

**CALIFORNIA COASTAL COMMISSION**

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Filed: 1/27/05  
49<sup>th</sup> Day: 3/17/05  
180<sup>th</sup> Day: 7/26/05  
Staff: LF-V  
Staff Report: 5/19/05  
Hearing Date: 6/10/05



BC

## RECORD PACKET COPY

### STAFF REPORT: REGULAR CALENDAR

**APPLICATION NO.:** 4-03-022

**APPLICANTS:** Robert and Nancy Rex

**PROJECT LOCATION:** 825 Cold Canyon Road, Calabasas (Los Angeles County)

**PROJECT DESCRIPTION:** Request for after-the-fact approval for construction of an approximately 5,475 sq. ft. corral, an approximately 45 sq. ft. portable wooden hay shed, an approximately 120 sq. ft. wooden tack shed with approximately 120 sq. ft. metal awning supported on posts, and an approximately 13 foot long, 1.5 foot high rock retaining wall.

**LOCAL APPROVALS RECEIVED:** Los Angeles County Department of Regional Planning, Approval in Concept, dated April 7, 2003; Los Angeles County Environmental Review Board, Consistent After Modifications Determination, dated November 18, 2002; Los Angeles County Fire Department, Approval for Accessory Use Buildings, dated April 24, 2002; Los Angeles County Fire Department, Recommended Oak Tree Exemption, dated June 25, 2002; California Department of Fish and Game, Streambed Alteration Agreement No. R5-2002-0035, dated May 29, 2002;

**SUBSTANTIVE FILE DOCUMENTS:** 1986 Los Angeles County Malibu Land Use Plan; Coastal Development Permit (CDP) No. P-81-7701; CDP No. 5-83-290-E6; CDP No. 4-92-072; CDP Waiver No. 4-97-045-W.

#### SUMMARY OF STAFF RECOMMENDATION

Staff recommends denial of the application, as the proposed after-the-fact approval of the unpermitted development would allow a horse corral and associated structures within and adjacent to an oak woodland ESHA and United States Geological Service (USGS) designated blue-line stream, and would not minimize impacts to ESHA or water quality as required by Sections 30230, 30231 and 30240 of the Coastal Act. The standard of review for the proposed project is the Chapter Three policies of the Coastal Act. In addition, the policies of the certified Malibu-Santa Monica Mountains Land Use Plan (LUP) serve as guidance.

## **I. STAFF RECOMMENDATION:**

**MOTION:** *I move that the Commission approve Coastal Development Permit No. 4-03-022 for the development proposed by the applicant.*

### **Staff Recommendation of Denial:**

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

### **Resolution to Deny the Permit:**

The Commission hereby denies a coastal development permit for the proposed development on the grounds that the development will not conform with the policies of Chapter 3 of the Coastal Act and will prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit would not comply with the California Environmental Quality Act because there are feasible mitigation measures or alternatives that would substantially lessen the significant adverse impacts of the development on the environment.

## **II. FINDINGS AND DECLARATIONS**

The Commission hereby finds and declares:

### **A. PROJECT DESCRIPTION AND BACKGROUND**

The applicants request after-the-fact approval for construction of an approximately 5,475 sq. ft. corral, an approximately 45 sq. ft. portable wooden hay shed, an approximately 120 sq. ft. wooden tack shed with approximately 120 sq. ft. metal awning supported on posts, and an approximately 13 foot long, 1.5 foot high rock retaining wall (**Exhibits 5 - 7**).

The project site is an approximately 1.73 acre lot located north of Cold Canyon Road, and immediately east of the Monte Nido subdivision (**Exhibits 3 and 8**). The site is located within the Cold Creek Ranch subdivision, which contains estate-sized residential properties (**Exhibit 4**). The subject parcel contains a graded pad with an existing single-family residence approved in CDP No. 4-02-072, and slopes that descend north towards an unnamed stream that crosses the northern portion of the lot (**Exhibits 2 and 4**).

The stream is a designated intermittent United States Geological Survey (USGS) blue-line stream, and a tributary to Cold Creek, a USGS-designated perennial blue line stream located approximately 300 meters downstream. The on-site stream and Cold Creek are designated environmentally sensitive habitat areas (ESHA) in the certified Malibu-Santa Monica Mountains LUP. The areas surrounding Cold Creek and its tributaries, including the on-site stream, contain oak woodlands that are designated Significant Oak Woodland and Savannah in the Malibu-Santa Monica Mountains LUP, and that are considered environmentally sensitive habitat areas

(ESHAs) pursuant to Section 30107.5 of the Coastal Act and the provisions for ESHA designation under Policy 57 of the Malibu-Santa Monica Mountains LUP (**Exhibits 8 - 10**).

The corral and tack shed that are the subject of this application are located in the lower portion of the property, approximately five to ten feet north of the blue-line stream; the hay shed is located just south of the stream, adjacent to a hiking and equestrian trail that skirts the eastern property line. The corral and tack shed are located beneath the riparian canopy, and within the protected zones of two mature Coast live oak trees (*Quercus agrifolia*) and one large sycamore tree (*Platanus racemosa*) (**Exhibits 5 and 10**).

On June 11, 1981, the Commission approved P-81-7701 to divide an 85-acre parcel into 10 residential lots and dedicate 56 acres for open space and public recreation. The permit was approved with a requirement to dedicate a public access trail within a 60-foot dedicated easement and required either 9 Transfer Development Credits (TDCs) adjacent to Cold Creek or participation in a Coastal Conservancy lot retirement program.<sup>1</sup> In the ensuing 7 years the applicant for the subdivision submitted 6 extension requests (5-83-290 E1 through E6<sup>2</sup>). On June 11, 1988, the Commission granted to Cold Creek Associates Coastal Development Permit 5-83-290-E6 for the division of 85 acres into 10 residential lots and one 56-acre open space lot, grading for building pads and roads, and utilities. The coastal development permit was issued on November 22, 1988.

The subject property was created as part of a 10-unit residential subdivision authorized by CDP No. 5-83-290-E6, which was issued in November 1988. The applicants purchased the property in August 1990, and in May 1992 received a coastal development permit (CDP No. 4-92-072) to build a 2,690 sq. ft. single-family residence, with garage, driveway, and septic system. The authorized development was located within the graded pad area approved under CDP No. 5-83-206-E6, immediately adjacent to Cold Canyon Road, and in an area not designated as ESHA. CDP No. 4-92-072 was approved with two special conditions regarding future improvements and conformance with geologic recommendations. The applicants subsequently received a waiver (CDP Waiver No. 4-97-045-W) for additions to the residence, including a new family room, hall extension, bedroom, and bath, totaling 832 sq. ft. The waiver also authorized approximately 80 cu. yds. of grading for foundations. With the exception of fuel modification and the public trail, no development has been authorized on the slopes below the developed pad or in the area of the unpermitted development (**Exhibit 2**).

