes, inhibited respiration and root growth of herb seedlings. They proposed that such inhibited seedlings would then be susceptible to drought mortality.

The hypothesis that volatiles play the primary role in the maintenance of the "bare zone" has been questioned by several workers (Wells 1964; Bartholomew

1970, 1972; Halligan 1973, 1974). Bartholomew (1970) presented evidence of concentrated vertebrate feeding in the bare zones of *S. leucophylla* and *Baccharis pilularis* and showed by the use of exclosures that the "bare zone" phenomenon disappeared, that is, herbs grew. Halligan (1974) obtained similar results working with *Artemisia californica*. Both Bartholomew (1972) and Halligan (1974) indicated the complex composition of the ecotone of the shrub species they studied with the grassland. Both noted that along the shrub perimeter and within the "bare zone" there was a distinctive flora composed of apparently unpalatable herbs such as *Navarretia, Chorizanthe, Croton, Satureja* (Halligan 1974), *Centaurea,* and *Anagallis* (Bartholomew 1972). The ecotone may be even more complex, since Muller (1966) indicated that shrub seedlings of *Artemisia californica* also become established in the "bare zone" and area of inhibition.

To answer the criticism by Muller and del Moral (1971) that small enclosures alter the microclimate so that herbs can successfully grow within them in the "bare zone," Bartholomew (1972) designed large U-shaped fences which abutted directly on *A. californica* and *Baccharis pilularis* shrub–grassland ecotones. They had a 3 m long shrub vegetation contact with parallel 3 m long arms extending out into the grassland. The rationale for the design was that grazers would either have to go over the 0.6 m high mesh fences or travel out into the grassland and back into the "U" to graze next to the shrubs—a potentially highly precarious trip away from the protective cover of the shrubs. This design would discriminate particularly against grazing by small mammals. The "bare zone" that previously existed next to the shrubs was eliminated after a growing season.

From all of these studies it is clear that there is a unique ecotone between the coastal sage scrub and the grassland. All workers are in agreement that the causes of the "bare zone" are complex and at least involve interactions between climate, plant secondary chemicals, and vertebrates. It may be that the exact characteristics of the ecotone are quite dependent on the sage and vertebrate species locally predominating.

AUTECOLOGY

To understand the basis for the distribution of coastal sage scrub, it is necessary first to understand the ecology of the component species and to relate this not only to the environment but also to the environmental responses of their competitors.

Shrub Structure

The average physical characteristics of several coastal sage species contrast with those of chaparral shrubs (Table 13-2). The sage species have somewhat smaller volumes and considerably lower biomass densities. Even though the densities of wood and leaves (g shrub biomass per volume) are lower in the sage species, the proportions of leaves versus stems are similar.

The leaves of the sage species have an average lower specific weight (mg dry wt cm^{-2}) than the chaparral shrubs. The sage species, however, have a leaf life span of less than 1 yr, whereas leaves on the chaparral species may last 2–3 yr.

The sage species have a leaf area index (m^2 of total shrub leaf single surface per

TABLE 13-2. Mean structural characteristics of chaparral and coastal sage shrubs. Chaparral averages include data for five representatives of each of eight species: Rhus ovata, Ceanothus leucodermis, Heteromeles arbutifolia, Arctostaphylos glauca, Adenostoma fasciculatum, Ceanothus greggii, Quercus dumosa, and Q. agrifolia (shrub size). The shrubs were on a site in San Diego Co. burned 23 yr previously. Coastal sage data are based on five individuals each of Artemisia californica, Salvia mellifera, and Encelia californica harvested in coastal San Diego Co. Unpublished data from Kummerow, Mooney, and Giliberto

Characteristic	Chaparral	Coastal Sage
Height (m)	1.67	1.12
Diameter (m)	1.35	1.11
Projected area (m^2)	1.51	1.01
Total shoot weight (g)	4384.8	802.6
Total leaf weight (g)	787.2	135.5
Stem weight ($g\ m^{-2}$)	2332.4	569.6
Leaf weight ($g\ m^{-2}$)	503.4	113.3
Shoot weight ($g\ m^{-2}$)	2835.8	682.9
Percent stems	82.0	82.8
Percent leaves	18.0	17.2
Leaf area index ($m^2\ m^{-2}$)	2.65	1.31
Specific leaf weight ($mg\ cm^{-2}$)	19.4	8.3

m^2 of maximum shrub ground surface projection) only about one-half that of chaparral shrubs.

The root systems of several coastal sage species were examined by Hellmers et al. (1955) and compared with those of chaparral shrubs. Sage species, on the average, had roots that penetrated, at the maximum, only half as deeply as those of chaparral shrubs.

Phenology

The phenology of coastal sage species differs substantially from that of chaparral shrubs. The evergreen shrubs of chaparral produce new stem growth principally dur-

ing the spring (Mooney et al. 1974). In contrast, the sage species initiate new stem growth soon after the commencement of the fall rains, during the coldest parts of the year. This is illustrated by the development of plants at Camp Pendleton during 1973–74 (Fig. 13-5). There the sage species *Artemisia californica, Salvia mellifera, Eriogonum fasciculatum*, and *Mimulus puniceus* all initiated new stem growth in November and December after the first rains of the season in October. In contrast, the evergreen chaparral type elements, such as *Heteromeles arbutifolia* and *Rhus integrifolia*, did not start growth until late March. The fact that the anomalous *Rhus laurina* has active stem growth year round may in part explain its noted frost sensitivity.

At the Camp Pendleton sage scrub site, at least one shrub species is flowering at any given time of the year. As has been shown for chaparral, the reproductive period of the community is more extensive than the vegetative growth period (Mooney et al. 1974).

The difference in canopy growth period between the sage subshrubs and the chaparral evergreen shrubs is no doubt due in part to differences in their root systems. Chaparral shrubs generally tap deeper soil water reserves and thus do not start growth until fall rains have penetrated to some depth. This was noted by Harvey and Mooney (1964) during the severe drought year of 1960–61. They found that, although the small amount of precipitation that fell was sufficient to initiate growth in the shallow-rooted sage species *Salvia apiana*, none of the chaparral shrubs at the same site produced stem growth that year.

Carbon Gain and Water Balance

The relationships between carbon-gaining capacity and water balance of evergreen chaparral shrubs and drought-deciduous coastal sage species have been discussed from several viewpoints by Mooney and Dunn (1970), Harrison et al. (1971), and Miller and Mooney (1974). The essence of these discussions is that the evergreen species are adapted to withstand the annual drought period, whereas the sage species evade it. In comparison to the drought-deciduous sage species, chaparral evergreens have lower photosynthetic rates and higher cuticular and stomatal resistances to water transfer. Thus the evergreen species have a long period of low gas exchange, and the sage species have a short period of very high gas exchange activity.

This is shown, in part, for the co-occurring shrubs *Heteromeles arbutifolia* and *Salvia mellifera*, an evergreen chaparral and a drought-deciduous sage species, respectively (Table 13-3). During the periods of lowest water stress in the winter, the sage species had photosynthetic rates about twice the value for the evergreen shrub. At this time, leaf resistances to water transfer were less than half that of the evergreen. During the height of the drought, the sage species had lost most of its leaves, and the few terminal ones left did not even have a positive photosynthetic rate. These shallow-rooted plants were under severe water stress with midday xylem water potentials of −64 bar. During the same time, the deeper-rooted *Heteromeles*, although in full leaf, was under less water stress and, furthermore, had photosynthetic rates reduced to only one-half those found during the optimal season. Not indicated in Table 13-3, however, is the fact that these relatively high drought photosynthetic rates of *Heteromeles* are maintained only in the morning. By midday, stomata close for the remainder of the day (Mooney et al. 1975).

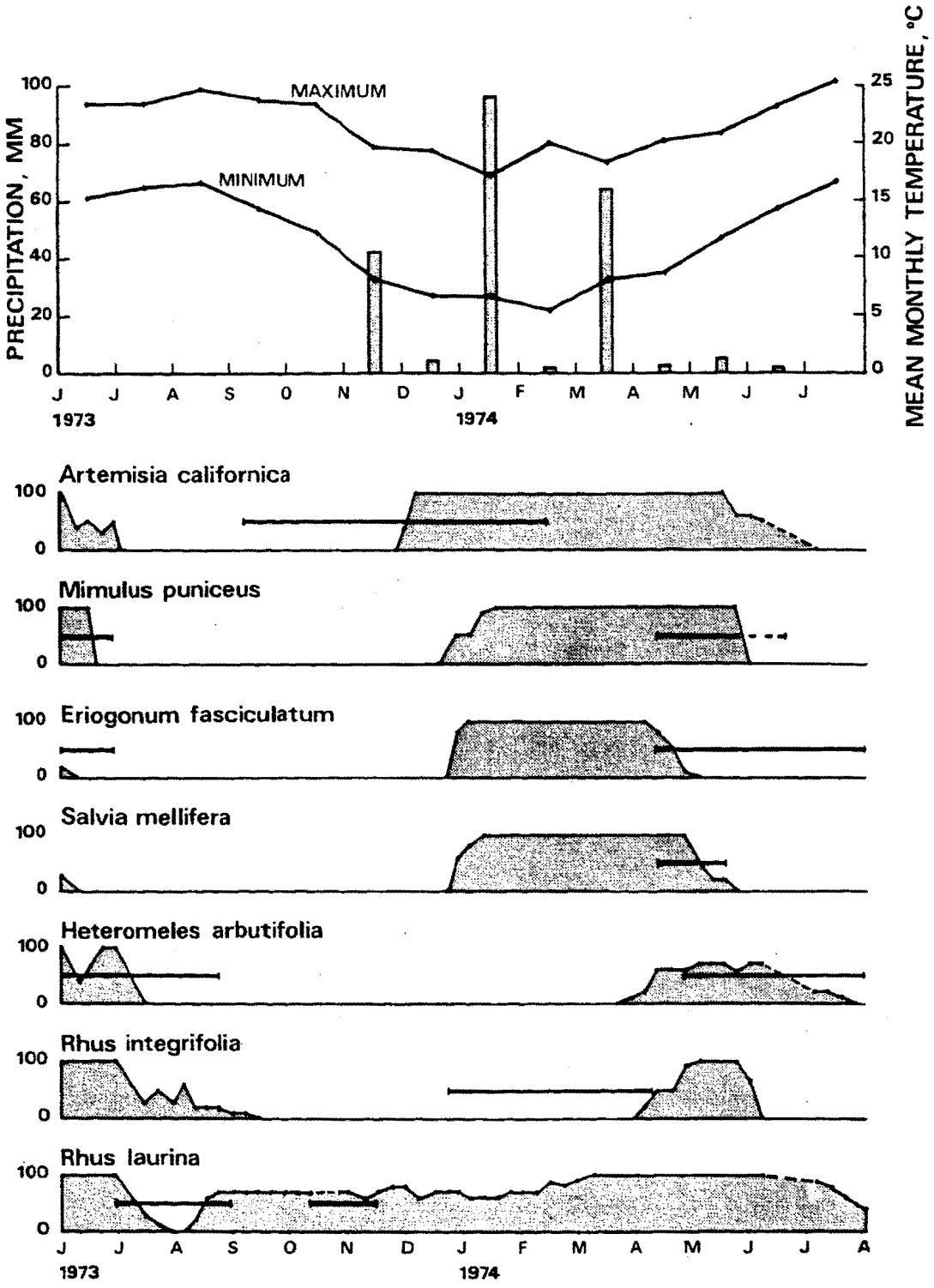

Figure 13-5. Phenological development of plants in a coastal sage community at Camp Pendleton, California. The gray areas represent the percentage of 10 plants that were elongating stems on a given date. The bars represent the period of flowering. The climate data are from nearby Oceanside.

TABLE 13-3. Seasonal changes in the maximum observed field photosynthetic rates of co-occurring evergreen chaparral (Heteromeles arbutifolia) and drought-deciduous sage species (Salvia mellifera) at Mira Mar Mesa, San Diego Co. Unpublished data from Mooney, Harrison, and Morrow

	Heteromeles arbutifolia			Salvia mellifera	
Date	Midday Xylem Water Potential (bar)	Maximum Net Photosynthetic Rate (mg CO_2 dm^{-2} hr^{-1})	Date	Midday Xylem Water Potential (bar)	Maximum Net Photosynthetic Rate (mg CO_2 dm^{-2} hr^{-1})
Feb. 8. 1970	-19	7.8	Feb. 10	-19	19.7
June 7, 1970	-23	8.4	June 9	-54	4.0
Aug. 7, 1970	-34	7.8	Aug. 18	-64	-0.2
Jan. 25, 1971	-22	13.4	Jan. 26	-12	23.0

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TABLE 13-4. Leaf and photosynthetic characteristics of the dominants of plants of the chaparral, coastal sage scrub, and coastal sage succulent scrub. Data from Mooney et al. (1974)

	Echo Valley, San Diego Co.	Camp Pendleton, San Diego Co.	San Telmo, Baja California
Vegetation type	Chaparral	Coastal sage scrub	Coastal sage succulent scrub
Latitude	32°50'	33°15'	31°
Estimated annual precipitation (mm)	450	200	160
Relative cover (%) by leaf type:			
Evergreen	98.58	32.78	12.45
Drought-deciduous	1.41	67.08	62.70
Stem chlorophyllous	0.00	0.00	0.00
Succulent	0.00	0.06	24.85
Unclassified	0.01	0.08	0.00
Relative cover (%) by photosynthetic type:			
C_3	99.31	99.55	75.17
C_4	0.00	0.00	0.00
CAM	0.39	0.37	24.85
Unclassified	0.30	0.08	0.00

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It has been shown by a cost (leaf production)/benefit (carbon gain) model that the evergreen species are favored in habitats of shorter drought duration than those characteristic of the sage species (Miller and Mooney 1974). This corresponds to their respective climatic distribution centers (Table 13-4). As the habitat becomes drier, evergreens become less abundant, and drought-deciduous species increase. In all cases, though, plants with the C_3 pathway predominate. In the driest sites, as the communities become more open and desert-like, the evergreens become even less important, and succulents, which have very low photosynthetic rates but the capacity to fix carbon during periods of low evaporative demand, become prevalent, along with the drought avoiders. In moister, and hence more closed, habitats, the slow-growing succulents are evidently noncompetitive. Thus the arrangement of the principal growth forms (evergreen shrubs, drought-deciduous shrubs, and succulents) along an aridity gradient is related to their gas exchange characteristics.

Nutrient Content

Little information is available on the nutrient balance of sage communities; however, there are indications that member species have high leaf contents of nitrogen and phosphorus in comparison to chaparral plants. Mature chaparral leaves (n = 8 species) averaged about 1% N and only 0.06% P, whereas averages for leaves of *Salvia mellifera*, *Encelia californica*, and *Artemisia california* were 3.1% N and 0.25% P, according to an unpublished study by Mooney and Chu. High leaf nitrogen content (hence potentially high content of the carboxylating enzyme) in sage species may explain the fact that their capacity to fix carbon is higher than that of chaparral shrubs. Faster turnover time, lower biomass, and lower tissue density could all contribute to the high nutrient of the sage species in comparison to the chaparral shrubs. Furthermore, the shallow-rooted sage species "explore" a more nutrient-rich soil than do the chaparral shrubs.

Terpenes

One of the most distinctive features of many of the shrubs of coastal sage scrub is their highly aromatic nature due to the presence of monoterpenes. In species of *Salvia*, at least, the terpenes are produced in glandular leaf trichomes (Tyson et al. 1974) and are passively volatilized from the leaf at a rate in direct proportion to temperature.

The fact that these compounds can be present in relatively high concentrations in the leaves (3.5% leaf dry wt in *S. mellifera*) and are relatively costly to produce (5.2 g of CO_2 to produce 1 g of camphor: Tyson et al. 1974) would indicate an adaptive function. This view is further supported by the fact that in a comparable climate type in the Mediterranean region the garigue vegetation is constituted of a number of taxa such as *Rosmarinus*, *Thymus*, *Salvia*, and *Teucrium*, which are also distinctively terpenaceous.

The adaptive role of terpenes has been examined in varying degrees. As discussed earlier, the role of terpenes in allelopathy has been studied intensively, and in fact serves as the classic example of the phenomenon in textbooks. Little work, however, has centered on the possible role of terpenes as antiherbivore substances or in leaf–water relationships (Wellburn et al. 1974), both promising lines of research.

SUMMARY

Coastal scrub vegetation is restricted to coastal plateaus and the lower slopes of the coastal ranges of California. It changes in character from north (northern coastal scrub) to south (coastal sage scrub and coastal sage succulent scrub), with the principal trend being a decrease in evergreenness and a progressive increase in drought-deciduous and succulent species. In comparison to chaparral, the lower-growing, often more open coastal sage scrub occupies drier sites and is composed of dominants whose principal adaptive mode is exploitation of soil moisture in upper soil horizons during the cool winter season. Most sage dominants are winter active and avoid the summer drought by shedding their leaves. They are competitive with chaparral species only where drought is of sufficient length to make evergreenness a carbon balance liability.