On May 11, 2001, Commission staff discovered the unpermitted development that is the subject of this application. Staff observed a horse in the corral and noted that manure was being dumped into the ESHA/stream corridor in conjunction with the horse facility. Staff estimated that the development was constructed in 1999 or later based on slides of the area taken that year. On September 4, 2001, Enforcement Division staff confirmed the existence of the unpermitted development. On October 24, 2001, Enforcement Division staff sent the applicants a Notice of Violation of the California Coastal Act, requesting that the applicants submit a coastal

<sup>1</sup> The access trail required under CDP No. P-81-7701 was the only trail approved or required by the Commission within this subdivision for either public or private use.

<sup>2</sup> A new system of numbering permits was established approximately halfway through 1981 when the regional Commissions were disbanded. When "older" permits (prior to the new system in 1981) are amended or extended they are typically given a new permit number with the appropriate suffix. In this case 5-83-290 E was the permit number given to Coastal Development Permit P-81-7701 when the applicants for the subdivision requested permit extensions; and therefore 5-83-290 is identical to permit P-81-7701.

development permit (CDP) application to either remove or seek approval for the unpermitted development. The applicants submitted a CDP application (CDP No. 4-02-032) on February 7, 2002. That application was returned for incompleteness on February 3, 2003. The current application was submitted on March 6, 2003 and was also incomplete. The materials needed for a complete application were submitted on January 27, 2005.

## **B. ENVIRONMENTALLY SENSITIVE HABITAT AND WATER QUALITY**

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

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

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

Section 30231 of the Coastal Act requires that the biological productivity and the quality of coastal waters and streams be maintained and, where feasible, restored through, among other means, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flows, maintaining natural buffer areas that protect riparian habitats, and minimizing alteration of natural streams. In addition, Sections 30107.5 and 30240 of the Coastal Act state that environmentally sensitive habitat areas must be protected against disruption of habitat values. Therefore, when considering any area, such as the Santa Monica Mountains, with regard to an ESHA determination one must focus on three main questions:

- 1) Is a habitat or species rare?
- 2) Is the habitat or species especially valuable because of its special nature or role in the ecosystem?

3) Is the habitat or species easily disturbed or degraded by human activities and developments?

The Commission has found that the Mediterranean Ecosystem in the Santa Mountains is itself rare, and valuable because of its relatively pristine character, physical complexity, and resultant biological diversity. Therefore, habitat areas that provide important roles in that ecosystem are especially valuable and meet the second criterion for the ESHA designation.

Woodlands that are native to the Santa Monica Mountains, such as oak woodlands and riparian woodlands, have many important roles in the ecosystem. Native trees prevent the erosion of hillsides and stream banks, moderate water temperatures in streams through shading, provide food and habitat, including nesting, roosting, and burrowing to a wide variety of wildlife species, contribute nutrients to watersheds, and are important scenic elements in the landscape. In the Santa Monica Mountains, coast live oak woodland such as the woodland in the area of the project site occurs mostly on north slopes, shaded ravines and canyon bottoms. Besides the coast live oak, this plant community includes hollyleaf cherry, California bay laurel, coffeeberry, and poison oak. Coast live oak woodland is more tolerant of salt-laden fog than other oaks and is generally found nearer the coast<sup>3</sup>. Coast live oak also occurs as a riparian corridor species within the Santa Monica Mountains. The important ecosystem functions of oak woodlands and savanna are widely recognized<sup>4</sup>. These habitats support a high diversity of birds<sup>5</sup>, and provide refuge for many species of sensitive bats<sup>6</sup>. Typical wildlife in this habitat includes acorn woodpeckers, scrub jays, plain titmice, northern flickers, cooper's hawks, western screech owls, mule deer, gray foxes, ground squirrels, jackrabbits and several species of sensitive bats. Therefore, because of their important ecosystem functions and vulnerability to development, the Commission finds that oak woodlands and savanna within the Santa Monica Mountains meet the definition of ESHA under the Coastal Act.

The subject parcel contains a graded pad with an existing single-family residence, and slopes that descend north towards an unnamed stream that crosses the northern portion of the lot. The stream is a designated intermittent United States Geological Survey (USGS) blue-line stream, and a tributary to Cold Creek, a USGS-designated perennial blue line stream located approximately 300 meters downstream. The on-site stream and Cold Creek are designated environmentally sensitive habitat areas (ESHA) in the certified Malibu-Santa Monica Mountains LUP. The areas surrounding Cold Creek and its tributaries, including the on-site stream, contain oak woodlands that are designated Significant Oak Woodland and Savannah in the Malibu-Santa Monica Mountains LUP, and that are considered environmentally sensitive habitat areas (ESHAs) pursuant to Section 30107.5 of the Coastal Act and the provisions for ESHA designation under Policy 57 of the Malibu-Santa Monica Mountains LUP. The stream corridor that crosses the subject property is located within a band of oak woodland extending from Cold

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<sup>3</sup> NPS 2000. op. cit.

<sup>4</sup> Block, W.M., M.L. Morrison, and J. Verner. 1990. Wildlife and oak-woodland interdependency. *Fremontia* 18(3):72-76. Pavlik, B.M., P.C. Muick, S. Johnson, and M. Popper. 1991. *Oaks of California*. Cachuma Press and California Oak Foundation, Los Olivos, California. 184 pp.

<sup>5</sup> Cody, M.L. 1977. Birds. Pp. 223-231 in Throver, N.J.W., and D.E. Bradbury (eds.). *Chile-California Mediterranean scrub atlas*. US/IBP Synthesis Series 2. Dowden, Hutchinson & Ross, Stroudsburg, Pennsylvania. National Park Service. 1993. A checklist of the birds of the Santa Monica Mountains National Recreation Area. Southwest Parks and Monuments Assoc., 221 N. Court, Tucson, AZ. 85701

<sup>6</sup> Miner, K.L., and D.C. Stokes. 2000. Status, conservation issues, and research needs for bats in the south coast bioregion. Paper presented at *Planning for biodiversity: bringing research and management together*, February 29, California State University, Pomona, California.

Canyon Road to the stream's outlet at Cold Creek, and continuing along Cold Creek. Commission staff biologist John Dixon has reviewed the subject area and has confirmed that the riparian and oak woodland habitat on the site is ESHA.

Therefore, due to the important ecosystem roles of oak woodlands in the Santa Monica Mountains (detailed in **Exhibit 1**), and the fact that the oak woodland habitat on the subject site is part of a larger, contiguous band of oak woodland habitat, the Commission finds that oak woodland habitat on the subject site meets the definition of ESHA under the Coastal Act.

As explained above, the subject site contains riparian and oak woodland habitat that constitutes an environmentally sensitive habitat area (ESHA) pursuant to Section 30107.5. Section 30240 requires that "environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas." Section 30240 restricts development on the parcel to only those uses that are dependent on the resource. The applicants request after-the-fact approval for construction of an approximately 5,475 sq. ft. corral, an approximately 45 sq. ft. portable wooden hay shed, an approximately 120 sq. ft. wooden tack shed with approximately 120 sq. ft. metal awning supported on posts, and an approximately 13 foot long, 1.5 foot high rock retaining wall. The corral and tack shed are located in the lower portion of the property, approximately five to ten feet north of the blue-line stream, and within the protected zones of two mature Coast live oak trees (*Quercus agrifolia*) and one large sycamore tree (*Platanus racemosa*). (The protected zone of an oak tree extends five feet from the dripline, or 15 feet from the trunk of the tree, whichever is further.) The rock wall is located immediately north of the stream, and east of the corral. The hay shed is located approximately 15 feet south of the stream, adjacent to the trail.

As corrals and associated sheds and walls do not have to be located within ESHAs to function, the Commission does not consider them to be a use dependent on ESHA resources. Thus, application of Section 30240 requires denial of the development, because the project would result in significant disruption of habitat values and is not a use dependent on those sensitive habitat resources.

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

The Commission interprets Section 30010, together with the *Lucas* decision, to mean that if Commission denial of the project would deprive an applicant's property of all reasonable economic use, the Commission may be required to allow some development even where a

Coastal Act policy would otherwise prohibit it, unless the proposed project would constitute a nuisance under state law. In other words; Section 30240 of the Coastal Act cannot be read to deny all economically beneficial or productive use of land because Section 30240 cannot be interpreted to require the Commission to act in an unconstitutional manner.

In this case, the subject property contains an approximately 3,522 sq. ft. single family residence with garage, driveway, and septic system. Therefore, the applicants already enjoy use of the property as a single-family residence. The unpermitted horse facilities and structures that are the subject of this application are accessory uses that are not necessary to provide a reasonable economic use of the property. Furthermore, the unpermitted corral and associated structures would result in significant impacts to the riparian and oak woodland ESHA.

Oak trees and oak woodlands are becoming increasingly rare due to increased direct and indirect impacts from development and other factors, such as "Sudden Oak Death," a pathogen that threatens the lives of oak trees and that has become epidemic in California<sup>7</sup>. Over the past 200 years, human activities have dramatically changed the complexion of oak woodlands and vast acreages have been removed for intensive agriculture, forage production, fuel wood, and urban and residential development<sup>8</sup>. The publication, "A Planner's Guide for Oak Woodlands," states:

*It is clearly recognized that the future viability of California's oak woodland resources is dependent to a large extent on the maintenance of large scale land holdings or on smaller multiple holdings that are not divided into fragmented, non-functioning biological units.... Today, research suggests that residential development from California's growing human population is the single largest threat to the state's oak woodlands.*

Oak trees and oak woodlands are not only rare and especially valuable due to their role in ecosystems, but they are also sensitive and may be easily disturbed or degraded by human activities and development. This sensitivity is reflected in the publication, "Oak Trees: Care and Maintenance," by the Los Angeles County Department of Forester and Fire Warden in 1989, which states:

*Oak trees in the residential landscape often suffer decline and early death due to conditions that are easily preventable. Damage can often take years to become evident, and by the time the tree shows obvious signs of disease it is usually too late to help. Improper watering...and disturbance to root areas are most often the causes.*

That publication goes on to state:

*Oaks are easily damaged and very sensitive to disturbances that occur to the tree or in the surrounding environment. The root system is extensive but surprisingly shallow, radiating out as much as 50 feet beyond the spread of the tree leaves, or canopy. The ground area at the outside edge of the canopy, referred to as the dripline, is especially important: the tree obtains most of its surface water and nutrients here, as well, as conducts an important exchange of air and other gases.*

In addition, this publication also addresses the sensitive nature of oak trees to human disturbance, stating:

<sup>7</sup> *Tracking a Mysterious Killer, The Relentless Spread of Sudden Oak Death*, California Coast & Ocean, Winter 2001-02, Elizabeth F. Cole, page 3.

<sup>8</sup> *A Planner's Guide for Oak Woodlands*, University of California, Integrated Hardwood Range Management Program, 1993, page 2.



*Any change in the level of soil around an oak tree can have a negative impact. The most critical area lies within 6' to 10' of the trunk: no soil should be added or scraped away. . . . Construction activities outside the protected zone can have damaging impacts on existing trees. . . . Digging of trenches in the root zone should be avoided. Roots may be cut or severely damaged, and the tree can be killed. . . . Any roots exposed during this work should be covered with wet burlap and kept moist until the soil can be replaced. The roots depend on an important exchange of both water and air through the soil within the protected zone. Any kind of activity which compacts the soil in this area blocks this exchange and can have serious long term negative effects on the trees....*

In addition, in recognition of the sensitive nature of oak trees to human disturbance and to increase protection of these sensitive resources, the Los Angeles County Oak Tree Ordinance defines the "protected zone" around an oak tree as follows:

*The Protected Zone shall mean that area within the dripline of an oak tree and extending therefrom to a point at least 5 feet outside the dripline or 15 feet from the trunk, whichever distance is greater.*

Development within an area that maintains oak tree root systems can eliminate the exchange of water, nutrients, air, and other gases, thereby harming or killing the oak trees. In addition, development, particularly within sensitive areas or on steep slopes, can increase erosion, which can adversely impact surrounding oak tree resources and ESHA by interfering with the interchange of air and water to the root zones of the oak trees.

Equestrian traffic has been found to compact soils and can have detrimental impacts on those oak trees whose driplines are located in or adjacent to equestrian facilities. In regards to a horse facility in the Santa Monica Mountains, Doug McCreary, Program Manager for the University of California Cooperative Extension Integrated Hardwood Range Management Program states:

*"...my observations are that horses are the worst in causing compaction in a confined situation. Six horses over 2 acres seems like an extremely high density to me (here at the SFREC we have about one cow per 20 acres) and I would guess that after a year, there would be little or no ground vegetation left in the pasture and there would be a risk of heavy compaction during wet periods."*

McCreary also states:

*"I have observed places where horses totally girdle oak trees by chewing away the bark. I visited a ranch (where) dozens of large trees (8-16 inches in diameter) were completely stripped of their bark from the ground to over 6 feet high. The horses weren't underfed -- just apparently bored. I've also heard it suggested that horses will do this when they have a potassium deficiency."*

In addition, the Commission finds that, in the case of soil compaction, it can frequently take many years before damage to oak trees becomes apparent.