The drought-avoiding features of the sage species, their fast growth rate, low investment in carbon per volume biomass, and lightweight seeds contribute to further their adoption of a seral role to chaparral species within habitats that support a chaparral climax.

Virtually no quantitative studies have been made of coastal sage scrub. This is especially unfortunate, because it often occupies choice development sites and is being destroyed over large areas of the state.

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Experiment Station**

General Technical
Report PSW-45

A Vegetation Classification System Applied to Southern California

Timothy E. Paysen Jeanine A. Derby Hugh Black, Jr. Vernon C. Bleich John W. Mincks

EXHIBIT NO. 96
APPLICATION NO.
Lever
4-99-211
"soft chaparral"

CHAPARRAL
RESEARCH AND DEVELOPMENT PROGRAM

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In 1977, the Forest Service, U.S. Department of Agriculture, established a research and development program at this Station titled "Vegetation Management Alternatives for Chaparral and Related Ecosystems." This 5-year program, with headquarters at Riverside, California, is an intensive effort to develop, test, and demonstrate a wide range of operations for maintaining or increasing the productivity of chaparral and related ecosystems in southern California.

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CONTENTS

Salt-cedar Series

Vegetation: Tamarix spp. are the dominant overstory trees. All are introduced from Asia or the Mediterranean region. They form dense thickets competing aggressively with native species. *Tamarix* has a high rate of transpiration and is sometimes blamed for lowering water tables. This Series occupies moist seeps and streambanks in the desert. *Tamarix* is often planted as a windbreak.

Distribution: Tamarix has become naturalized throughout the Southwest.

Smoke Tree Series

Vegetation: Dalea spinosa is the dominant overstory tree. This is a drought-deciduous desert riparian tree common to dry washes in the California Sonoran Desert. Seeds germinate after scarification, usually from tumbling in flash floods. The extent of past flooding can be inferred from the distribution of smoke trees *(fig. 22)*.

Distribution: Smoke tree ranges from the southern Mojave Desert through the California Sonoran Desert to Arizona and Mexico.

Sycamore Series

Vegetation: The dominant overstory species is *Platanus racemosa*. Sycamores follow perennial and intermittent streams with a soft chaparral shrub and herbaceous understory.

Distribution: California sycamore ranges from Baja California north to Shasta County.

Desert Willow Series

Vegetation: Chilopsis linearis is the dominant overstory species. This is a drought-deciduous riparian species of the California Sonoran Desert and inland valleys of southern California. It is not related to willow, *Salix* spp., but has drooping elongated leaves similar to some willow species. Understory vegetation is sparse to moderate, consisting of soft chaparral and desert shrub species.

Distribution: Desert willow ranges from the Mojave and California Sonora Deserts south to Mexico and east to Texas.

Willow Series

Vegetation: Salix lasiolepis (arroyo willow), *S. gooddingii* (black willow), *S. hindsiana* (sandbar willow), and other *Salix* spp. are dominant overstory species. They may be trees or shrublike, and always indicate riparian habitats. The understory is herbaceous. Since willows are deciduous, dense stands have deep litter layers.

Distribution: The genus has worldwide distribution at all elevations. In southern California, the Series may occur wherever surface water or subsurface seeps are present.

Succulent Woodland Subformation

Joshua Tree Series *(fig. 23)*

Vegetation: The dominant overstory species is *Yucca brevifolia*. Understory shrubs include desert and chaparral species. The herbaceous understory varies from moderately dense in mountain foothills to virtually absent on the Mojave Desert. Joshua trees occur more often as a component of the Pinyon Series, or of shrub Series that occur in desert climates, than as a dominant overstory.

Distribution: The Joshua tree occurs in foothills and desert highlands surrounding the Mojave Desert, from San Bernardino County north to Inyo County, into Nevada and northern Arizona.

Palm Series

Vegetation: The dominant overstory is usually the California fan palm (*Washingtonia filifera*) with an understory of shrubs and grasses. Occasionally date palms (*Phoenix* spp.) have become naturalized, and occur as dominants in the overstory. Cottonwoods and mesquites are sometimes present.

Distribution: The Palm Series is found in the California Sonora Desert and oases, which often follow earthquake-fault lines.

Shrub Formation

Vegetation: Elements of the Shrub Formation are dominated by shrubs that are between 1½ feet (½ m) and 15 feet (3 m) tall *at maturity*. Our definition of "shrub" includes succulent-stemmed species (such as cactus) that are not normally called shrubs. Evergreen sclerophyllous shrubs dominate Series in the Chaparral Subformation; the shrubs are adapted to fire resprouting or germinating following fire. The Soft Chaparral Subformation is dominated by shrubs with relatively little woody tissue; woody tissue that is present is generally confined to the basal portions of the shrubs. In terms of stand physiognomy and shrub morphology, we can, for practical purposes, describe the Woody Shrub Subformation as a membranous-leaved analogue of the Chaparral Subformation; some dominant species found in the Woody Shrub Subformation have survival mechanisms that allow them to maintain their existence in a fire regime, but adaptation to fire is not a diagnostic character of this Subformation. The Woody Shrub Subformation includes some plant communities that occur in dry desert habitats, and others that occur in mesic environments with a readily available supply of moisture. Dominant species in the Succulent Shrub Subformation are succulent stemmed (e.g., *Opuntia* spp.) or have succulent leaves (*Allenrolfea* spp. and *Agave* spp.).

Distribution: The Shrub Formation is worldwide in distribution, and occurs in a wide range of habitats.

Suggested Phases are:

	Cover (percent)		
Overstory	*Understory*	*Annual*	*Litter*
1. <5	1. <5	1. <2	Expressed
2. 5-10	2. 5-10	2. 2-10	in percent
3. 10-25	3. 10-25	3. 11-25	cover and
4. 25-50	4. 25-50	4. 25-50	composition
5. 50-70	5. 50-70	5. 50-70	
6. >70	6. >70	6. >70	

Chaparral Subformation *(fig. 24)*

Vegetation: Chaparral is dominated by evergreen sclerophyllous shrubs, mostly less than 15 feet tall (3 m). Shrubs are adapted to fire, resprouting or germinating following fire. Shrub crown cover at maturity is often close to 100 percent, although it can remain sparse on very steep or poor sites.

Distribution: Chaparral occurs throughout California, but is best developed in southern California. The Subformation extends from southern Oregon to central Arizona and Baja California.

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Figure 22—The Smoke Tree Series is a common representative of the Broadleaf Woodland Subformation in dry desert washes.

Figure 23—One of the two Series currently in the Succulent Woodland Subformation is represented by the Joshua Tree/Nevada Ephedra Association. Other associated species in this stand are cottonthorn (Tetradymia spinosa) and box-thorn (Lycium andersonii). Hairy Yerbasanta (Eriodictyon trichocalyx) occurs in disturbed areas.

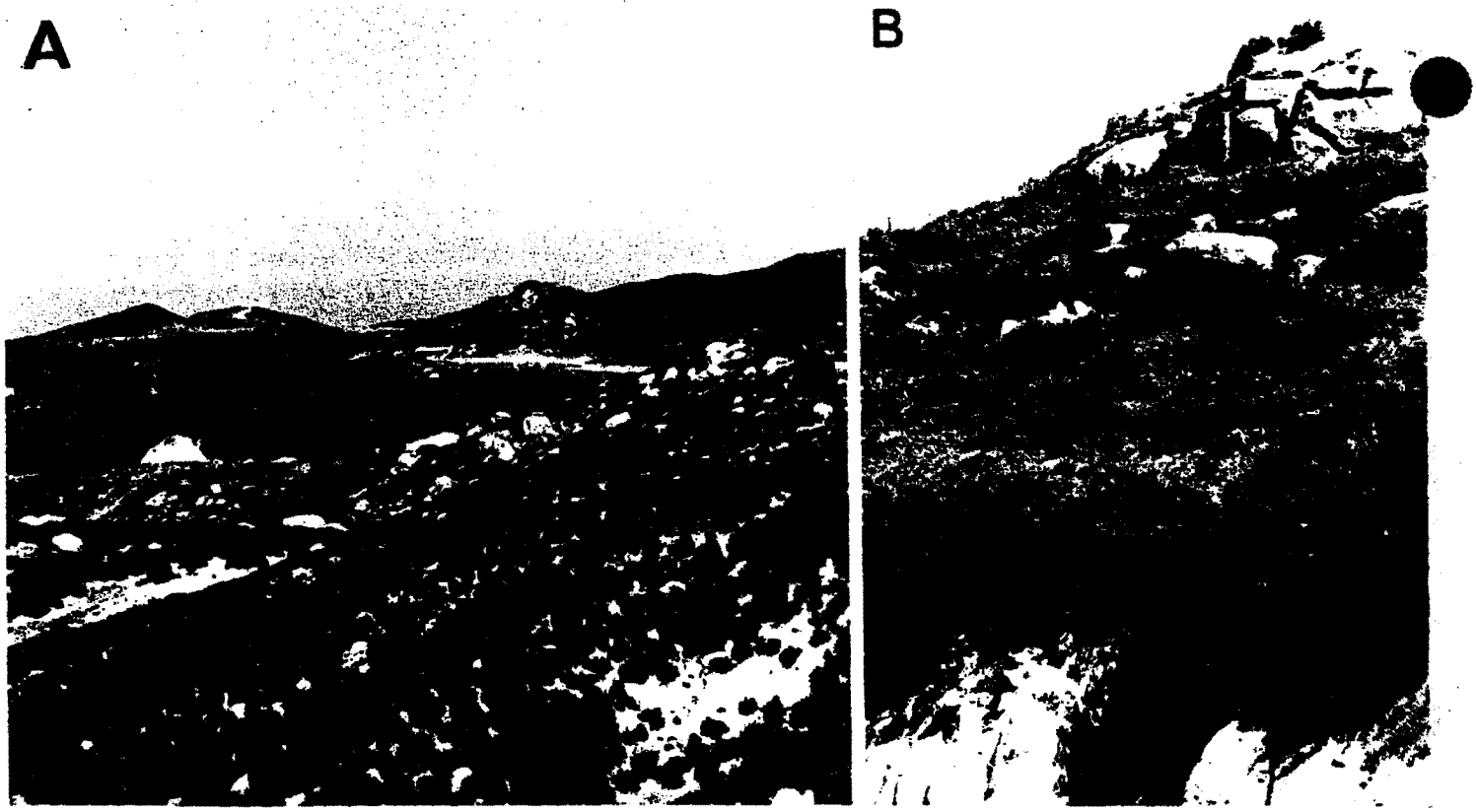

Figure 24—A complex of Associations dominated by elements of the Chamise, Manzanita, and Ceanothus Series with inclusion of the Interior Live Oak Series is seen in *A*. The predominant Series is chamise with associated manzanita species. The foreground is dominated by the Chamise/Pointleaf Manzanita Association *(B)*. Classification systems that use a broader descriptive level than ours might view the vegetation in *A* as a single community; the visual uniformity of the landscape cover will relegate most of the vegetation to a single "type" under some vegetation mapping systems. Most of the shrubs in *A* are from 2 to 3 feet (0.6 to 1 m) in height.

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Figure 25—A Chamise/Wild Oats Association on a rocky site near Banning, California. Slow growth of the shrubs has been a factor contributing to the persistence of this two-layered Association. An admixture of ceanothus appears in the middle ground.

Figure 26—A Desert Mountain Mahogany/Sagebrush Association is seen in the middle and foreground in *A*. Juniper is scattered throughout the stand, but provides insufficient cover to place the stand in the Juniper Series (Conifer Woodland Subformation). Evidence in the form of downed snags and stump remnants *(B)* shows that this was once a Jeffrey Pine/Western Juniper/Desert Mountain Mahogany Association.

Ceanothus Series

Vegetation: Ceanothus species are the dominant overstory vegetation. This Series can produce open stands when mature since *Ceanothus* shrubs are rather short lived. Fifty-year-old stands may have herbaceous vegetation interspersed with shrubs. *Ceanothus* is one of the chaparral shrubs with ability to fix nitrogen in soils.

Distribution: Ceanothus spp. occur from southwestern Oregon to Baja California, on both inland and coastal slopes.

Chamise Series

Vegetation: Adenostoma fasciculatum is the dominant overstory shrub. The mature vegetation is dense and excludes any herbaceous understory. This Series occupies the hottest and driest of chaparral sites *(fig. 25)*.

Distribution: Chamise covers more land in California than any other single Series. It exists from the north Coast Ranges south to Baja California.

Bush Chinquapin Series

Vegetation: Chrysolepis sempervirens is the dominant overstory species, forming pure dense stands at high elevations.

Distribution: The Bush Chinquapin Series occurs from southern Oregon south to the San Jacinto Mountains.

Mountain Mahogany Series *(fig. 26)*

Vegetation: Cercocarpus betuloides, C. traskae, C. ledifolius, or *C. minutiflora* are the dominant overstory species. This Series occupies a more mesic habitat than many chaparral shrubs. *Cercocarpus* has the ability to fix soil nitrogen.

Distribution: Cercocarpus betuloides is found from Oregon through cismontane California to Baja California; *C. minutiflorus* from San Diego County south to Baja California; and *C. traskae* only on Santa Catalina Island. *C. ledifolius* occurs on slopes adjacent to the desert, and extends westward, through the Tehachapi Mountains, to the Mt. Pinos area.

Manzanita Series

Vegetation: Arctostaphylos species are the dominant overstory. Mature stands are very dense and impenetrable, and the form varies from low mats to small trees. This Series comprises higher elevation chaparral and is sometimes referred to as "cold chaparral."

Distribution: Manzanita occurs from southern Oregon to Baja California and east through central Arizona.

Scrub Oak Series

Vegetation: Dominant overstory is *Quercus dumosa, Q. turbinella, Q. macdonaldii, Q. tomentella,* or *Q. dunnii* in dense stands with no understory in mature stands. Many other shrub species may be associated with the Scrub Oak Series.

Distribution: Quercus dunnii is limited in distribution, occurring in San Luis Obispo County and in isolated stands to Baja California. *Q. dumosa* ranges from Baja California throughout the State. *Q. turbinella* ranges from transmontane California east to Texas. *Q. macdonaldii* and *Q. tomentella* are restricted to the Channel Islands.

Prunus Series *(fig. 27)*

Vegetation: Dominant overstory is Catalina cherry (*Prunus lyonii*), bitter cherry (*P. emarginata*), or desert apricot (*P. fremontii*). Catalina cherry and bitter cherry are evergreen and

may grow into small trees in optimum habitat. Desert apricot is a drought-deciduous shrub.

Distribution: Catalina cherry occupies canyons on the Channel Islands and bitter cherry occupies rocky ridges or canyons from San Diego County north. Desert apricot is found on slopes above 4000 feet (1219.2 m) at the western edge of the California Sonoran Desert and extends south into Baja California.

Redshank Series *(fig. 28)*

Vegetation: Adenostoma sparsifolium is the dominant overstory shrub. Individual shrubs have open crowns and therefore a herbaceous understory may be present, even in mature stands.

Distribution: Redshank exists from San Luis Obispo County south along the coast to Los Angeles County, then shifts in distribution inland to the Peninsular Mountain ranges, following them south into Baja California.

Sumac Series

Vegetation: Rhus laurina, R. ovata, or *R. integrifolia* are dominant overstory species. Sumacs are more often components of Scrub Oak or Manzanita Series than a dominant species. However, coastal and island slopes may support almost pure stands of sumac.

Distribution: Rhus laurina and *R. integrifolia* occur near the coast from Santa Barbara County south to Baja California and on the Channel Islands. *R. ovata* occurs away from the coast to desert edges throughout southern California.

Toyon Series

Vegetation: Dominant overstory is *Heteromeles arbutifolia* with other chaparral shrubs.

Distribution: Toyon grows on coastal foothills north to Humboldt County and on the Channel Islands.

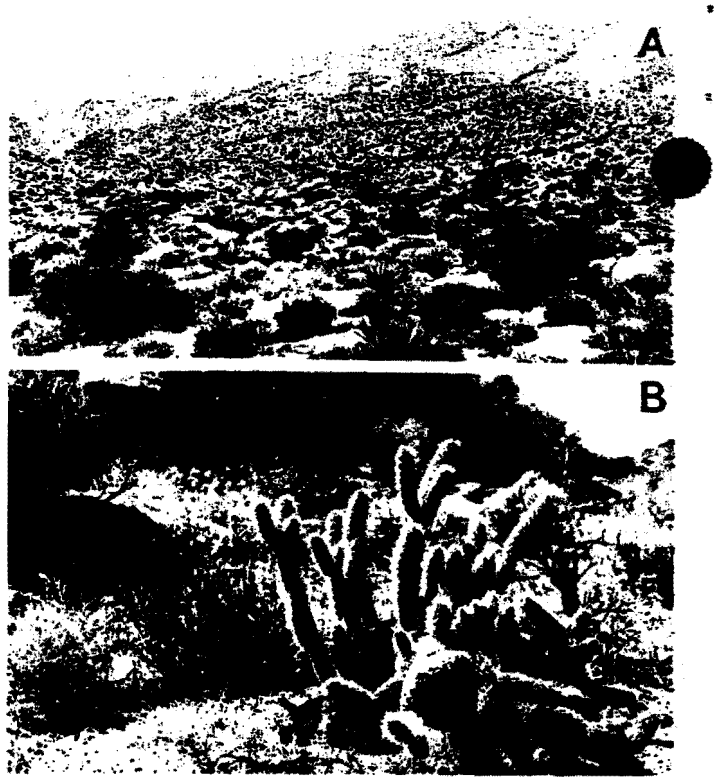

Figure 27—A Desert Apricot/Mojave Yucca/Silver Cholla Association is seen in the middle and foreground in *A*. Although plant density is lower than in communities found on more mesic habitats, the number of associated species is relatively high. An interior view of this stand shows the dominance of buckwheat, bladder-sage, and silver cholla *(B)*.