As noted above, the applicants request after-the-fact approval for construction of an approximately 5,475 sq. ft. corral, an approximately 45 sq. ft. portable wooden hay shed, an approximately 120 sq. ft. wooden tack shed with approximately 120 sq. ft. metal awning supported on posts, and an approximately 13 foot long, 1.5 foot high rock retaining wall. The



corral and tack shed are located in the lower portion of the property, approximately five to ten feet north of the blue-line stream, and within the protected zones of two mature Coast live oak trees (*Quercus agrifolia*) and one large sycamore tree (*Platanus racemosa*). The rock wall is located immediately north of the stream, and east of the corral. The hay shed is located approximately 15 feet south of the stream, adjacent to the trail.

Approval of the unpermitted development would allow an accessory equestrian use within and adjacent to the boundaries of the oak woodland ESHA, thus increasing the potential for soil compaction and other damage to the oak trees, and increasing human intrusion into this important resource area for wildlife. In addition, the unpermitted tack room is constructed of wood with metal awnings. The unpermitted tack room does not result in significant additional clearance of adjacent chaparral habitat, located to the north of the corral area, due to overlapping brush clearance and thinning requirements from neighboring residences. However, the Fire Department has required trimming of a mature oak tree that overhangs the structure. Thus, it is likely that the subject development would also result in future removal of oak tree branches.

The unpermitted corral and tack room are located, in part, beneath the canopies of oak and sycamore trees and thus within the boundaries of the oak woodland ESHA. As noted above, Section 30240(a) prohibits uses not dependent on ESHA to be located within ESHA. Therefore, the portions of the unpermitted development located within the boundaries of the oak woodland ESHA are inconsistent with Section 30240(a) of the Coastal Act.

In addition, Section 30240(b) requires development in areas adjacent to ESHA to be sited and designed to prevent impacts that would significantly degrade such areas, and to be compatible with the continuance of such habitat areas. In past permit actions, the Commission has consistently required development to be located no closer than 100 feet from ESHA, in order to protect the biological integrity of the ESHA, provide space for transitional vegetated buffer areas, and minimize human intrusion. The unpermitted corral and associated sheds are located in an area that extends from within the ESHA to approximately 50 feet north and, in the case of the hay shed, approximately 15 feet south of the ESHA. As discussed above, approval of the unpermitted corral and associated structures would significantly reduce the habitat value of the adjacent ESHA. Therefore, the proposed project is also inconsistent with Section 30240(b) of the Coastal Act.

Furthermore, Section 30231 requires maintenance of natural vegetation buffer areas that protect riparian habitats. Approval of the unpermitted development would sanction the unauthorized disruption of the buffer area that existed prior to construction of the corral. Therefore, as discussed further in Section C. below, the proposed project is also inconsistent with Section 30231 of the Coastal Act. Furthermore, Section 30231 and 30240(b) require maintenance of natural vegetation buffer areas that protect riparian habitats. Approval of the proposed development would sanction placement of structures and confinement of horses adjacent to the riparian habitat on site and would not maintain a natural vegetation buffer area to protect the riparian habitat. Therefore, as discussed further in Section C. below, the proposed project is also inconsistent with Section 30231 and 30240(b) of the Coastal Act.

Staff has considered potential siting and design alternatives to the proposed project that would minimize impacts to the on-site ESHA. Due to the size and configuration of the subject parcel, and the location of the existing single-family residence, no alternative corral sites exist on the property outside of the required 100 foot setback from the oak woodland ESHA. The existing

residence and driveway occupy most of the approved building pad area. Staff notes that the Los Angeles County Environmental Health Department requires a separation of at least fifty feet between residential development and confined animal facilities such as the proposed project. Staff can identify no areas on the site where the proposed horse facilities could provide both the fifty foot separation from the residence and the 100 foot buffer from ESHA. The applicants have identified a small (approximately 400 sq. ft.) area just north of the existing driveway that could be used for a horse corral; however, it appears from the submitted site plan that this area is within 100 feet of the stream. In addition, no alternative corral or shed designs would adequately minimize impacts to the oak woodland ESHA. Although no siting or design alternatives exist for the corral and sheds, these facilities are not necessary to provide a reasonable use of the property. Therefore, continued use of the single family residence without a corral and associated structures is the only feasible alternative that would minimize impacts to sensitive habitat.

Therefore, for the reasons discussed above, the Commission finds that the proposed project has not been sited or designed in a manner that would minimize impacts to oak woodland ESHA and is, therefore, not consistent with the Chapter 3 policies of the Coastal Act.

### **C. WATER QUALITY AND MARINE RESOURCES**

Section 30230 of the Coastal Act states:

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

Section 30231 of the Coastal Act States:

*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.*

Non-point source pollution is the pollution of coastal waters (including streams and underground water systems), by numerous sources that are difficult to identify on an individual basis. Non-point source pollutants include suspended solids, coliform bacteria and nutrients. These pollutants can originate from many different sources such as overflow septic systems, storm drains, runoff from roadways, driveways, rooftops and horse facilities.

Confined animal facilities are one of the most recognized sources of non-point source pollutants since these types of developments are cleared of vegetation and have concentrated sources of animal wastes. Use of horse corrals generates horse wastes, which includes manure, urine, waste feed, and straw, shavings and/or dirt bedding which can be significant contributors to

pollution. In addition, horse wastes contain nutrients such as phosphorous and nitrogen as well as microorganisms such as coliform bacteria which can cause eutrophication and a decrease in oxygen levels resulting in clouding, algae blooms, and other impacts affecting the biological productivity of coastal waters.

When the pollutants are swept into coastal waters by storm water or other means, they can cause cumulative impacts such as: eutrophication and anoxic conditions resulting in fish kills and diseases and the alteration of aquatic habitat, including adverse changes to species composition and size; excess nutrients causing algae blooms and sedimentation increasing turbidity, which both reduce the penetration of sunlight needed by aquatic vegetation that provide food and cover for aquatic species; disruptions to the reproductive cycle of aquatic species; acute and sublethal toxicity in marine organisms leading to adverse changes in reproduction and feeding behavior; and human diseases such as hepatitis and dysentery. These impacts reduce the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes and reduce optimum populations of marine organisms and have adverse impacts on human health.

These types of pollutants are particularly significant here since Cold Creek has been placed on the state's list of impaired water bodies (Clean Water Act 303(d) list). As noted above, the subject development is located on a tributary to Cold Creek, approximately 300 meters upstream from its outlet. Cold Creek is tributary to Malibu Creek, which is also listed as an impaired water body by the Los Angeles Regional Water Quality Control Board (LARWQCB). Malibu Creek outlets into Malibu Lagoon and Surfrider Beach, which is consistently one of the most polluted regions within the Santa Monica Bay<sup>9</sup>. The LARWQCB is developing a Total Maximum Daily Load (TMDL) for bacteria at Santa Monica Bay Beaches, including the Malibu beach area, which would include Cold Creek and Malibu Creek. Therefore, the discharge of additional pollutants into Cold Creek, via the tributary stream, detracts from the efforts being made by LARWQCB to restore this water body and further degrades an already impaired stream.