Soft Chaparral Subformation *(fig. 29)*

Vegetation: Soft Chaparral is dominated by evergreen or deciduous soft shrubs (shrub forms with little woody tissue) mostly less than 5 feet (1.5 m) tall. Shrub crown cover ranges from 25 to 100 percent, often with grasses and forbs codominant. Trees, if present, have a crown cover of less than 25 percent.

Distribution: Soft Chaparral is present at lower elevations (below the Chaparral Subformation [*fig. 30*]), throughout southern California, extending north along the coast and Central Valley.

Series within the Soft Chaparral Formation are named for the dominant species present or the species representing 60 percent of the total overstory cover. Grasses and forbs are usually present in all phases.

Baccharis Series

Vegetation: The dominant shrub overstory is *Baccharis* spp. *Baccharis pilularis* is common on coastal foothills. Riparian species are *B. glutinosa, B. sergiloides,* and *B. sarathroides,* the latter two being confined to desert riparian habitats.

Distribution: Baccharis pilularis occurs from Sonoma County southward through central and coastal California to San Diego County, including the Channel Islands. The riparian species occur from Inyo County south to Mexico and east to Texas.

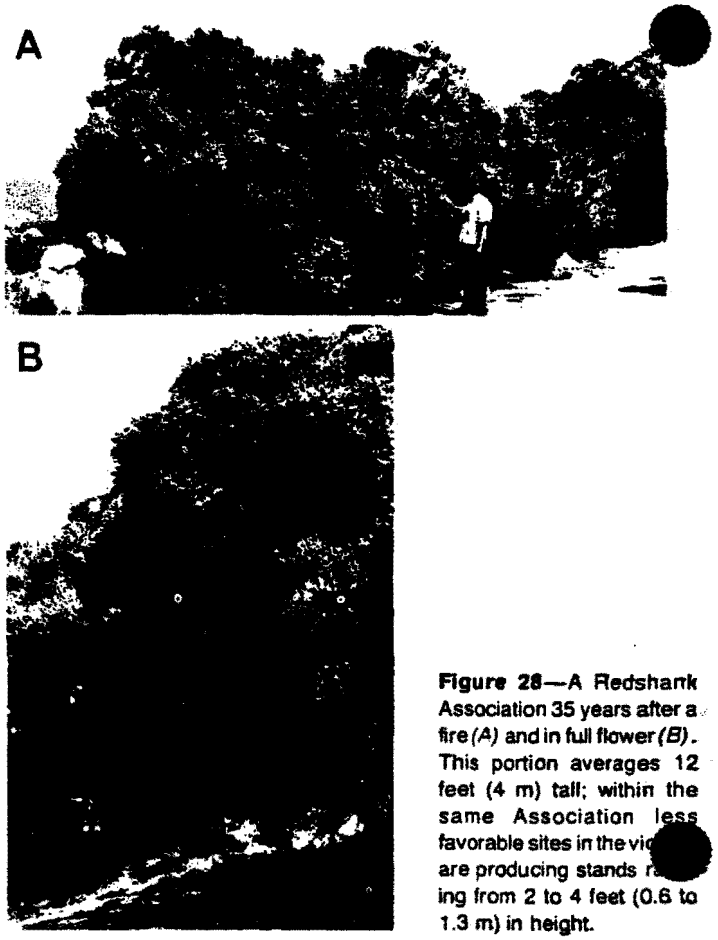

Figure 28—A Redshank Association 35 years after a fire *(A)* and in full flower *(B)*. This portion averages 12 feet (4 m) tall; within the same Association less favorable sites in the vi are producing stands r ing from 2 to 4 feet (0.6 to 1.3 m) in height.

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Figure 29—Associations within the Soft Chaparral Subformation occur in a mosaic pattern that reflects moisture availability and heat load.

Figure 30—Soft Chaparral often invades cutbanks in the interface zone between habitats of the Soft Chaparral and the Chaparral Subformations. Variation in plant density within an Association can be seen along this cutbank.

Figure 31—The Creosote/Burrobush Association represents the Woody Shrub Subformation in this interface between Low Desert Valley and High Desert Valley climate regions.

California Buckwheat Series

Vegetation: Eriogonum fasciculatum is the dominant overstory shrub, with herbaceous understory.

Distribution: California Buckwheat Series is found at low elevations in mountain foothills and valleys from Santa Clara County south to Baja California. Varieties of California buckwheat can occur at high elevations as an understory component in several Forest or Woodland Series.

Coastal Sagebrush Series

Vegetation: Artemisia californica is the dominant shrub overstory with a grass/forb understory. *Yucca whipplei* is sometimes codominant in this Series, particularly in Santa Barbara County.

Distribution: This Series is present on low-elevation coastal foothills and interior valleys from Baja California north to San Francisco Bay including the Channel Islands.

Croton Series

Vegetation: Croton wigginsii is the dominant vegetation covering desert sand dunes.

Distribution: Croton Series is restricted to the dunes of the California Sonoran Desert in southeastern California and into Mexico.

Encelia Series

Vegetation: Encelia farinosa or *E. californica* are dominant overstory shrubs with a herbaceous understory.

Distribution: The Encelia Series occurs from Santa Barbara and Inyo Counties south to Baja California.

Lupine Series

Vegetation: Lupinus arboreus or *L. chamissonis*-form the dominant overstory, with other soft shrubs and herbaceous species in the understory.

Distribution: Lupine shrubs range from Ventura County north along the California coastline. The Lupine Series occurs only on coastal bluffs.

Rabbitbrush Series

Vegetation: Chrysothamnus nauseosus or other *Chrysothamnus* species form the dominant overstory, with a grass and herbaceous understory.

Distribution: Rabbitbrush ranges throughout the Great Basin into western and southwestern California. There are many varieties of *Chrysothamnus nauseosus* from low elevations to above 9000 feet (2743.2 m).

Salvia Series

Vegetation: Purple sage (*Salvia leucophylla*), black sage (*Salvia mellifera*), or white sage (*Salvia apiana*) are dominant overstory species with a herbaceous understory. The Salvia Series covers coastal and inland foothills at low elevations.

Distribution: Salvia mellifera ranges from Contra Costa County south to Baja California and the Channel Islands. *S. leucophylla* ranges from San Luis Obispo County to Orange County; *S. apiana* ranges from Santa Barbara County to Baja California.

Woody Shrub Subformation

Arrowweed Series

Vegetation: Pluchea sericea is the dominant overstory vegetation in seeps or marshes and following canals.

Distribution: Pluchea sericea occurs from Santa Barbara County throughout cismontane southern California and east to Texas. The Series is common along the Colorado River and irrigation canals in the California Sonoran Desert.

Blackbush Series

Vegetation: Coleogyne ramosissima is the dominant overstory shrub. Blackbush is drought-deciduous. Associated species vary, but usually include *Ephedra* spp., *Chrysothamnus* spp., and California buckwheat (*Eriogonum fasciculatum*).

Distribution: Blackbush occurs from the southern Mojave Desert north and east through the Great Basin.

Catclaw Series

Vegetation: Acacia greggii, a winter-deciduous shrub, is the dominant overstory with subshrubs in the understory. The habitat in California often follows washes or canyons where some soil moisture is available.

Distribution: Catclaw is found in the southern Mojave Desert, throughout the California Sonoran Desert, south to Mexico, and east to Texas.

Creosote Bush Series

Vegetation: Larrea tridentata, an evergreen shrub, is the dominant overstory. Understory plants vary, but burrobush (*Ambrosia dumosa*) is most often codominant in California (*fig. 31*).

Distribution: Creosote is found throughout both deserts, ranging south from Inyo County into Mexico and east into Texas. *Larrea* spp. also occur in South America.

Greasewood Series

Vegetation: Sarcobatus vermiculatus is the dominant shrub occurring with saltbush (*Atriplex* spp.) on strongly alkaline, saline soils.

Distribution: Greasewood occurs throughout the Mojave Desert north to Washington and east throughout the Great Basin in suitable habitats.

Ocotillo Series

Vegetation: Fouquieria splendens, a drought-deciduous shrub, is the dominant overstory, with subshrubs and stem succulents present in the understory. The substrate is usually rocky.

Distribution: Ocotillo occurs from the southeastern Mojave Desert through the Sonoran Desert to Texas and Mexico.

Wild Rose Series (*fig. 32*)

Vegetation: Rosa californica, R. gymnocarpa, or *R. woodsii* are dominant, forming thickets in moist soil.

Distribution: Rosa species occur throughout the West in many vegetation types. The Series usually occurs below 6000 feet (1828.8 m) elevation in cismontane southern California.

Sagebrush Series (*fig. 33*)

Vegetation: Artemisia tridentata is the most common dominant shrub, although *A. nova, A. arbuscula*, or *A. rothrockii* may also form the dominant overstory. These are all evergreen shrubs and may be associated with perennial grasses.

Distribution: The Sagebrush Series is found from the mountains of southern California north to Oregon and throughout the Great Basin. The Series occurs at 7000 feet (2133.6 m) elevation interspersed with Series of the Closed Forest or Woodland Formations, as well as in the Mojave Desert.

Figure 32—An element of the Rose Series (Woody Shrub Subformation) occurring in a moist opening in a landscape cover dominated by the Closed Forest Formation—near Big Bear Lake, California.

Figure 33—Portions of this range being used by cattle belong to the Sagebrush Series of the Woody Shrub Subformation. Jeffrey pine (Closed Forest Formation) flanks the Herbaceous Formation that occurs in pastureland, while a mosaic comprised of elements of the Shrub Formation carries upward on the far slopes to the Closed Forest Formation that occurs along the ridge.

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APPENDIX

A. Climate Regions of Southern California

The climate regions adapted from Almquist's study are defined as follows:[5]

Coastal

The westernmost portion of southern California, extending inland to the coastal foothills. Maritime influence dominates, with even seasonal temperatures averaging 50° F (10° C) in winter and 67° F (19.4° C) in summer,* and little daily fluctuation. Average humidity is above 50 percent and precipitation in the form of winter rains ranges from 6 inches (152 mm) in the south to 60 inches (1524 mm) in the coastal ranges of the north.

Interior Valley

The gentle undulating terrain from the coastal foothills to the interior mountain foothills, up to 2500 feet (762 m) elevation at the eastern limit. Temperature extremes can range from below freezing in the winter to above 100° F (37.8° C) in the summer, with an average of 55° F (12.8° C) in winter and 75° F (23.9° C) in summer. Relative humidity averages 15 to 25 percent. Precipitation occurs primarily as winter rains, averaging 8 to 13 inches (20.3 to 330.2 mm) per year.

Transition

A region characterized by higher precipitation (12 to 20 inches [304.8 to 508 mm] per year) and lower average temperatures (51° F [10.6° C] in winter, 72° F [22.2° C] in summer) than the interior valley. It occurs on the coastal (cismontane) side of the mountains. There are extreme elevational differences, with lower limits ranging from 500 to 2500 feet (152.4 to 762 m), and usually an upper limit of 4500 feet (1371.6 m).

* As used here, summer months are considered May through October, winter months November through April.

Montane

Mountainous areas between 4500 and 9000 feet (1371 and 2833 m) on the coastal (cismontane) side and between 6500 and 9000 feet (1981 and 2743 m) on the desert (transmontane) side. Precipitation from 15 to 40 inches (254 to 1016 mm) with an average of 25 inches (635 mm) per year. Snow is common at higher elevations and some summer rainfall (5 to 7 inches) (127 to 177 mm) occurs. In winter, average temperature is 38° F (3.3° C), in summer, 62° F (16.7° C).

High Montane

Mountainous areas between 9000 and 10,500 feet (2743 and 3200 m). Precipitation is mainly in the form of snow. Average temperatures are lower than those in the montane region.

Alpine

All mountainous regions above 10,500 feet (3200 m). Average temperatures are lower than in the high montane region, snow pack remains longer, and strong winds are common.

Desert Transition

Areas on the desert (transmontane) side of the mountains between 3500 and 6500 feet (1066 and 1981 m) elevation. Precipitation generally occurs in the winter with some snow, and averages 6 to 10 inches (152 to 254 mm) per year. Average temperatures are 50° F (10° C) in winter and 70° F (21.1° C) in summer.

High Desert Valley

Primarily, the Mojave Desert and adjacent mountain slopes up to 3500 feet (1066 m). Rainfall is generally less than 6 inches (152 mm) per year. Little weather data are available.

Low Desert Valley[10]

The California Sonora Desert and adjacent slopes up to 3500 feet (1066 m). This region is somewhat influenced by the Gulf Coast air mass, and therefore receives more summer rainfall than the high desert. Daily temperature fluctuations can be extreme, with highs up to 120° F (48.9° C). Rainfall is less than 4 inches (101 mm) per year. Again, little weather data are available.

[10] The lowest elevations in this region are lower than any in the High Desert Valley region; the interface between the two is difficult to define.

C. Glossary

Annual plant—A plant which completes its life cycle within one year or one growing season.

Broadleaf—Refers to leaves that are *not* needlelike or scalelike and plants that are angiosperms. For this publication, trees and shrubs that are *not* conifers will be said to have broad leaves.

Bunch grass—A perennial grass which forms evenly spaced clumps, spreading by vegetative reproduction at the outer edge of the clump and dying at the center of old age. It does not form a closed sod.

Canopy—The aggregate of tree and shrub crowns that provide a broken layer of cover; most often used in reference to tree crowns that provide an "overhead" canopy.

Cismontane—This side of the mountains. For this publication, west of the main axis of the Sierra Nevada, Transverse, and Peninsular Mountain ranges, as opposed to the desert side.

Codominant—Refers to plants of different species that share stand dominance in the overstory (see Dominant). This use of codominant is different from timber management usage referring to dominant individuals in a stand that are slightly subordinate to a few individuals that have achieved superior stature.

Conifer—A cone-bearing tree with evergreen needle or scalelike leaves. Includes genus *Pinus, Calocedrus, Juniperus, Cupressus,* etc.

Crown cover—The vertical projection of a tree or shrub crown perimeter to the ground.

Crown sprout—A form of vegetative reproduction. A new shoot from the main crown of a tree which has been damaged, as by fire.

Cryptogam—A group of primitive plants such as mosses, club mosses, lichens, and ferns, which do not produce true flowers or seeds.

Cushion plant—A plant that forms a low-growing mat of vegetation which hugs the ground. Individual plants spread vegetatively at the outer edge of the mat, sometimes rooting at nodes or branch tips.

D.b.h.—Diameter at breast height. The diameter of a tree trunk at 4.5 feet (1.37 m) above the ground.

Deciduous plant—A plant which sheds its leaves, triggered by some environmental factor, such as temperature or water availability.

Density—The average number of individuals (plants) per unit of space.

Disjunct—Separate, noncontinuous; occurring in isolated, separate populations.

Dominant—Characteristic of plants within a system of vegetation, which by reason of size or numbers exert some controlling influence on the environment. For this publication, most numerous in the overstory.

Ecotone—A transition zone between two different types of dominant vegetation, containing components of each type.

Established tree—For this publication, a young tree with the crown rising above surrounding understory vegetation.

Evergreen—Refers to plants that do not generally shed their leaves in response to normal fluctuations in environmental conditions.

Forb—A broadleafed herbaceous plant.

Forest—Generally, an area of land covered by trees whose crowns are mostly touching. Because closed forests with interlocking crowns are rare in southern California, areas that grow trees with a crown cover of 60 percent or more are considered forests.

Grass—Herbaceous plants with narrow leaves in the family Poaceae.

Habitat—As an abstract concept, refers to that combination of environmental factors which provides suitable conditions for the existence of an organism or group of organisms; also, the concrete realization of such a combination in the field.

Herbaceous—Herblike or composed of herbs—plants with soft green leaves and no woody tissue.

Hydric—Characterized by considerable moisture.

Krummholtz—A twisted, dwarfed, or prostrate growth habit of trees that is the result of severe environmental conditions.

Litter—Slightly decayed, nonliving plant parts scattered on the ground; duff.

Mesic—Characterized by moderately moist conditions.

Overstory—The taller plants within a vegetation type, forming the upper layer of canopy cover.

Perennial plant—A plant which lives for 2 years or more. Sometimes only the underground parts remain alive while the green herbaceous parts die back.

Physiognomy—The characteristic structure of vegetation, apart from land form.

Relict stands—Remnants of a vegetation type that once occupied an extensive area (or was present in scattered form over an extensive area), but has since become nearly extinct. This often results from shifts in the state of a given environmental factor or combination of factors.

Riparian—Pertaining to the bank or edge of a river, lake, stream, or subsurface water source within 10 feet (3.05 m) of the ground surface.

Root sprouts—Vegetative growth (branches) emerging from a basal root burl or root nodes. Common in chaparral shrubs.

Rush—A grasslike plant in the family Juncaceae.

Savannah—A grassland containing scattered trees or shrubs.

Scrub—Vegetation consisting mainly of shrubs or stunted trees.

Sedge—A grasslike or rushlike herb of the family Cyperaceae.

Shrub—A short, low-branching woody perennial, usually having several main stems arising from a central point in the root system.

Succulent—Refers to a characteristic related to water storage within the cells of stems and leaves, making these parts soft and thick in texture.

Transmontane—The other side of the mountains; for this publication, east of the main axis of the Sierra Nevada, Transverse, and Peninsular Mountain ranges.

Understory—Those plants with canopy heights at a lower level than the tallest vegetation species present.

Woodland—An area of land covered by trees of a characteristic form whose crowns are generally not touching.

Xeric—Characterized by dry conditions (low rainfall).

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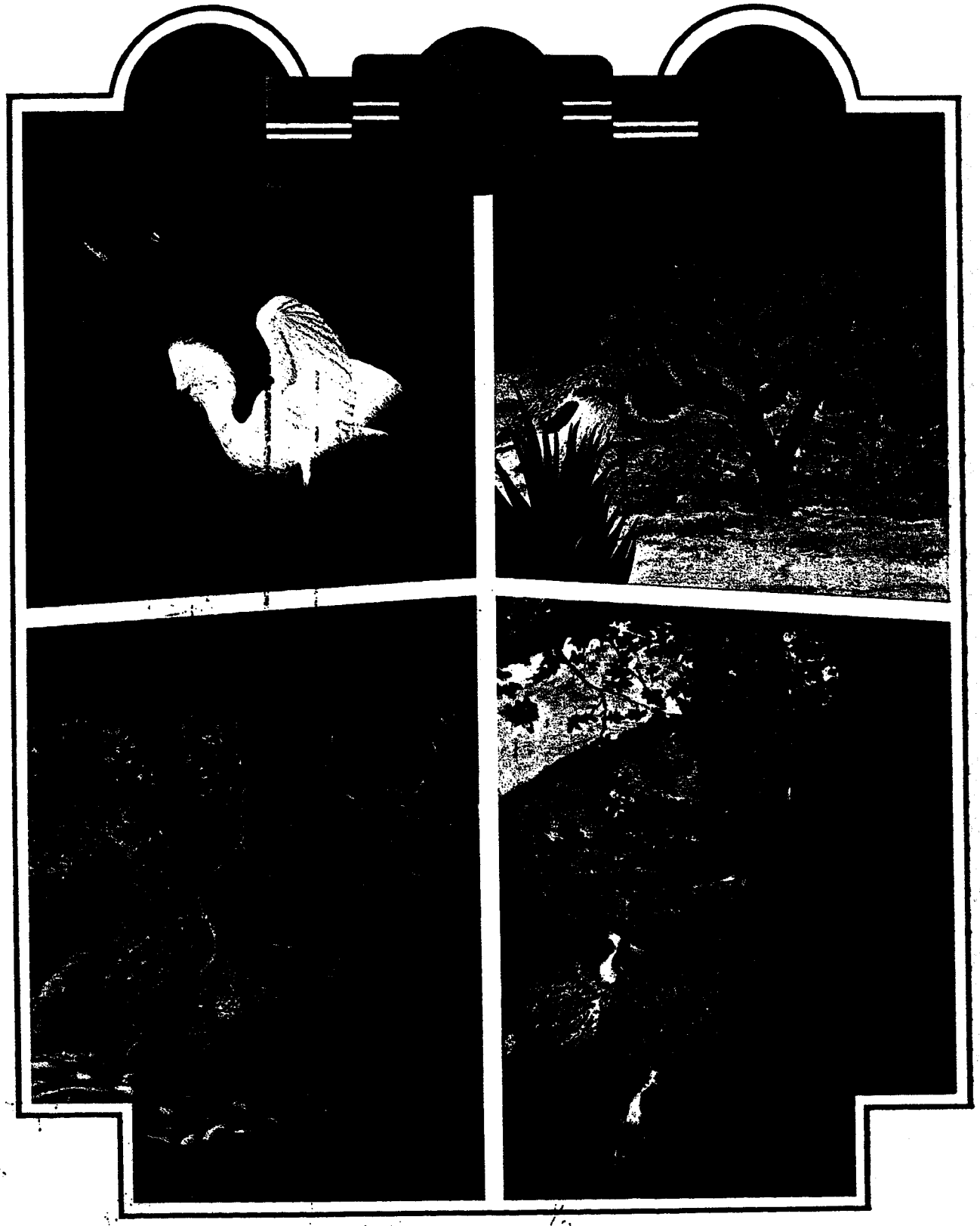

A GUIDE TO WILDLIF
HABITATS OF CALIFOR

4 Pages

EXHIBIT NO. 9

APPLICATION NO. Lever

4-99-211

Wildlife Habitat Coastal Scrub

A GUIDE TO WILDLIFE HABITATS OF CALIFORNIA

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October 1988

Exhibit Page 2 of 4

Scrub

Sally de Becker

plant associations that comprise
r to moderate-sized shrubs with
nches, semiwoody stems growing
low root system (Harrison et al.
liffers among stands, mostly along
cific coastline. Northern Coastal
:o the San Francisco Bay Area,
le cover of nearly prostrate sub-
d to a dense and continuous cover
shrubs up to 2 m (7 ft) tail and a
story up to 0.3 m (1 ft) tail. The
cal of inland central (around Mt.
nds, is made up of a shrub layer
cover usually approaches 100 per-
1977), although bare areas are
light penetrates through the canopy
erstory. Bare zones about 1 m (3
ids dominated by sage species into
(Halligan 1973, Mooney 1977,

pecies is typical of all Coastal Scrub
iposition changes most markedly
conditions from north to south
nge from mesic to xeric sites, domi-
vergreen species in the north to
the south. Variation in coastal influ-
ices less pronounced composition

stal Scrub are usually recognized.
e) occurs as low-growing patches of
l lupine at exposed, oceanside sites.
on type of northern Coastal Scrub
d sites. Here coyotebush dominates
overstory species are blue blossom
bush monkeyflower, blackberry, poi-
. Bracken fern and swordfern are
ommon cowparsnip, Indian paint-
ornia oatgrass are typically present
Half Moon Bay, western hazelnut,
ish are also present (Mayfield and

rring intermittently over a larger area
al Scrub types, is subdivided into
s in composition of these three types
le moisture. A fairly common species
sagebrush. The most mesic area,
ita Barbara, is dominated by black
eat. In the less mesic region from
ge County, purple sage and Califor-
e in importance. Golden yarrow,
lower, and California encelia are typi-
d on the slightly drier sites within the
County (Kirkpatrick and Hutchinson
n 1981b, Gray 1982). The souther-
eric of the form. Composition here is
pecies and a distinct Baja California
California sagebrush, California buck-
typical of the stands farther north,
agave, and cunyado are present
y 1977, Westman 1981a).

The following vegetation types and
the literature fall into WHR's Coastal
Lupine, Salal, Sumac, Ragweed,
a, Buckwheat and Sage described by
the Opuntia series of succulent shrub
al Sagebrush, Encelia, Baccharis,
a Buckwheat series of the soft cha-
d by Paysen et al. (1980); Coastal
Strand, Northern Coastal Scrub, Coastal Sage Scrub, and Coastal Sagebrush described by Munz and Keck (1973); Coastal Sagebrush, Northern Seashore Communities (Northern Dune Scrub), Southern Seashore Communities (Central Dune Scrub, Southern Dune Scrub), and Coastal Prairie - Scrub Mosaic described by Küchler (1977); and the Northern Coastal Dune Scrub subdivision of Partially Stabilized and Stabilized Coastal Dunes, Coastal Bluff Scrub, Coastal Scrub, and Maritime Cactus Scrub described by Cheatham and Haller (1975).

Habitat Stages

Vegetation Changes 1;2-4:S-D.—Only tentative conclusions can be drawn from the relatively few studies of vegetation change in Coastal Scrub. Stands in some areas are considered seral stages. But most phases of Coastal Scrub probably change little in composition after the first 10 years following fire or if subjected only to natural, moderate disturbance. In contrast, major or human-caused disturbances often permit Coastal Scrub to invade new areas, or permit invasion by other habitats.

The lupine phase of northern Coastal Scrub appears to be replaced by grasslands under grazing pressure, returning if grazing is halted; when undisturbed, the lupine phase appears to persist in a dynamic equilibrium, patches dying out while new ones become established (Davidson and Barbour 1977). The coyotebush stands in the north have been considered a seral stage in a progression from grassland to forest, though evidence is inconclusive. Elliott and Wehausen (1974) found no significant increase of scrub in a Pt. Reyes coastal prairie grassland/northern Coastal Scrub mosaic when cattle were excluded for six years. Coyotebush was replaced by forest in the Berkeley Hills (by mixed evergreen forest, coast live oak forest and California bay forest) (McBride and Heady 1968, McBride 1974), but this replacement pattern was not observed on the nearby Pt. Reyes Peninsula (Grams et al. 1977).

Southern Coastal Scrub on some sites is replaced by chaparral types (Mooney 1977, Gray 1983) but the usual trend of vegetation change in undisturbed or naturally disturbed stands is towards shrubs of various ages and size classes. Composition remains constant because recruitment is continual. Seeds germinate and young plants survive and grow under the canopy of mature plants. Southern Coastal Scrub is fire-adapted and most species sprout readily from crowns after burning. Thus, fire temporarily creates an even-aged stand, but reproduction by seed occurs within the second year after fire (Westman 1982).

Disturbances such as road cuts or landslides create areas often invaded by both northern and southern Coastal Scrub. Light, wind-dispersed seed and tolerance of xeric conditions allow Coastal Scrub to establish itself in disturbed areas (Harrison et al. 1971, Malanson and O'Leary 1982). Disturbance caused by oxidants in air pollution may have caused reduced cover by native Coastal Scrub species at certain sites in southern California (Westman 1979).

Duration of Stages.—As discussed, most Coastal Scrub types can probably exist indefinitely and will not change greatly in the absence of disturbance, or when affected only by natural perturbations. Bradbury (1978) observed southern sage scrub surrounded by chaparral types that endured for over 45 years; Westman (1981a) observed healthy stands that had not burned in over 60 years. McBride (1974) estimates that invasion by chamise, chaparral, forest or woodland types would take 50 years.

Biological Setting

Habitat.—At its lowest elevations, Coastal Scrub is associated with Coastal Dunes, Coastal Prairie/Perennial Grassland (PGS), Cropland (CRP) and Pasture (PAS). At its central and highest elevations, it is associated with annual grassland (AGS), Douglas fir-Hardwood (DFR), Coastal Oak Woodland (COW), Montane

uncertainty

effects of disturbance

CDP Application subject site / 4-99-211 (Paysen) see Exhibit

Exhibit Page 3 of 4

Hardwood (MHW), Closed-Cone Pine Cypress (CPC), Chamise-Redshank Chaparral (CRC) and Mixed Chaparral (MCH).

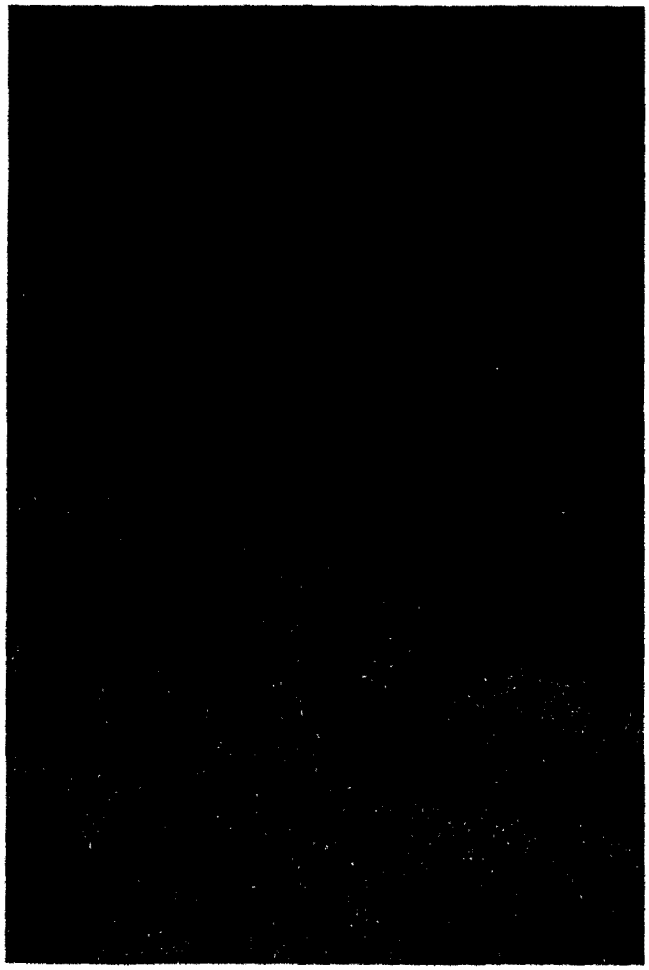
Wildlife Considerations.—Little is known about the importance of Coastal Scrub habitat to wildlife. Though vegetation productivity is lower in Coastal Scrub than in adjacent chaparral habitats associated with it (Gray 1982), Coastal Scrub appears to support numbers of vertebrate species roughly equivalent to those in surrounding habitats (Stebbins 1978). The Federal and State listed endangered peregrine falcon, Morro Bay kangaroo rat and the Santa Cruz long-toed salamander all occur in Coastal Scrub (Jones & Stokes 1981), though not exlusively. A subspecies of the black-tailed gnatcatcher, a California Department of Fish and Game Species of Special Concern (Remsen 1978), is found exclusively in southern sage scrub.

Physical Setting

Coastal Scrub seems to tolerate drier conditions than its associated habitats. It is typical of areas with steep, south-facing slopes; sandy, mudstone or shale soils; and average annual rainfall of less than 30 cm (12 in). However, it also regularly occurs on stabilized dunes, flat terraces, and moderate slopes of all aspects where average annual rainfall is up to 60 cm (24 in). Stand composition and structure differ markedly in response to these physiographic features (Harrison et al. 1971, Bakker 1972, Mooney 1977, Cole 1980, Kirkpatrick and Hutchinson 1980, Parker and Matyas 1981, Westman 1981b).

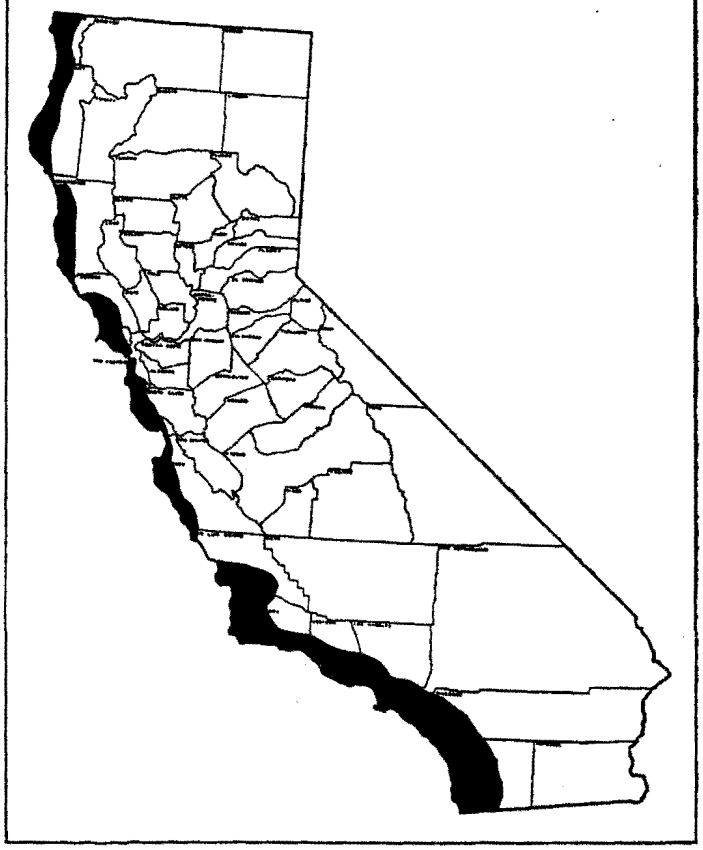
Distribution

Coastal Scrub occurs discontinously in a narrow strip throughout the length of California. Latitude ranges from about 32° to 42° N and longitude ranges between 117° and 124°. Coastal Scrub usually occurs within about 45 km (20 mi) of the ocean; in Riverside County, it extends at least 110 km (50 mi) inland (see map). Elevation ranges from sea level to about 900 m (3000 ft).