The unpermitted horse corral is located approximately five to ten feet north of a seasonal blue-line stream that is a tributary to Cold Creek. Ground cover within the unpermitted corral consists of sparse grasses and bare soil. Drainage from the corral area is by sheet flow runoff. According to the applicants, no horses have used the corral for the past two years. However, it can be assumed that the applicants would resume active use of the corral if their request for approval is granted. Rainfall or nuisance flow runoff would likely transport exposed sediments and, once horse use was resumed, horse wastes, into the stream. As discussed above, the discharge of pollutants, including sediment, can cause significant negative impacts to streams. In past permit actions, the Commission has required horse facilities to be located a minimum distance of 100 feet from streams (in addition to employing best management practices to minimize runoff of pollutants) in order to protect water quality.

Furthermore, Section 30231 requires maintenance of natural vegetation buffer areas that protect riparian habitats, and minimal alteration of natural streams. Approval of the unpermitted development would sanction the unauthorized disruption of the buffer area that existed prior to construction of the corral, and the unauthorized construction of a rock retaining wall at the top of the creek bank. The rock wall was constructed in order to support an informal path to the corral, and entailed alteration of the top of the stream bank, inconsistent with Section 30231

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<sup>9</sup> Data taken from Heal the Bay's Beach Report Card, weekly water testing between 6/01/98 and 2/25/03

Staff has considered potential siting and design alternatives to the proposed project that would minimize impacts to the on-site creek and water quality. Due to the size and configuration of the subject parcel, and the location of the existing single-family residence, no alternative corral sites exist on the property outside of the required 100 foot setback from the stream. The existing residence and driveway occupy most of the approved building pad area. Staff notes that the Los Angeles County Environmental Health Department requires a separation of at least fifty feet between residential development and confined animal facilities such as the proposed project. Staff can identify no areas on the site where the proposed horse facilities could provide both the fifty foot separation from the residence and the 100 foot buffer from the stream. The applicants have identified a small (approximately 400 sq. ft.) area just north of the existing driveway that could be used for a horse corral; however, it appears from the submitted site plan that this area is within 100 feet of the stream. In addition, no alternative corral or shed designs would adequately minimize impacts to water quality. Although no siting or design alternatives exist for the corral and sheds, these facilities are not necessary to provide a reasonable use of the property. Therefore, continued use of the single-family residence without a corral and associated structures is the only feasible alternative that would minimize impacts to sensitive habitat.

In summary, the unpermitted development does not maintain, enhance, and restore marine resources in a manner that will sustain the biological productivity of all species of marine organisms in coastal waters, and does not maintain and restore biological productivity and water quality of coastal waters by controlling polluted runoff, maintaining natural vegetation buffer areas, and minimizing alteration of natural stream banks. Therefore, approval of the unpermitted development, as proposed, is inconsistent with Sections 30230 and 30231 of the Coastal Act.

#### **D. VIOLATION**

Development has occurred on the subject site without the required coastal development permit, including, but not limited to, construction of an approximately 5,475 sq. ft. corral, an approximately 45 sq. ft. portable wooden hay shed, an approximately 120 sq. ft. wooden tack shed with approximately 120 sq. ft. metal awning supported on posts, and an approximately 13 foot long, 1.5 foot high rock retaining wall. The unpermitted development occurred prior to submission of this permit application. The applicants are requesting after-the-fact approval for the unpermitted development. As discussed above, the proposed project is not consistent with the ESHA and water quality policies of the Coastal Act and is denied. The Commission's enforcement division will evaluate further actions to address these matters.

On October 24, 2001, Enforcement Division staff sent the applicants a Notice of Violation of the California Coastal Act, requesting that the applicants submit a coastal development permit (CDP) application to either remove or obtain approval for the unpermitted development. The applicants submitted a CDP application (CDP No. 4-02-032) on February 7, 2002. That application was returned for incompleteness on February 3, 2003. The current application was submitted on March 6, 2003 and was also incomplete. The materials needed to complete the application were submitted on January 27, 2005.

Although development has occurred prior to submission of this permit application, consideration of this application by the Commission has been based solely upon the Chapter 3 policies of the Coastal Act. Commission review and action on this permit application does not constitute a

waiver of any legal action with regard to the alleged violation nor does it constitute an admission as to the legality of any development undertaken on the subject site without a coastal permit.

### **E. LOCAL COASTAL PROGRAM**

Section 30604(a) of the Coastal Act states:

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

Section 30604(a) of the Coastal Act provides that the Commission shall issue a Coastal Permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program that conforms with Chapter 3 policies of the Coastal Act. The preceding sections provide findings that the proposed project will not be in conformity with the provisions of Chapter 3. As discussed, there are no siting or design alternatives to the project that would conform with the ESHA or water quality policies of the Coastal Act. Therefore, the Commission finds that approval of the proposed development, would prejudice the County's ability to prepare a Local Coastal Program for the Santa Monica Mountains area that is also consistent with the policies of Chapter 3 of the Coastal Act as required by Section 30604(a).

### **F. CALIFORNIA ENVIRONMENTAL QUALITY ACT**

Section 13096(a) of the Commission's administrative regulations requires Commission approval of a Coastal Development Permit application to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California 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 that the activity may have on the environment.

The Commission finds that the proposed project will have significant adverse effects on the environment, within the meaning of the California Environmental Quality Act of 1970. Therefore, the proposed project is determined to be inconsistent with CEQA and the policies of the Coastal Act.

## CALIFORNIA COASTAL COMMISSION

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## MEMORANDUM

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

TO: Ventura Staff

SUBJECT: Designation of ESHA in the Santa Monica Mountains

DATE: March 25, 2003

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

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

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

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

Exhibit 1  
CDP 4-03-022  
ESHA Findings



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

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

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

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

### **Ecosystem Context of the Habitats of the Santa Monica Mountains**

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



California's coastal sage scrub, chaparral, oak woodlands, and associated riparian areas have analogues in just a few areas of the world with similar climate. Mediterranean ecosystems with their wet winters and warm dry summers are only found in five localities (the Mediterranean coast, California, Chile, South Africa, and south and southwest Australia). Throughout the world, this ecosystem with its specially adapted vegetation and wildlife has suffered severe loss and degradation from human development. Worldwide, only 18 percent of the Mediterranean community type remains undisturbed<sup>1</sup>. However, within the Santa Monica Mountains, this ecosystem is remarkably intact despite the fact that it is closely surrounded by some 17 million people. For example, the 150,000 acres of the Santa Monica Mountains National Recreation Area, which encompasses most of the Santa Monica Mountains, was estimated to be 90 percent free of development in 2000<sup>2</sup>. Therefore, this relatively pristine area is both large and mostly unfragmented, which fulfills a fundamental tenet of conservation biology<sup>3</sup>. The need for large contiguous areas of natural habitat in order to maintain critical ecological processes has been emphasized by many conservation biologists<sup>4</sup>.