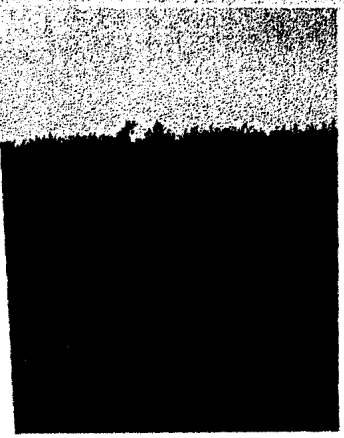


CSC
Coastal Scrub habitat, Santa Cruz County, California (photo by Sally de Becker)

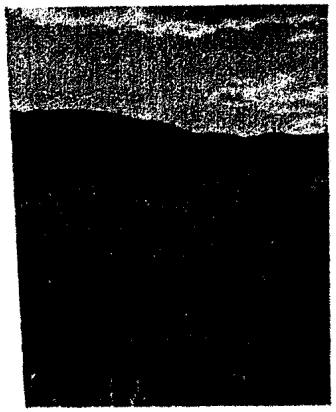
Coastal Scrub



The map depicts general habitat distribution. Green represents an area of the state that the habitat can be found when the proper environmental conditions exist.



A. Creosote Bush Scrub.



B. Jumping Cholla (*Opuntia* sp.) in Creosote Bush Scrub.

C. *Oenothera deltoides* in Creosote Bush Scrub.

4. AN INTRODUCTION TO CALIFORNIA PLANT COMMUNITIES

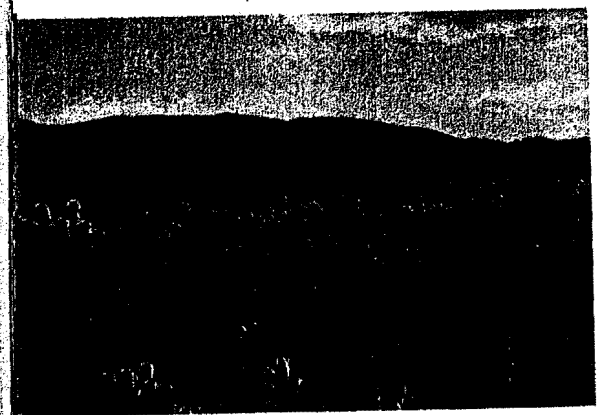
California Plant Communities and Their Major Components

A plant *community* is a regional assemblage of interacting plant species characterized by the presence of one or more dominant species. The concept of the community has been the subject of considerable argument in past decades and there is no uniform application of the term even today. Some botanists define a plant community simply as an assemblage of plants living in a prescribed area or physical habitat. Other botanists deny the "reality" of plant communities and do not believe that they exist, except in the minds of some ecologists. Nevertheless, there are practical reasons for recognizing plant communities in California as a basis for discussing the plant life of the state.

In Munz' *A California Flora* eleven vegetation types and twenty-nine plant communities are recognized for California, based on a scheme that Munz and D. D. Keck devised ten years earlier. The vegetation types they recognize in California are:

1. Strand
2. Salt Marsh
3. Freshwater Marsh
4. Scrub
5. Coniferous Forest
6. Mixed Evergreen Forest
7. Woodland-Savanna
8. Chaparral
9. Grassland
10. Alpine Fell-Field
11. Desert Woodland

Another classification of California plant communities that is relatively simple and useful is given below. Some of the characteristic plant species of each community are listed along with their distribution in that plant community in California. Each of these communit[illegible] discussed later in the text. This classification of California plant communities is my modific[illegible]



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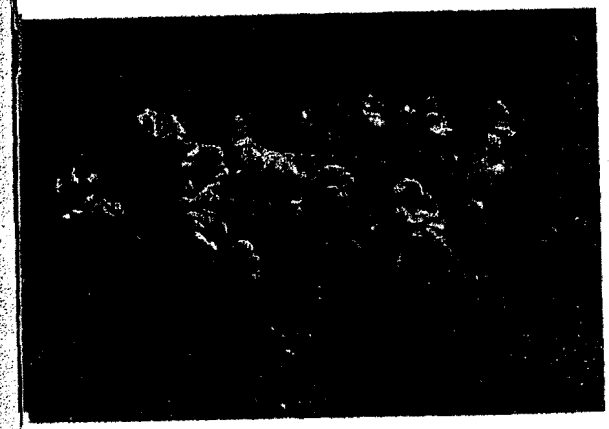

C. *Oenothera deltoides* in Creosote Bush Scrub.

D. Desert wash in Creosote Bush Scrub.

Plate 16. PLANT COMMUNITIES

California Plant Communities and Their Major Components

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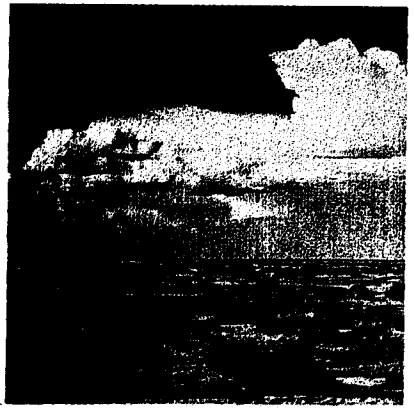
B. Sagebrush Scrub.

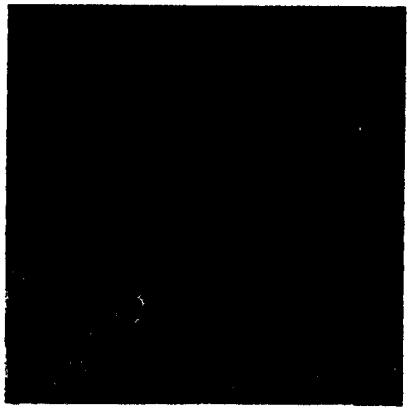
C. Coastal Sage Scrub.

D. Shadscale Scrub.

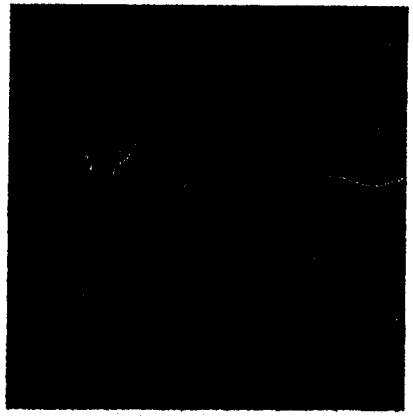
Plate 14. PLANT COMMUNITIES



B. Alkali Sink Scrub.



C. Iodine Bush (*Allenrolfea occidentalis*) in Alkali Sink Scrub.



D. Joshua Tree Woodland.

Plate 15. PLANT COMMU

Purshia spp.	Antelope Brush	Rosaceae	widespread
Tetradymia spp.	Cotton Thorn	Compos[redacted]	Mojave Desert north

Coastal Sage Scrub (Soft Chaparral): (same in Munz)

Artemisia californica	Coastal Sagebrush	Compositae	widespread
Baccharis pilularis var. *consanguinea*	Coyote Brush, Chaparral Broom	Compositae	widespread
Eriogonum fasciculatum	Wild Buckwheat	Polygonaceae	widespread
Rhus diversiloba	Poison Oak	Anacardiaceae	widespread
Rhus integrifolia	Lemonadeberry	Anacardiaceae	S. Cal. only
Salvia leucophylla	Purple or White-leaved Sage	Labiatae	mostly S.Cal.
Salvia mellifera	Black Sage	Labiatae	widespread

Shadscale Scrub: (same in Munz)

Artemisia spinescens	Spiny Sagebrush	Compositae	Mojave Desert north
Atriplex spp.	Saltbush, Shadscale	Chenopodiaceae	widespread
Coleogyne ramosissima	Blackbush	Rosaceae	widespread
Ephedra spp.	Mormon Tea	Ephedraceae	widespread
Eurotia lanata	Winter Fat	Chenopodiaceae	Mojave Desert north
Grayia spinosa	Hop Sage	Chenopodiaceae	Mojave Desert north
Gutierrezia spp.	Matchweed	Compositae	Mojave Desert north
Hymenoclea salsola	Cheese Bush	Compositae	widespread

Alkali Sink Scrub: (same in Munz)

Allenrolfea occidentalis	Iodine Bush	Chenopodiaceae	widespread
Atriplex spp.	Saltbush	Chenopodiaceae	widespread
Salicornia spp.	Pickleweed	Chenopodiaceae	widespread
Sarcobatus vermiculatus	Greasewood	Chenopodiaceae	widespread
Suadea spp.	Seep Weed	Chenopodiaceae	widespread

Joshua Tree Woodland: (same in Munz)

Atriplex spp.	Saltbush	Chenopodiaceae	widespread
Ephedra spp.	Mormon Tea	Ephedraceae	widespread
Eriogonum fasciculatum	Wild Buckwheat	Polygonaceae	widespread

Lycium spp.	Box Thorn	Solanaceae	w
Opuntia spp.	Cholla, Prickly Pear	Cactaceae	w
Salazaria mexicana	Bladder Sage	Labiatae	w
Tetradymia axillaris	Cotton Thorn	Compositae	M
Yucca brevifolia	Joshua Tree	Agavaceae	M
Yucca schidigera	Mojave Yucca	Agavaceae	M

Most species of Shadscale Scrub

Creosote Bush Scrub: (same in Munz)

Encelia farinosa	Brittle Bush	Compositae	r
Fouquieria splendens	Ocotillo	Fouquieriaceae	C
Franseria dumosa	Burro Weed	Compositae	v
Hymenoclea salsola	Cheese Bush	Compositae	v
Larrea divaricata	Creosote Bush	Zygophyllaceae	v
Opuntia spp.	Cholla, Prickly Pear	Cactaceae	v

Ecological Dominance

Some plant communities are named for the tree or s species which are *dominant* in them. The term domina to one or more plant species which may be the largest abundant plants in a community, or those which accou the greatest coverage in the community. Because of th cover or the extent of their root systems, dominants h strong influence on the local ecology of the communit they are members. Perhaps the most straightforward a example of the idea of dominance is that which exists Redwood Forest, which is recognized by Munz and Ke distinct community although I have included it in the Coastal Forest plant community. This plant associatio after its sole dominant, Coast Redwood (*Sequoia semp* Because of the large size of these trees and the influenc they have on the moisture and shading relationships ur

Foregoing discussions were concerned with the major plant communities that were encountered along a transect in northern California. Because of the relatively symmetrical and orderly arrangement of the chief mountain ranges in northern California, a transect approach was used: most of the plant communities in this part of the state tend to be distributed in a pattern that is related to climatic patterns, and these in turn are strongly influenced by the position of mountain ranges in a north-south series. We now turn to plant communities restricted to southern California, especially the desert portions of the state. In this region, the topography forms more of a mosaic pattern.

Coastal Sage Scrub (Plate 14C; Map 3)

In some respects, a southern counterpart of the Northern Coastal Scrub is the Coastal Sage Scrub, also called Soft Chaparral. The term counterpart is used because the Coastal Sage Scrub occupies a narrow strip along the coast stretching along the coastward side of the South Coast Ranges (and some of the Peninsular Ranges) into Baja California, in much the same relative position occupied by Northern Coastal Scrub in the northern portion of the state. But although the general aspect of the two communities is similar, there is little floristic similarity between the Northern Coastal Scrub and the Coastal Sage Scrub. The Coastal Sage Scrub occurs on rather dry, often steep, gravelly or rocky slopes below 3,000 feet (915 m). Climatically, the area occupied by this plant community is rather mild and has an average of 20 inches (51 cm) of rainfall per year or less. The "scrub" refers to the fact that the major plant species found in the community are shrubby species one to six feet (1.3 to 1.8 m) tall, although a few of the component species are considerably larger than this and might be considered small trees.

The name of this plant community comes from the presence of *Salvia* species such as Black Sage (*S. mellifera*) and Purple or White-leaved Sage (*S. leucophylla*, Labiatae). Other shrubs

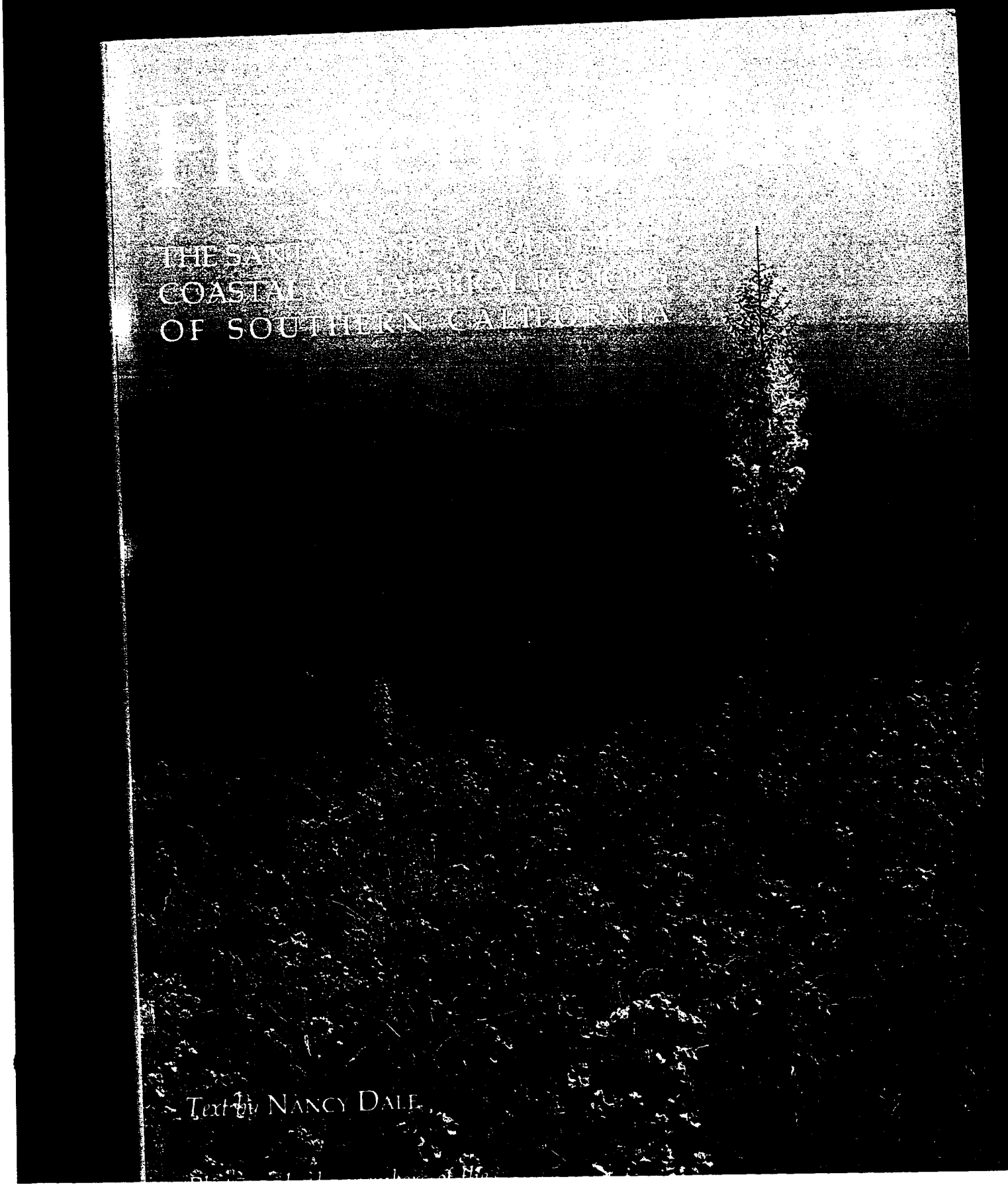
and Coyote Brush (

found in Northern Coastal Scrub). Larger species are some Lemonadeberry (*Rhus integrifolia*, Anacardia toxic relative, Poison Oak (*R. diversiloba*).

Shadscale Scrub (Plate 14D; Map 3)

Most herbaceous plant communities of California veloped in cismontane northern California. Likewise land (or Forest) communities also are more extensive northern portion of the state (i.e., north of the Trans than in the south. Examination of patterns of distrib scrubland communities, however, indicates that thes developed in southern California than in the northern the state. The Shadscale Scrub plant community is n one of the dominant species, Shadscale. This is *Atrip tifolia* (Chenopodiaceae), an erect, rigidly branched, with rather crowded, round leaves that resemble fish (Curiously, Munz and Keck do not list Shadscale as t name for this shrub, even though this name is widely the shrub in much of the Great Basin and it gave its plant community in which it occurs.) Other membe desert plant community are Hop Sage (*Grayia spino* diaceae), Winter Fat (*Eurotia lanata*, Chenopodiacea Sagebrush (*Artemisia spinescens*, Compositae), matcl *rezia* spp., Compositae), Cheese Bush (*Hymenoclea* positae), Blackbush (*Coelogyne ramosissima*, Rosac peculiar gymnospermous shrub, Mormon tea (*Ephe* Ephedraceae).