In addition to being a large single expanse of land, the Santa Monica Mountains ecosystem is still connected, albeit somewhat tenuously, to adjacent, more inland ecosystems<sup>5</sup>. Connectivity among habitats within an ecosystem and connectivity among ecosystems is very important for the preservation of species and ecosystem integrity. In a recent statewide report, the California Resources Agency<sup>6</sup> identified wildlife corridors and habitat connectivity as the top conservation priority. In a letter to governor Gray Davis, sixty leading environmental scientists have endorsed the

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

<sup>2</sup> Ibid.

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

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

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

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

conclusions of that report<sup>7</sup>. The chief of natural resources at the California Department of Parks and Recreation has identified the Santa Monica Mountains as an area where maintaining connectivity is particularly important<sup>8</sup>.

The species most directly affected by large scale connectivity are those that require large areas or a variety of habitats, e.g., gray fox, cougar, bobcat, badger, steelhead trout, and mule deer<sup>9</sup>. Large terrestrial predators are particularly good indicators of habitat connectivity and of the general health of the ecosystem<sup>10</sup>. Recent studies show that the mountain lion, or cougar, is the most sensitive indicator species of habitat fragmentation, followed by the spotted skunk and the bobcat<sup>11</sup>. Sightings of cougars in both inland and coastal areas of the Santa Monica Mountains<sup>12</sup> demonstrate their continued presence. Like the "canary in the mineshaft," an indicator species like this is good evidence that habitat connectivity and large scale ecological function remains in the Santa Monica Mountains ecosystem.

The habitat integrity and connectivity that is still evident within the Santa Monica Mountains is extremely important to maintain, because both theory and experiments over 75 years in ecology confirm that large spatially connected habitats tend to be more stable and have less frequent extinctions than habitats without extended spatial structure<sup>13</sup>. Beyond simply destabilizing the ecosystem, fragmentation and disturbance

<sup>7</sup> Letters received and included in the September 2002 staff report for the Malibu LCP.

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

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

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

<sup>11</sup> Sauvajot, R. M., E. C. York, T. K. Fuller, H. Sharon Kim, D. A. Kamradt and R. K. Wayne. 2000. Distribution and status of carnivores in the Santa Monica Mountains, California: Preliminary results from radio telemetry and remote camera surveys. p 113-123 in: Keeley, J. E., M. Baer-Keeley and C. J. Fotheringham (eds), 2nd Interface Between Ecology and Land Development in California, U.S.

Geological Survey Open-File Report 00-62. Beier, P. 1996. Metapopulation models, tenacious tracking and cougar conservation. In: *Metapopulations and Wildlife Conservation*, ed. D. R. McCullough. Island Press, Covelo, California, 429p.

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

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

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

As a result of the pristine nature of large areas of the Santa Monica Mountains and the existence of large, unfragmented and interconnected blocks of habitat, this ecosystem continues to support an extremely diverse flora and fauna. The observed diversity is probably a function of the diversity of physical habitats. The Santa Monica Mountains have the greatest geological diversity of all major mountain ranges within the transverse range province. According to the National Park Service, the Santa Monica Mountains contain 40 separate watersheds and over 170 major streams with 49 coastal outlets<sup>15</sup>. These streams are somewhat unique along the California coast because of their topographic setting. As a "transverse" range, the Santa Monica Mountains are oriented in an east-west direction. As a result, the south-facing riparian habitats have more variable sun exposure than the east-west riparian corridors of other sections of the coast. This creates a more diverse moisture environment and contributes to the higher biodiversity of the region. The many different physical habitats of the Santa Monica Mountains support at least 17 native vegetation types<sup>16</sup> including the following habitats considered sensitive by the California Department of Fish and Game: native perennial grassland, coastal sage scrub, red-shank chaparral, valley oak woodland, walnut woodland, southern willow scrub, southern cottonwood-willow riparian forest, sycamore-alder woodland, oak riparian forest, coastal salt marsh, and freshwater marsh. Over 400 species of birds, 35 species of reptiles and amphibians, and more than 40 species of mammals have been documented in this diverse ecosystem. More than 80 sensitive species of plants and animals (listed, proposed for listing, or species of concern) are known to occur or have the potential to occur within the Santa Monica Mountains Mediterranean ecosystem.

The Santa Monica Mountains are also important in a larger regional context. Several recent studies have concluded that the area of southern California that includes the Santa Monica Mountains is among the most sensitive in the world in terms of the number of rare endemic species, endangered species and habitat loss. These studies have designated the area to be a local hot-spot of endangerment in need of special protection<sup>17</sup>.

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

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

<sup>15</sup> NPS. 2000. *op.cit.*

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

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

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

### **Major Habitats within the Santa Monica Mountains**

The most recent vegetation map that is available for the Santa Monica Mountains is the map that was produced for the National Park Service in the mid-1990s using 1993 satellite imagery supplemented with color and color infrared aerial imagery from 1984, 1988, and 1994 and field review<sup>18</sup>. The minimum mapping unit was 5 acres. For that map, the vegetation was mapped in very broad categories, generally following a vegetation classification scheme developed by Holland<sup>19</sup>. Because of the mapping methods used the degree of plant community complexity in the landscape is not represented. For example, the various types of "ceanothus chaparral" that have been documented were lumped under one vegetation type referred to as "northern mixed chaparral." Dr. Todd Keeler-Wolf of the California Department of Fish and Game is currently conducting a more detailed, quantitative vegetation survey of the Santa Monica Mountains.

The National Park Service map can be used to characterize broadly the types of plant communities present. The main generic plant communities present in the Santa Monica Mountains<sup>20</sup> are: coastal sage scrub, chaparral, riparian woodland, coast live oak woodland, and grasslands.

#### Riparian Woodland

Some 49 streams connect inland areas with the coast, and there are many smaller drainages as well, many of which are "blue line." Riparian woodlands occur along both perennial and intermittent streams in nutrient-rich soils. Partly because of its multi-layered vegetation, the riparian community contains the greatest overall biodiversity of all the plant communities in the area<sup>21</sup>. At least four types of riparian communities are discernable in the Santa Monica Mountains: walnut riparian areas, mulefat-dominated riparian areas, willow riparian areas and sycamore riparian woodlands. Of these, the

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

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

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

<sup>21</sup> Ibid.

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

Riparian communities are the most species-rich to be found in the Santa Monica Mountains. Because of their multi-layered vegetation, available water supply, vegetative cover and adjacency to shrubland habitats, they are attractive to many native wildlife species, and provide essential functions in their lifecycles<sup>22</sup>. During the long dry summers in this Mediterranean climate, these communities are an essential refuge and oasis for much of the areas' wildlife.