Despite the fact that the characteristic shrubs of Scrub belong to several plant families that are taxon related, there is a strong superficial similarity amon shrubs are rather small, seldom over half a meter tal they are grayish, small leaved, much branched, and spiny, and produce smallish flowers. Shadscale Scru very heavy, often alkaline (pH 8 to 10) or saline soi


THE
COAST
OF SOUTHERN CALIFORNIA
Text by NANCY DALE

Coyote Brush

Baccharis pilularis DC. ssp. *consanguinea* (DC.) C.B. Wolf.
Sunflower Family. ASTERACEAE (COMPOSITAE)

James P. Kenney

Coyote Brush

Coyote Brush is a much-branched, evergreen shrub 3 to 12 feet high. The numerous, small leaves, less than an inch long, are egg-shaped, attached at the narrow end and have 5 to 9 coarse teeth. The dirty-white flower heads are 1/8 to 1/4 inch long, clustered singly at the ends of branches or in the leaf axils. Ray florets are absent. Male and female flowers are on different plants. The male ones are smaller and yellowish. The bracts are narrowly oblong and pointed at the end.

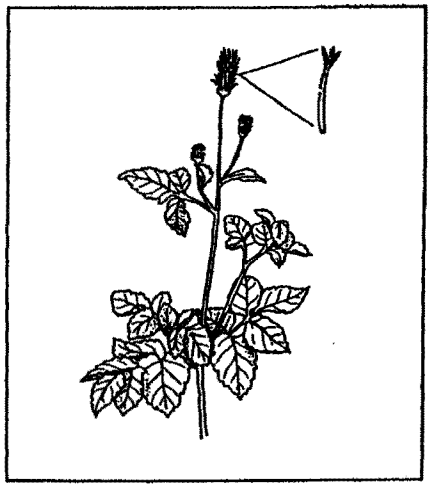
Coyote Brush is frequent near the coast and in Coastal Sage and Oak Woodland throughout. It blooms from August to November.

Sometimes this shrub is known as Chaparral Broom. A horticultural version of the subspecies *pilularis* has been cloned by Rancho Santa Ana Botanic Garden for use as a most attractive, hardy, ground cover, especially useful on banks and slopes.

Pilularis generally means "having globules," referring either to galls on the stem or the flower buds. *Consanguinea* means "related by blood."

Hairy Bur-marigold

Bidens pilosa L.
Sunflower Family. ASTERACEAE (COMPOSITAE)



The Hairy Bur-marigold is an annual 1 to 4 feet high. The leaves have 3 to 5 egg-shaped leaflets. The margins are toothed and covered underneath with harsh hairs. The yellowish heads are inconspicuous since the ray florets are either minute or missing. The

oval bracts are green in th
membranous edges. The
4 bristles topped with sha

This native of the Ar
now a frequent weed in l
out. It blooms from Febru

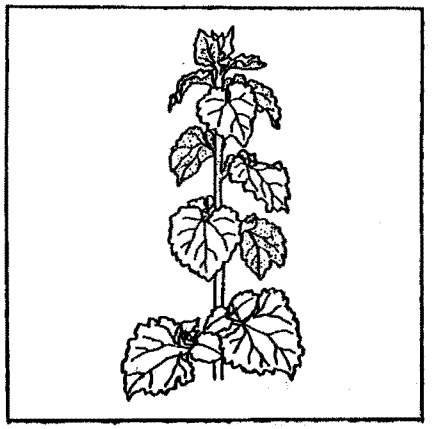
The common name
Beggar-ticks. Not only d
semble ticks, but they stic
begging a ride in the ha
hooking into boots, jeans
travel widely to new locat

We have two other spe
tains. *B. frondosa* with s
located near Lake Sherwo
simple leaves if found, bu
Los Angeles River.

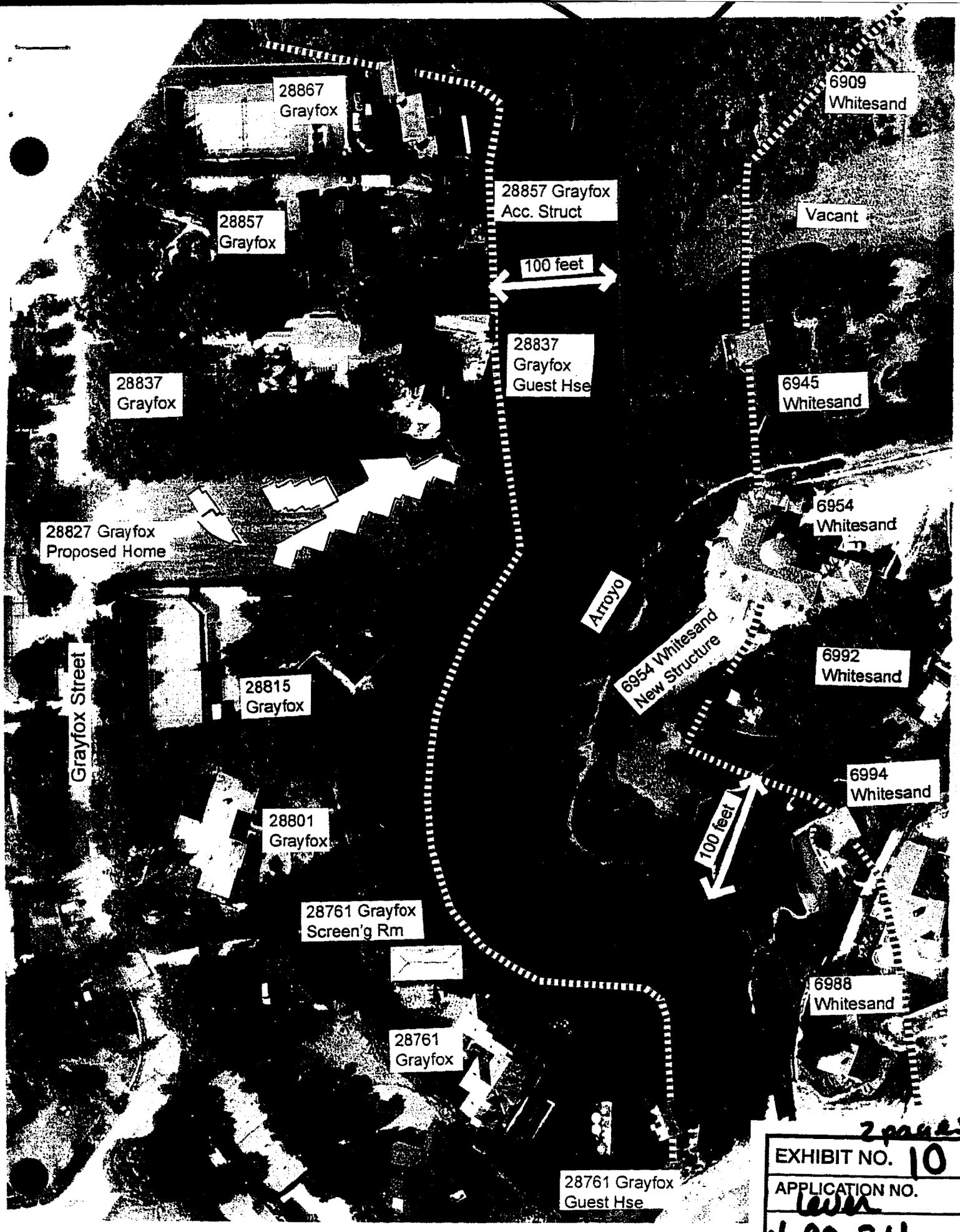
Bidens is from Lat
toothed" and refers to th
achenes. *Pilosa* means "ha

California Brickelbush

Brickellia californica (T. & G.) Gray.
Sunflower Family. ASTERACEAE (COMPOSITAE)



California Brickelbush is
up to about 3 feet in h
rounded leaves on short
are ½ to 2 inches long
around their margins, cc
gray hairs and heart-sha
The creamy heads are al
all disk, in small terminal
branches.



Current Development Along Canyon

2 pages

EXHIBIT NO. 10

APPLICATION NO. Lewis 4-99-211 Applicant Exh.

PSOMAS

June 12, 1998

Psomas and Associates
3187 Red Hill Avenue, Suite 250
Costa Mesa, California 92626
Phone 714/751-7373
Fax 714/545-8883

Marti Witter
Biologist
CITY OF MALIBU
23555 Civic Center Way
Malibu, CA 90265-4865

Subject: Environmental Analysis, 28827 Grayfox (Lever), PPR No. 97-176

Dear Marti:

On behalf of Mark Lever, I visited the Lever property on 19 May, 1998 for the purpose of assessing biological resources of the property and extent to which development of the property would impact the ecological values of the canyon. I also reviewed the project site plan, landscape plan, geology/soils report, the City's General Plan Land Use and Conservation Elements, previous biological reviews by the City, and historical photographs of the area supplied to me by Alisa Morgenthaler, Mr. Lever's attorney. Based on my review and discussion with Ms. Morgenthaler, the primary issue concerning the City appears to be the setback distance of the building footprint from an area designated as a disturbed sensitive resource. I also understand, from my conversation with you on 9 June, that the City's Environmental Review Board (ERB) has a long-term interest in enhancement/restoration of the coastal canyons, and the ERB does not wish to recommend approval of projects to the Planning Commission that may compromise this goal. You also expressed a concern about setting precedents for future development proposals, should a variance from the setback requirement be granted to the Lever project.

At the outset, I should say my analysis is conducted purely from an ecological point of view. I have not been involved in the history of the City's review of this project, nor do I claim to have legal expertise in policy issues of the City. However, I hope my analysis will prove helpful in determining the best environmental resolution of the situation.

The following section summarizes the main points of my analysis and recommendations. Subsequent sections discuss these points in greater detail.

6 pages

EXHIBIT NO. 11
APPLICATION NO. Lever
4-99-211
Biological Consult

Summary and Recommendations

The Lever's property consists of a vacant lot, situated between two developed lots along an unnamed small canyon on Point Dume. The canyon is shown as a "blue line" stream on the USGS topographic map of the Point Dume area. The City has designated this canyon as a Disturbed Sensitive Resource Area (DSRA). The precise boundaries of the DSRA with respect to the Lever's property are difficult to determine due to the very general nature of the City's DSRA map, but appear to include parts of the Lever's property as well as developed home sites across the canyon. One corner of the Lever's building footprint, as shown on the Site Plan dated 13 April, 1998, is 100 feet from the creek bed, but is possibly within (or at least on the border of) the DSRA. Historical photographs compared to photographs of current conditions indicate that the present mix of coyote bush and exotics growing on the canyon slope is significantly degraded from conditions of the late 1940's. These historical photographs suggest that vegetation in the area was composed of Venturan coastal sage scrub and non-native annual grassland. The creek bed appears to have been dry in summer. The current ability of this creek to support riparian habitat is limited due to very low summer flows. If such habitat were to be established, plant growth would probably be limited to the creek channel itself, because of the limited water availability and small drainage area upstream. Therefore, in my view, the sensitivity of the resource at this location is limited to the creek bed itself, from which the building footprint is 100 feet distant.

Based on these considerations, I do not find that the building footprint and setback proposed by Mr. Lever would significantly impact any sensitive biological resources. Also, with some additions to the plant species list described in this letter, implementation of the landscape/fuel modification plan will increase native species diversity in the area to more closely resemble the historical Venturan sage scrub vegetation type. It also is possible, given the irrigation required in the Lever's fuel modification zone, that runoff from this irrigation (however minimal) could support a small riparian community in the creek. I find that the proposed project will result in environmental improvement of the property, and will not preclude the City from pursuing any future plans with respect to restoration of this coastal canyon.

I recommend that the project be approved, with the condition that the landscape/fuel modification plan include some or all of the additional native species suggested in this letter, and/or other such fire-resistant Venturan sage scrub species that the City may suggest.

Historical Site Conditions Compared to Current Conditions

Due to the fortunate presence of Mr. Lever's relatives in the project area for a considerable period of time, and their inclination for taking pictures of their property, Ms. Morgenthaler was able to provide me with photographs of the area as it existed sometime during the period 1947-1950. Examples of these photographs, in comparison to a current photograph are shown in the Attachment to this letter. The historical and current views are not taken from the same location, but provide a general comparison. Photo # 3 shows the bottom of the canyon itself, apparently a dry gully at that time.

Landscape features in the historical photos indicate the presence of a native vegetation community on slopes. This community would probably be classified by current standards as Venturan coastal sage scrub. The larger, darker spots are most likely laurel sumac or lemonadeberry (*Rhus integrifolia*), and the more extensive, lighter patches would have likely consisted of herbs, sage (*Salvia leucophylla* and/or *S. mellifera*), coastal buckwheat (*Eriogonum parvifolium*), California encelia (*Encelia californica*), and other small shrubs. The shrub community occurs primarily on the slopes, with grassland present on flatter terrain. These grasses are probably exotic barleys or oats, rather than the native needlegrasses (*Nassella pulchra* and/or *N. lepida*). Exotic grasses are thought to have been introduced to California soon after arrival of the Spaniards, and spread extensively in association with establishment of forage for the massive cattle-grazing phase of the 1800's. Therefore the vegetation of 1947-1950 in the project area can best be described as a combination of Venturan sage scrub on the slopes, with exotic annual grassland already dominating the flatter topography where cattle would have grazed. Prior to the grazing, it is possible that patches of native bunchgrasses or needlegrasses (*Nassella* spp.) occupied the area. It is unknown whether the canyon ever supported true riparian vegetation, such as cottonwoods and willows. Limited natural water availability in the dry season would make this unlikely. The dry gully shown in Photo #3 supports this thesis.

During my field visit, I found the vegetation on the site to be as described in the City's Biological Review of 25 April 1997. The vegetation is basically of two types: 1) exotic annual vegetation on the flat topography of the property and part of the east facing slope – this condition appears consistent with historical conditions; 2) mixed exotic/native perennial vegetation, occupying the majority of the east facing slope of the property. Also note in the photographs the extensive upward growth of exotic trees on adjacent properties, nearly obscuring the ocean view as compared to historical conditions.

Species composition of the grassland is typical of areas with a long history of disturbance, and appears to have changed little in general appearance since the 1940's. Wild oat (*Avena* cf. *barbata*), wild radish (*Raphanus sativa*), and broad-leaf filaree (*Erodium botrys*) comprise most of the flora. Occasional species, also exotic, include fennel (*Foeniculum vulgare*) scarlet pimpernel (*Anagallis arvensis*), and *dock (Rumex crispus*). The few native species include California sunflower (*Helianthus californica*) and golden stars (*Bloomeria crocea*).

The native flora within the mixed vegetation on the slope is composed mostly of coyote bush (*Baccharis pilularis*), with occasional laurel sumac (*Malosma laurina*), poison ivy (*Toxicodendron diversilobum*), and monkeyflower (*Mimulus longiflorus*). The most significant threat to the long-term future of this vegetation is English ivy (*Hedera helix*), which has extended from adjacent lots and has now overgrown nearly all of the slope and native vegetation. I also observed an extensive carpet of exotic iceplant *(Carbobrotus edulis*) on the adjacent lot to the south, and myoporum on the property itself. Iceplant and myoporum are noxious problems in coastal areas but for some reason these species have not expanded across the Lever property as extensively as the ivy. With the exception of coyote bush, the few native species on the property slope appear to be a remnant of the once-extensive Venturan sage scrub that was present 50 years ago.

Changes in Habitat Condition Resulting from the Proposed Project

According to the Site Plan, the southeastern corner of the building footprint extends 100 feet from the bottom of the creek bed. This corner point of the building footprint is staked, and I was able to check the 100-foot horizontal distance from the stake to the creek bed with a measuring tape during my site visit. According to the Landscape Plan/Fuel Modification Plan dated 20 July, 1997, there would be two zones extending downslope from the building footprint:

a) Zone A, a fully irrigated setback zone that would extend 20 feet from the building structure and all appendages (i.e. about halfway down from the existing top of slope);

b) Zone B, a fully irrigated area extending 80 feet from the boundary of Zone A (i.e. to the property boundary just short of the creekbed).

Exotics would be removed and both zones would be planted with native, fire-resistant species. Average height of vegetation within Zone A will be maintained at 30"-36". Zone B will be planted with low and medium-growing perennials.

Based on these plans the vegetation impacted by the building footprint would be herbaceous exotics, with some impacts to coyote bushes, and a laurel sumac that is being overtaken by English ivy. These impacts are not biologically significant.

With slight modification (see next section), implementation of the landscape/fuel modification plan would actually enhance the plant species diversity, and structural diversity, of the slope adjacent to the creek, and therefore would be a beneficial environmental impact. Western sycamore (*Platanus racemosa*) has been selected for some of the landscape plantings in the front of the house – a good choice of native tree for this area. I would not expect any sensitive species to be impacted by the proposed project and the City has not identified sensitive species to be an issue.