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

The streams themselves provide refuge for sensitive species including: the coast range newt, the Pacific pond turtle, and the steelhead trout. The coast range newt and the Pacific pond turtle are California Species of Special Concern and are proposed for federal listing<sup>23</sup>, and the steelhead trout is federally endangered. The health of the streams is dependent on the ecological functions provided by the associated riparian woodlands. These functions include the provision of large woody debris for habitat, shading that controls water temperature, and input of leaves that provide the foundation of the stream-based trophic structure.

The importance of the connectivity between riparian areas and adjacent habitats is illustrated by the Pacific pond turtle and the coast range newt, both of which are sensitive and both of which require this connectivity for their survival. The life history of the Pacific pond turtle demonstrates the importance of riparian areas and their associated watersheds for this species. These turtles require the stream habitat during the wet season. However, recent radio tracking work<sup>24</sup> has found that although the Pacific pond turtle spends the wet season in streams, it also requires upland habitat for refuge during the dry season. Thus, in coastal southern California, the Pacific pond turtle requires both streams and intact adjacent upland habitats such as coastal sage

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

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

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



scrub, woodlands or chaparral as part of their normal life cycle. The turtles spend about four months of the year in upland refuge sites located an average distance of 50 m (but up to 280 m) from the edge of the creek bed. Similarly, nesting sites where the females lay eggs are also located in upland habitats an average of 30 m (but up to 170 m) from the creek. Occasionally, these turtles move up to 2 miles across upland habitat<sup>25</sup>. Like many species, the pond turtle requires both stream habitats and the upland habitats of the watershed to complete its normal annual cycle of behavior. Similarly, the coast range newt has been observed to travel hundreds of meters into upland habitat and spend about ten months of the year far from the riparian streambed<sup>26</sup>. They return to the stream to breed in the wet season, and they are therefore another species that requires both riparian habitat and adjacent uplands for their survival.

Riparian habitats in California have suffered serious losses and such habitats in southern California are currently very rare and seriously threatened. In 1989, Faber estimated that 95-97% of riparian habitat in southern California was already lost<sup>27</sup>. Writing at the same time as Faber, Bowler asserted that, "[t]here is no question that riparian habitat in southern California is endangered."<sup>28</sup> In the intervening 13 years, there have been continuing losses of the small amount of riparian woodlands that remain. Today these habitats are, along with native grasslands and wetlands, among the most threatened in California.

In addition to direct habitat loss, streams and riparian areas have been degraded by the effects of development. For example, the coast range newt, a California Species of Special Concern has suffered a variety of impacts from human-related disturbances<sup>29</sup>. Human-caused increased fire frequency has resulted in increased sedimentation rates, which exacerbates the cannibalistic predation of adult newts on the larval stages.<sup>30</sup> In addition impacts from non-native species of crayfish and mosquito fish have also been documented. When these non-native predators are introduced, native prey organisms are exposed to new mortality pressures for which they are not adapted. Coast range newts that breed in the Santa Monica Mountain streams do not appear to have adaptations that permit co-occurrence with introduced mosquito fish and crayfish<sup>31</sup>. These introduced predators have eliminated the newts from streams where they previously occurred by both direct predation and suppression of breeding.

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

<sup>26</sup> Dr. Lee Kats, Pepperdine University, personal communication to Dr J. Allen, CCC.

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

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

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

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

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

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

### Coastal Sage Scrub and Chaparral

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

The two vegetation types are often found interspersed with each other. Under some circumstances, coastal sage scrub may even be successional to chaparral, meaning that after disturbance, a site may first be covered by coastal sage scrub, which is then replaced with chaparral over long periods of time.<sup>32</sup> The existing mosaic of coastal sage scrub and chaparral is the result of a dynamic process that is a function of fire history, recent climatic conditions, soil differences, slope, aspect and moisture regime, and the two habitats should not be thought of as completely separate and unrelated entities but as different phases of the same process<sup>33</sup>. The spatial pattern of these vegetation stands at any given time thus depends on both local site conditions and on history (e.g., fire), and is influenced by both natural and human factors.

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

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

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

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

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



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

### Relationships Among Coastal Sage Scrub, Chaparral and Riparian Communities

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

Strong evidence for the interconnectedness between chaparral, coastal scrub and other habitats is provided by "opportunistic foragers" (animals that follow the growth and flowering cycles across these habitats). Coastal scrub and chaparral flowering and growth cycles differ in a complimentary and sequential way that many animals have evolved to exploit. Whereas coastal sage scrub is shallow-rooted and responds quickly to seasonal rains, chaparral plants are typically deep-rooted having most of their flowering and growth later in the rainy season after the deeper soil layers have been saturated<sup>36</sup>. New growth of chaparral evergreen shrubs takes place about four months later than coastal sage scrub plants and it continues later into the summer<sup>37</sup>. For example, in coastal sage scrub, California sagebrush flowers and grows from August to February and coyote bush flowers from August to November<sup>38</sup>. In contrast, chamise chaparral and bigpod ceanothus flower from April to June, buck brush ceanothus flowers from February to April, and hoaryleaf ceanothus flowers from March to April.

Many groups of animals exploit these seasonal differences in growth and blooming period. The opportunistic foraging insect community (e.g., honeybees, butterflies and moths) tends to follow these cycles of flowering and new growth, moving from coastal sage scrub in the early rainy season to chaparral in the spring<sup>39</sup>. The insects in turn are followed by insectivorous birds such as the blue-gray gnatcatcher<sup>40</sup>, bushtit, cactus wren, Bewick's wren and California towhee. At night bats take over the role of daytime insectivores. At least 12 species of bats (all of which are considered sensitive) occur in

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

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

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

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

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

the Santa Monica Mountains<sup>41</sup>. Five species of hummingbirds also follow the flowering cycle<sup>42</sup>.

Many species of 'opportunistic foragers', which utilize several different community types, perform important ecological roles during their seasonal movements. The scrub jay is a good example of such a species. The scrub jay is an omnivore and forages in coastal sage scrub, chaparral, and oak woodlands for insects, berries and notably acorns. Its foraging behavior includes the habit of burying acorns, usually at sites away from the parent tree canopy. Buried acorns have a much better chance of successful germination (about two-fold) than exposed acorns because they are protected from desiccation and predators. One scrub jay will bury approximately 5000 acorns in a year. The scrub jay therefore performs the function of greatly increasing recruitment and regeneration of oak woodland, a valuable and sensitive habitat type<sup>43</sup>.