Irrigation of Zones A and B may or may not increase water flow into the creek to a significant degree, depending on the irrigation regime. It is likely that landscape irrigation of all properties, upstream and downstream of the Lever property, has increased summer base flow in the creek and the current luxuriant growth of coyote bush has been favored by this regime.

With the information available to me, I understand the City considers the creek area, while disturbed, to qualify as an environmentally sensitive resource and for the purposes of IZO §9.3.03(6)(f). The City requires a minimum 100-foot setback from such resources. According to Craig A. Ewing, City Planning Director, in the past the City has at times requested that development take place on the "top-of-slope" to comply with the setback (A. Morgenthaler, telephone conversation with C.A. Ewing, Planning Director, on 6 May, 1998). When delineating disturbed and non-disturbed environmentally sensitive areas, I expect the City could not survey every foot of every canyon/creek area to determine whether the 100-foot setback was necessary in every case. In many circumstances I would agree with this requirement, as a way to ensure that development does not encroach upon valuable flora or fauna, or adversely impact natural

stream channels. However, I cannot determine any particular environmental reason for requiring that the footprint be moved to the "top-of-slope" in this instance. Given the degraded nature of the site in comparison to historical conditions, the only resource that could be interpreted as "sensitive" would be the creek bed itself, and the nearest corner of the building footprint is 100 feet from the creek. The rest of the building footprint is more distant from this point. With appropriate erosion control during construction, and proper irrigation regime in the fuel modification zones, I believe Mr. Lever's plan will enhance this portion of the canyon and benefit the native environmental resources of the area.

More specifically, the planting of native species in the fuel modification zones provides an opportunity to significantly increase native plant species diversity at this location within the canyon, without precluding future steps the City might take toward enhancement/restoration of native vegetation in the canyon.[1] In addition, with some changes to the plant species list on the fuel modification plan (see next section of this letter), the project could serve as a good first (albeit small) step toward enhancement/restoration of the canyon. In fact, from what I can tell of past housing encroachments into the canyon that preceded the Lever's proposal, fuel modification zones are likely to be important tools available to the City and property owners to address both fire hazard and native habitat enhancement/restoration.

Finally, I understand from our conversation and my review of the City's requirements, that the native plantings/fuel modification areas would have been required even if the building footprint were to have been placed at greater distance from the creek than currently proposed. I am not qualified to conduct an economic analysis, but I understand that additional setback of the building footprint from the creek would result in loss of the ocean view and property value. If the present case represented a trade-off between property values and significant ecological values/sensitive species, as an ecologist I would opt in favor of ecological values/sensitive species. However, in the present case, no significant ecological values or sensitive species will be impacted by keeping the building footprint as shown in the site plan. From the City's perspective, the additional natural area gained from strict adherence to the setback requirement would still be subject to fuel modification requirements and therefore not restorable in the strictest sense. In addition, if the City plans restoration of Venturan sage scrub downslope or outside of irrigated fuel modification zones in these canyons as a future condition, it should be noted that many species comprising this community type are already low-growing (on average) and on Fire Department lists of fire-resistant species, unlike their counterparts in chaparral. This fire resistance will be increased if the plants receive any excess runoff from the irrigated fuel modification areas. Therefore there should be good compatibility between the fuel modification zones of the Mr. Lever's plan and the City's enhancement/restoration goals for DSRA's as identified in the Conservation Element of the General Plan.

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[1] Enhancement is generally defined as increasing the native habitat component and biodiversity, through removal of exotics and/or planting of additional native species. Restoration is generally defined as the re-establishment of the indigenous native ecosystem, with all of its complexity and functions. In typical situations, especially near housing where fire hazard is a consideration, the City is more likely to be engaged in enhancement rather than restoration.

PSOMAS

In summary, I see little if anything to be gained, environmentally, by placing the setback of the building footprint further away from the creek bed than is currently proposed.

Suggested Additions of Native Plant Species to the Landscape/Fuel Modification Plan

With some additions of the following fire-resistant natives to the plant species list, the fuel modification areas can be made to better resemble the Venturan coastal sage scrub/native grassland that was probably dominant in the area historically, while adhering to the City's standards for fire protection. The plants should be readily available from nurseries that specialize in native plants. All would be 1-gallon container plants unless otherwise noted. I have divided the list between Zone A and Zone B, to reflect the lower height standard expected in Zone A.

	Latin Name	Common Name
Zone A	*Stipa pulchra* and/or *S. lepida*	purple (foothill) needlegrass
	Eriogonum cinereum	ashy leaf buckwheat
	Eriogonum parvifolium	coastal buckwheat
	Mimulus longiflorus	monkeyflower
	Sisyrinchium bellum	blue-eyed grass (seeds)
	Yucca whipplei	Whipple's yucca
Zone B	(keep existing list: *Penstemon heterophyllus*, *Oenothera hookeri*, *Salvia spathacea*, *Mimulus guttatus*, *Solanum xantii*)	
	Add species listed for Zone A plus:	
	Malosma laurina/Rhus integrifolia	laurel sumac/lemonadeberry

I hope this information is helpful. If you have any questions or need more information, please do not hesitate to contact me at 714-751-7373.

Sincerely,

PSOMAS AND ASSOCIATES

Dr. Edith Read
Manager of Biological Resources

cc: Alisa Morgenthaler
Attachment

PSOMAS

Information and Engineering Solutions

March 20, 2000

Mr. Jack Ainsworth
California Coastal Commission
South Central Coast Area
89 South California Street, 2nd floor
Ventura, CA 93001

Re: Environmental Analysis of the Lever property, 28827 Grayfox, Malibu

Dear Mr. Ainsworth,

This letter updates a previous evaluation I prepared for the City of Malibu in 1998 on behalf of Mark Lever and Alisa Morgenthaler Lever. The purpose of this letter is to summarize my previous biological evaluation and provide my professional opinion as to whether construction of the Levers' proposed single-family dwelling would affect coastal resources, specifically biological resources.

I visited the Lever property in May of 1998 and again in November of 1999. In 1998 I prepared a detailed evaluation that the Levers submitted to the City, including review of the project site plan, landscape plan, previous biological reviews by the City, and historical photographs. As far as I understand the situation, the main issues for the CCC revolve around the setback distance of the building footprint from a small, narrow canyon along the east side of the property.

Historical and Existing Conditions

From a biological perspective, the Levers' property consists of basically two features: 1) a ruderal, herbaceous vegetation type on the flatter portions of the property that would be removed by construction of the house; 2) dense shrub vegetation downslope of the construction footprint to the base of a narrow canyon.

The ruderal herbaceous vegetation is dominated by non-native species and appears typical of areas with a long history of disturbance, and appears to have changed little in general appearance since the 1940's. Wild oat (*Avena* cf. *barbata*), wild radish (*Raphanus sativa*), and broad-leaf filaree (*Erodium botrys*) comprise most of the flora. Occasional species, also exotic, include fennel (*Foeniculum vulgare*) scarlet pimpernel (*Anagallis arvensis*), and *dock (Rumex crispus*). The few native species include California sunflower (*Helianthus californica*) and golden stars (*Bloomeria cr*----

(12 pages)

EXHIBIT NO. 12
APPLICATION NO. Lever
4-99-211
Biological Consultant

Historical photographs compared to observation of current conditions indicate that the present mix of coyote bush and exotics growing in the canyon is completely different from conditions of the late 1940's. These historical photographs suggest that the primary vegetation type in the canyon was Venturan coastal sage scrub along the margins of a dry gully, with a mosaic of scrub and grassland on the surrounding hillsides. There is no hydrologic evidence to suggest that this small canyon historically supported, or would have potential to support, a riparian or wetland community.

While the vegetation in the canyon is presently very tall and dense, and thus gives a superficial impression of an undisturbed ecosystem, The native flora within the mixed vegetation on the slope is composed mostly of coyote bush (*Baccharis pilularis*), with occasional laurel sumac (*Malosma laurina*), poison ivy (*Toxicodendron diversilobum*), and monkeyflower (*Mimulus longiflorus*). The most significant threat to the long-term future of this vegetation is English ivy (*Hedera helix*), which has extended from adjacent lots and has now overgrown nearly all of the slope and native vegetation. I also observed an extensive carpet of exotic iceplant (*Carbobrotus edulis*) on the adjacent lot to the south, and myoporum on the property itself. Iceplant and myoporum are noxious problems in coastal areas but for some reason these species have not expanded across the Lever property as extensively as the ivy. With the exception of coyote bush, the few native species on the property slope appear to be a remnant of the once-extensive Venturan sage scrub that was so abundant in the area 60 years ago.

The canyon has been designated as a Disturbed Sensitive Resource Area by the City of Malibu. However, it is my understanding that the line drawn to distinguish the boundary of this Area was derived from a very broad-scale mapping effort for the entire Malibu region. Individual properties could not be visited and their resources could not be documented in detail at the time such mapping was conducted. In my view it would be inappropriate for such a planning map to become the sole basis for determining a setback line, or determining whether an individual property owner is actually affecting a sensitive resource. For now, these factors need to be considered on a case-by-case basis as we are trying to do here. An ideal, long-term solution (to avoid endless repetition of these cases before the CCC) would be a more detailed local coastal plan with watershed-level evaluations of each canyon system.

It is my professional opinion that vegetation occupying the canyon reflects at least a 60-year trajectory of degradation that will continue unless at least some human intervention is allowed. I believe the Levers' proposed building and landscaping plans, combined with their continued pro-active attitude toward preservation of the canyon resources in the face of the numerous regulatory hurdles they have encountered, provides a unique opportunity to address this problem in an area that is currently outside of public ownership.

Building Setback in Relation to Canyon Resources

The Levers' current site plan places one corner of their house at the edge of a slope, 116.5 feet from the bottom of the canyon, while the rest of their house and surrounding

landscaping occupy the property away from this point. As is typical of the rolling-hill/incised gully kind of topography in the Malibu area, the actual "top-of-slope" edge above the canyon is very difficult to define. In my view the issue for the building setback is its relation to the natural resources of the canyon itself, from which the house will be at least 116 feet distant. Pulling the house corner even further back from this point would result in a great economic impact to the Levers, an impact that seems unnecessary, given the fact that no additional resource protection would be achieved. Issues related to placement of the house close to, or at, a slope edge, regardless of how such a slope edge is defined on this property, are readily addressed through erosion control measures that would be built into conditions of a permit and the final grading plans for the house. I have also worked with the Levers to incorporate native plant species into their landscaping plans, and would continue to advise them as needed ensure that any fill slopes and other areas of bare soil exposed during grading would be revegetated promptly with native species that are representative of the Venturan coastal sage scrub and native grassland that was likely present historically.

Conclusions

Based on these considerations, I do not find that the building footprint and setback proposed by the Levers would significantly impact any sensitive biological resources, nor (with proper measures) would construction necessarily expose the canyon to adverse impacts from erosion and siltation. In the long-term, I find that the proposed project will result in significant environmental improvement of the property, and will not preclude the City or the CCC from pursuing any future plans with respect to restoration of this coastal canyon.

If the present case represented a trade-off between property values and significant coastal resources or sensitive species, as an ecologist I would opt in favor of the coastal resources and species. However, in the present case, no significant coastal resources or sensitive species will be impacted by keeping the building footprint as shown in the site plan, and I believe it is within the CCC's purview to condition the Levers' permit to address erosion or other issues with which the CCC might be concerned. The Levers' proposed landscape plan is a small but positive beginning to help reverse 60 years of past "benign neglect" of this canyon. I do not see any violation of intent of the Coastal Act or CCC's regulations for implementing the Coastal Act.

In summary I see nothing to be gained, environmentally, by placing the setback of the building footprint further away from the slope edge than is currently proposed or in denying a CDP to the Levers, nor do I see that approval of the Levers' project would necessarily set a precedent for future discretionary actions by the CCC regarding other properties.

I hope this information is helpful to the decisions of you and your staff. If you have any questions or need more information, please do not hesitate to contact me at 714-751-7373 ext. 7933.

Sincerely,

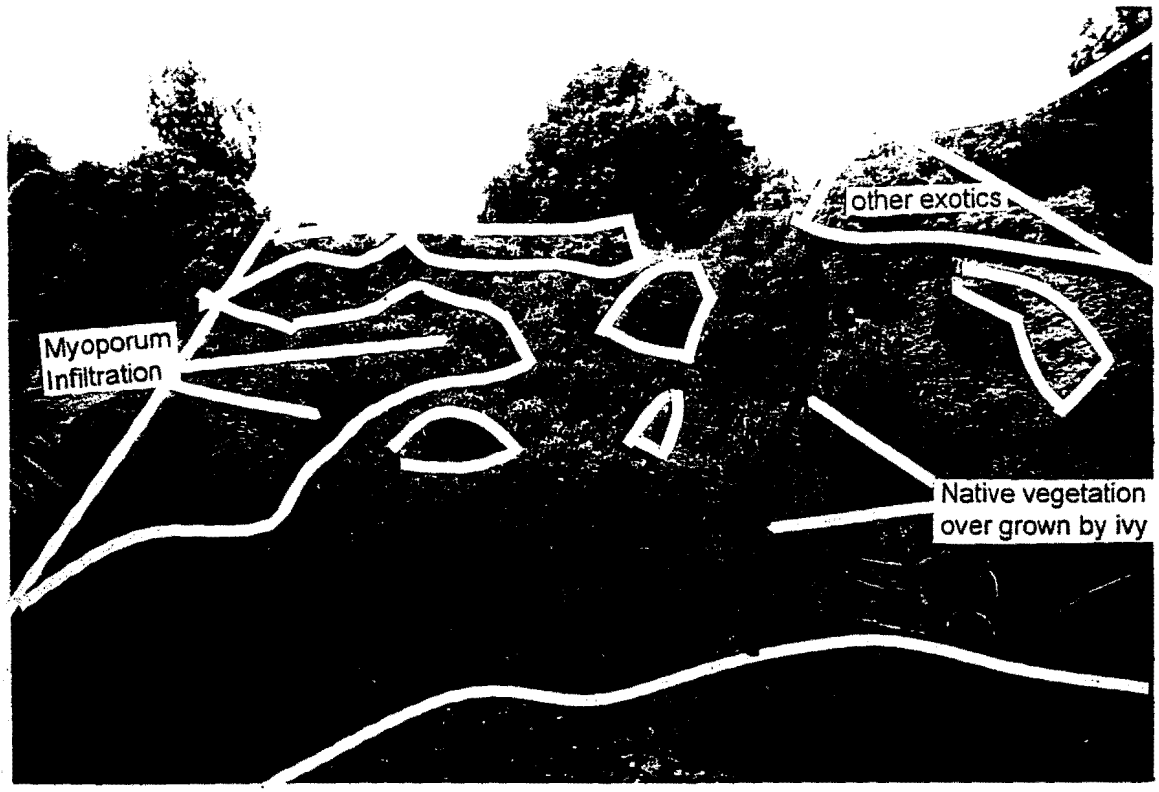
PSOMAS

Dr. Edith Read, Ph.D.
Manager of Biological Resources

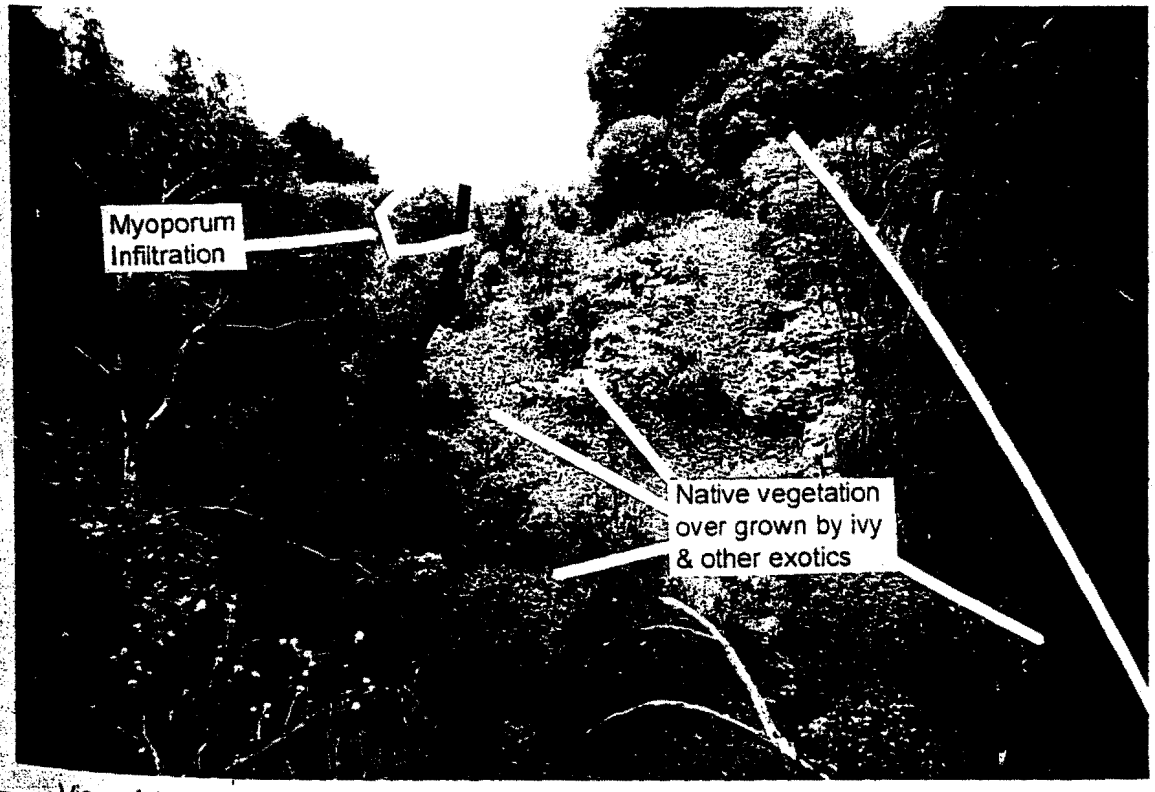
Cc: Melanie Hale

1 28827 Grayfox Street. Project site. View from southwest. Currently overgrown with annual grasses. House across canyon (6957 Whitesands Pl.) Visible from site. Note trees on both sides of site located on adjacent parcels.

2 View from northeast (Across canyon) Extensive overgrowth from adjacent sites of exotic plants (Myoporum) and ivy. See photos 3 &4



3 View of site from across canyon. (Property Lines are shown in yellow) Note infiltration of Myoporum and other exotics from the southeast (left) property line . Also note the extensive infiltration of ivy from the northwest (right) property line.



4 View of the northwesterly edge of the site. (Property line shown in yellow) The extensive ivy infiltration has completely obliterated the native plants along this zone. Further ivy undergrowth continues across the site to the southwest under the existing vegetation.

5 Creek bed along southwest edge. Note the exotic ivy and other plants along this bank. Corner of site is just beyond bridge

6 Closer view of lower corner of site. Completely over run by ivy from a house two lots away

7 View to northwest from project site. Note ivy undergrowth, and exotic plants encroaching on sparse native vegetation.

8 View southeasterly from project site. Note shrub engulfed by ivy, and continuing undergrowth. Also note various exotic plants among coyote bush.

9 Adjacent House, 28837 Grayfox. Edge of house as it steps out over edge of hillside (see map) Also note overgrowth of exotic plants into the canyon. This overgrowth has run rampant throughout this end of the canyon.

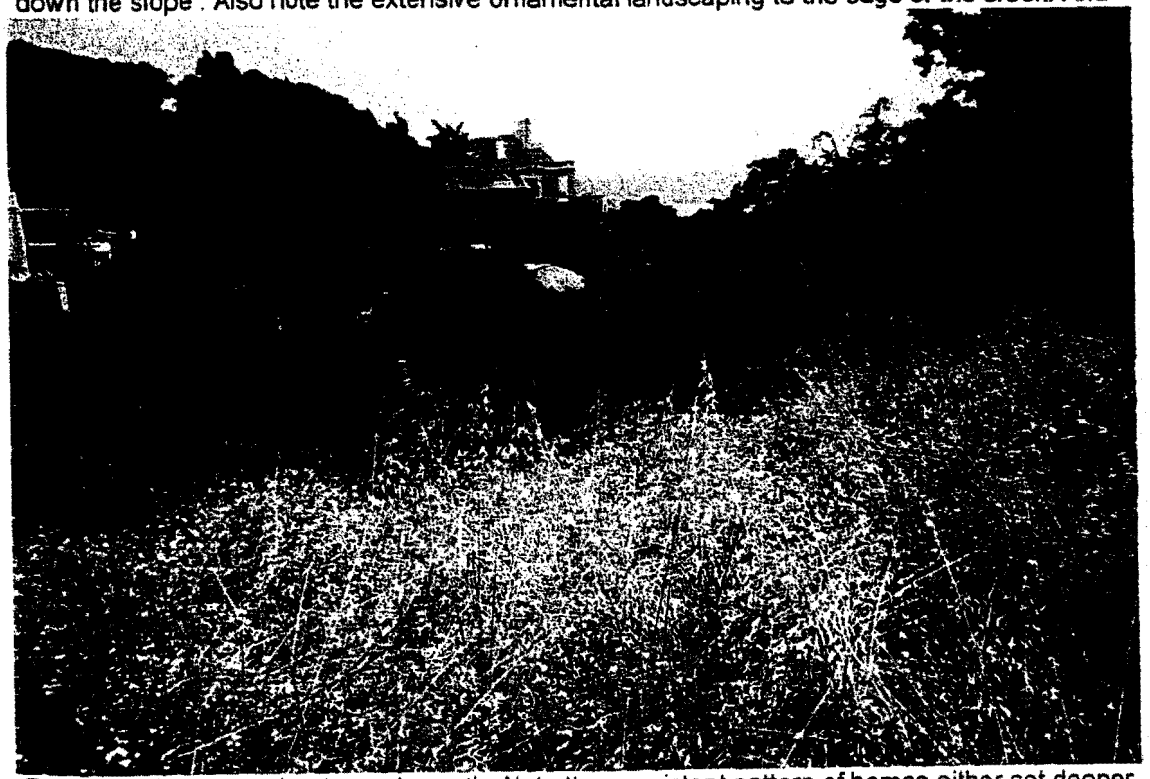
10 Adjacent House 28815 Grayfox. House situated on steeper slope which precluded location of the structure closer to the creek. Note continuance of exotics plants into the canyon. Native plant life is almost non-existent.

11 West side of canyon, Two adjacent homes as they both project into the canyon. The remaining native plant life is severely encroached upon by ornamental plant life.

12 Development on west side of canyon north of site. Note that these homes also project into the canyon.

LEVER RESIDENCE

13 East side of canyon. 6957 Whitesands Pl. Directly across from the subject property. This home also steps deeply into the canyon. Also a pool and fence structure was recently approved farther down the slope . Also note the extensive ornamental landscaping to the edge of the creek. And



14 East side of canyon, view towards south. Note the consistent pattern of homes either set deeper into the canyon, or stepping down into the canyon.

City of Malibu

23555 Civic Center Way, Malibu, California 90265-4804
(310) 456-2489 Fax (310) 456-3356

Planning Department

August 6, 1998

To: Planning Staff

From: Craig Ewing, Planning Director

RE: Determination of Top of Slope

The City uses the term "top of slope" in certain setback standards, most notably those applying to Environmentally Sensitive Habitat Areas (ESHA's). Presently, there is no definition for "top of slope" in the General Plan or Zoning Ordinance. On beach bluffs and many inland canyons, the top of slope is a singular and very distinct break in the direction of slope. In some cases, however, the terrain indicates several slope segments - each with its own top of slope. In order to determine the sole "top of slope" for purposes of setting setback lines, please follow this procedure, using a cross-section which best represents the site's slope conditions (see graphic below):

1. Identify each slope segment and its "top of slope" elevation
2. Beginning with the segment at which the site begins to slope from the flat, establish the slope for each segment
3. Identify the first segment which exceeds a slope of 4:1
4. The top of slope for that segment is the "top of slope" for the site

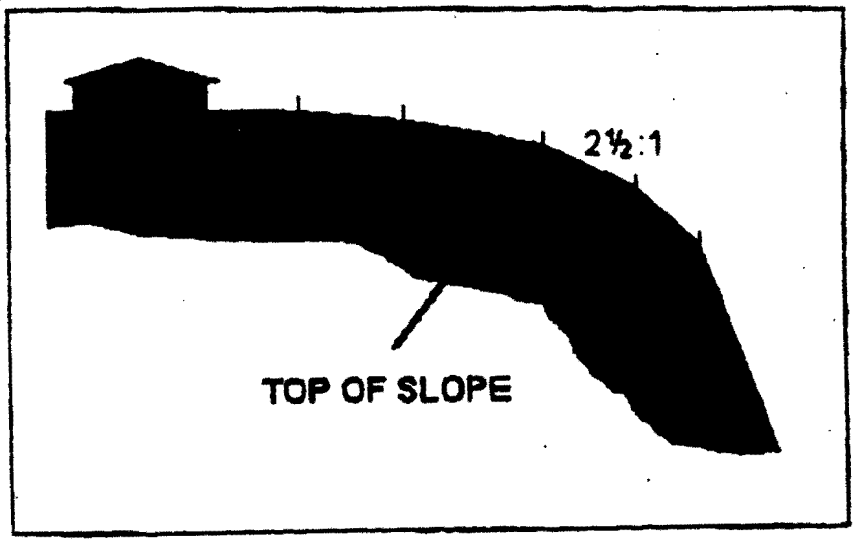


EXHIBIT NO. 13a
APPLICATION NO. Lever
4-99-211
"Top-of-Slope"

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August 20, 1998

VIA FEDERAL EXPRESS

Craig A. Ewing
Planning Director
City of Malibu
23555 Civic Center Way
Malibu, CA 90265-4865

Re: 28827 Grayfox (Lever), PPR No. 97-176 - Completion of Environmental Review

Dear Mr. Ewing:

The purpose of this letter is to confirm your determination of the "top-of-slope" as applied to the above-referenced project site for purposes of the Environmental Review Board (the "ERB") Resolution No. 98-05, adopted on July 22, 1998, and the Biological Review dated August 3, 1998 (collectively referred to as the "Resolution"). This determination was made at a meeting held on August 6, 1998 attended by yourself, Ara Mihranian and Mark Lever and his attorneys, Clare Bronowski of this office and myself.

During the meeting, you stated that for the purposes of determining the "top-of-slope" for property such as the project site, you have determined to apply the 4(H): 1(V) ratio as a threshold, because the City Engineer has adopted this ratio as a threshold to determine when a stability analysis should be performed on a slope. (See Guidelines for the Preparation of Engineering Geologic and Geotechnical Engineering Reports & Procedures for Report Submittal prepared by Donald Kowalewsky, City Geologist, and Bing Yen & Associates, Inc., City Geotechnical Engineer, dated February 1993 at page 13).

4 pages

EXHIBIT NO. 13b
APPLICATION NO.
Lever
4-99-211
"Top of Slope"

58944.1

With respect to the subject property, which has two natural breaks, the 4(H): 1(V) ratio threshold is applied as follows. The project site has two possible "tops-of-slope", a top-of-slope located within the vicinity of the 90 foot contour (the "First Top-Of-Slope") and a top-of-slope located between the 78.5 and 83.5 foot contour as determined by a "top-of-slope" survey dated July 7, 1998 by Robert A. MacNeil, licensed surveyor (the "Survey") (the "Second Top-Of-Slope"). Given this typography, you concluded that the "top-of-slope" of the project site for the purposes of the Resolution is the Second Top-Of-Slope so long as the slope ratio between the First-Top-Of-Slope and Second Top-Of-Slope is no steeper than 4(H): 1(V). If the slope ratio between the First Top-Of-Slope and the Second Top-Of-Slope becomes steeper than 4(H): 1(V) (i.e., less than 4(H): 1(V)), the "top-of-slope" of the project site becomes the First Top-Of-Slope at that point.

Pursuant to your request, we have enclosed an exhibit setting forth the slope ratio between the First Top-of-Slope (i.e., estimated at the 90 foot contour) and the Second Top-Of-Slope. The enclosed exhibit demonstrates that the slope ratio of the property between the 90 foot contour and the Second Top-Of-Slope is 4(H): 1(V) or greater from the eastern property line to a point 20.75 feet from the western property line. Accordingly, based on your determination, the "top-of-slope" of the property for the purposes of the Resolution is located at the Second Top-Of-Slope as shown on the Survey from the eastern property line to a point 20.75 feet from the western property line, and the proposed house can be located at the Second Top-Of-Slope, so long as there is a side yard setback of at least 20.75 feet from the western property line.

Pursuant to your instructions, the applicant will submit a revised site plan that conforms with the Resolution and your determination on August 6, 1998 as confirmed and set forth herein. You stated that the applicant has complied with all necessary requirements for conceptual approval from the Planning Department other than completion of the environmental review. Accordingly, it is our understanding the application will receive conceptual approval from the Planning Department as long as the revised site plan conforms to the foregoing and meets all other requirements of the zoning ordinance.

Please call me as soon as possible if the foregoing does not accurately reflect your determination, or if you have questions regarding the foregoing or the enclosed exhibit. If we do not hear from you, we shall assume that you have concluded that the foregoing confirmation is accurate and that the exhibit is satisfactory.

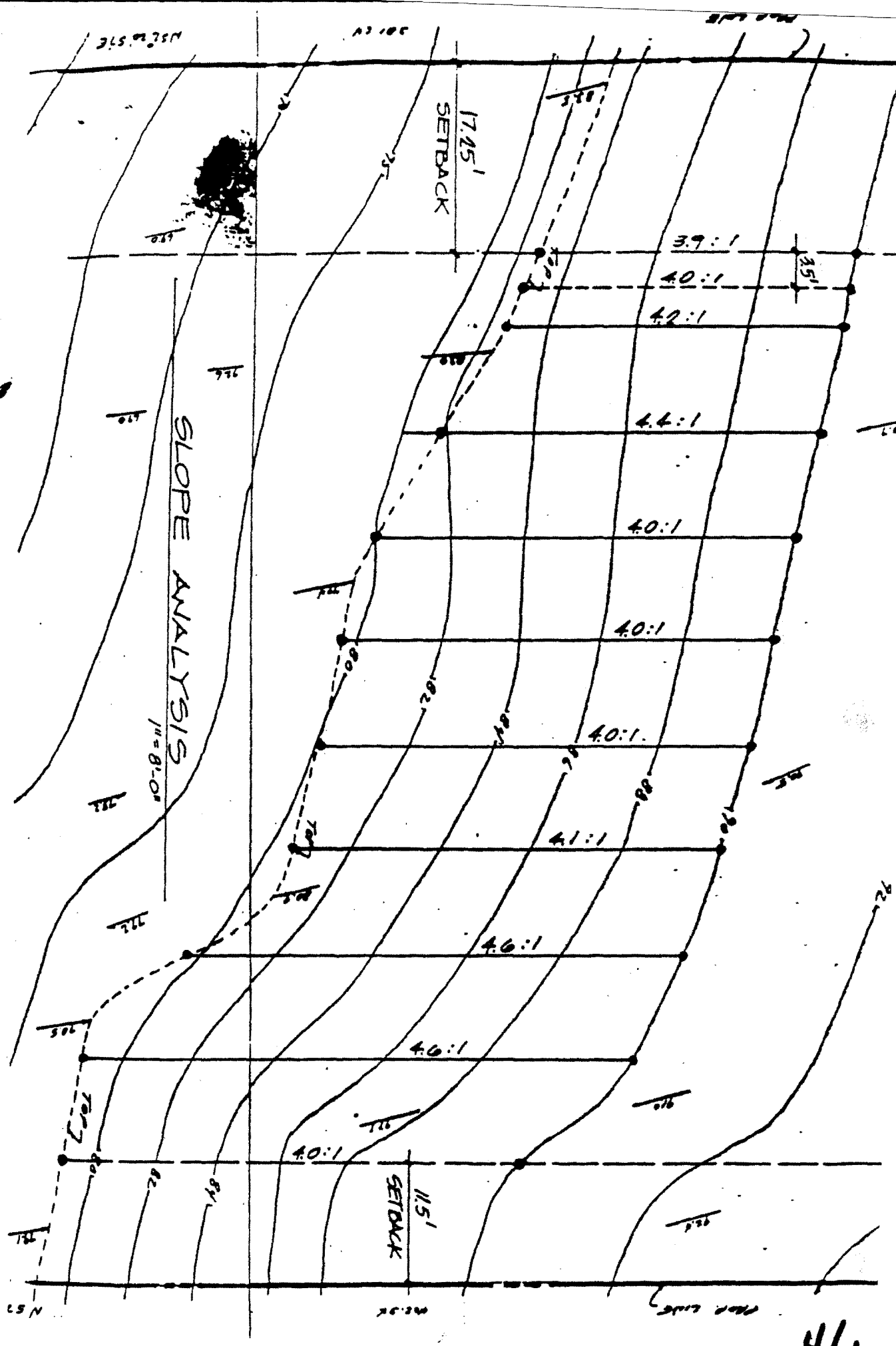
Thank you for your assistance with this project.

Very truly yours,

Alisa M. Morgenthaler

Alisa Morgenthaler
of CHRISTENSEN, MILLER, FINK, JACOBS,
GLASER, WEIL & SHAPIRO, LLP

cc: Mark Lever (w/enc.)
Clare Bronowski, Esq. (w/enc.)
Peter Choate (via facsimile)
Douglas Lindors (via facsimile)


SLOPE ANALYSIS
1" = 8'-0"
17.45' SETBACK
11.5' SETBACK
3.9 : 1
4.0 : 1
4.2 : 1
4.4 : 1
4.0 : 1
4.0 : 1
4.0 : 1.
4.1 : 1
4.6 : 1
4.6 : 1
4.0 : 1
35'