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

"Bird diversity is directly related to the habitat mosaic and topographic diversity of the Santa Monicas. Most bird species in this bio-landscape require more than one habitat for survival and reproduction." "A significant proportion of the avifauna breeds in the wooded canyons of the Santa Monicas. Most of the canyon breeders forage every day in the brush- and grass-covered slopes, ridges and mesas. They would not breed in the canyons in the absence of the surrounding shrublands. Hawks, owls, falcons, orioles, flycatchers, woodpeckers, warblers, hummingbirds, etc. belong to this group. Conversely, some of the characteristic chaparral birds such as thrashers, quails, and wrentits need the canyons for access to shelter, protection from fire, and water. The regular and massive movement of birds between riparian corridors and adjacent shrublands has been demonstrated by qualitative and quantitative observations by several UCLA students<sup>44</sup>."

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

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

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

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

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

from both the diversity and the interconnected nature of this mosaic. Most raptor species, for example, require large areas and will often require different habitats for perching, nesting and foraging. Fourteen species of raptors (13 of which are considered sensitive) are reported from the Santa Monica Mountains. These species utilize a variety of habitats including rock outcrops, oak woodlands, riparian areas, grasslands, chaparral, coastal sage scrub, estuaries and freshwater lakes<sup>45</sup>.

When the community mosaic is disrupted and fragmented by development, many chaparral-associated native bird species are impacted. In a study of landscape-level fragmentation in the Santa Monica Mountains, Stralberg<sup>46</sup> found that the ash-throated flycatcher, Bewick's wren, wren-tit, blue-gray gnatcatcher, California thrasher, orange-crowned warbler, rufous-crowned sparrow, spotted towhee, and California towhee all decreased in numbers as a result of urbanization. Soule<sup>47</sup> observed similar effects of fragmentation on chaparral and coastal sage scrub birds in the San Diego area.

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

### Coastal Sage Scrub

"Coastal sage scrub" is a generic vegetation type that is inclusive of several subtypes<sup>48</sup>. In the Santa Monica Mountains, coastal sage scrub is mostly of the type termed "Venturan Coastal Sage Scrub." In general, coastal sage scrub is comprised of dominant species that are semi-woody and low-growing, with shallow, dense roots that enable them to respond quickly to rainfall. Under the moist conditions of winter and spring, they grow quickly, flower, and produce light, wind-dispersed seeds, making them good colonizers following disturbance. These species cope with summer drought by dying back, dropping their leaves or producing a smaller summer leaf in order to reduce water loss. Stands of coastal sage scrub are much more open than chaparral and contain a greater admixture of herbaceous species. Coastal sage scrub is generally restricted to drier sites, such as low foothills, south-facing slopes, and shallow soils at higher elevations.

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

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

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

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

The species composition and structure of individual stands of coastal sage scrub depend on moisture conditions that derive from slope, aspect, elevation and soil type. Drier sites are dominated by more drought-resistant species (e.g., California sagebrush, coast buckwheat, and *Opuntia* cactus). Where more moisture is available (e.g., north-facing slopes), larger evergreen species such as toyon, laurel sumac, lemonade berry, and sugar bush are common. As a result, there is more cover for wildlife, and movement of large animals from chaparral into coastal sage scrub is facilitated in these areas. Characteristic wildlife in this community includes Anna's hummingbirds, rufous-sided towhees, California quail, greater roadrunners, Bewick's wrens, coyotes, and coast horned lizards<sup>49</sup>, but most of these species move between coastal sage scrub and chaparral during their daily activities or on a seasonal basis.

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

Riparian woodlands are primary contributors to the high biodiversity of the Santa Monica Mountains. The ecological integrity of those riparian habitats not only requires wildlife dispersal along the streams, but also depends on the ability of animals to move from one riparian area to another. Such movement requires that the riparian corridors be connected by suitable habitat. In the Santa Monica Mountains, coastal sage scrub and chaparral provide that function. Significant development in coastal sage scrub would reduce the riparian corridors to linear islands of habitat with severe edge effects<sup>50</sup>, reduced diversity, and lower productivity.

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

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

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

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

distributed from the San Francisco Bay area to Mexico<sup>51</sup>. Species with restricted distributions are by nature more susceptible to loss or degradation of their habitat. Westman said of this unique and local aspect of coastal sage scrub species in California:

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

Coastal sage scrub in southern California provides habitat for about 100 rare species<sup>53</sup>, many of which are also endemic to limited geographic regions<sup>54</sup>. In the Santa Monica Mountains, rare animals that inhabit coastal sage scrub<sup>55</sup> include the Santa Monica shieldback katydid, silvery legless lizard, coastal cactus wren, Bell's sparrow, San Diego desert woodrat, southern California rufous-crowned sparrow, coastal western whiptail, and San Diego horned lizard. Some of these species are also found in chaparral<sup>56</sup>. Rare plants found in coastal sage scrub in the Santa Monica Mountains include Santa Susana tarplant, Coulter's saltbush, Blockman's dudleya, Braunton's milkvetch, Parry's spineflower, and Plummer's mariposa lily<sup>57</sup>. A total of 32 sensitive species of reptiles, birds and mammals have been identified in this community by the National Park Service.<sup>58</sup>

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

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

<sup>52</sup> Ibid.

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

<sup>54</sup> Westman, W.E. 1981. op. cit.

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

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

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

<sup>58</sup> NPS, 2000, op cit.

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

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

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

### Chaparral

Another shrub community in the Santa Monica Mountain Mediterranean ecosystem is chaparral. Like "coastal sage scrub," this is a generic category of vegetation. Chaparral species have deep roots (10s of ft) and hard waxy leaves, adaptations to drought that increase water supply and decrease water loss at the leaf surface. Some chaparral species cope more effectively with drought conditions than do desert plants<sup>61</sup>. Chaparral plants vary from about one to four meters tall and form dense, intertwining stands with nearly 100 percent ground cover. As a result, there are few herbaceous species present in mature stands. Chaparral is well adapted to fire. Many species regenerate mainly by crown sprouting; others rely on seeds which are stimulated to germinate by the heat and ash from fires. Over 100 evergreen shrubs may be found in chaparral<sup>62</sup>. On average, chaparral is found in wetter habitats than coastal sage scrub, being more common at higher elevations and on north facing slopes.

The broad category "northern mixed chaparral" is the major type of chaparral shown in the National Park Service map of the Santa Monica Mountains. However, northern mixed chaparral can be variously dominated by chamise, scrub oak or one of several species of manzanita or by ceanothus. In addition, it commonly contains woody vines and large shrubs such as mountain mahogany, toyon, hollyleaf redberry, and sugarbush<sup>63</sup>. The rare red shank chaparral plant community also occurs in the Santa Monica Mountains. Although included within the category "northern mixed chaparral" in

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

<sup>60</sup> Westman, W.E. 1981. op. cit.

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

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

<sup>63</sup> Ibid.



the vegetation map, several types of ceanothus chaparral are reported in the Santa Monica Mountains. Ceanothus chaparral occurs on stable slopes and ridges, and may be dominated by bigpod ceanothus, buck brush ceanothus, hoaryleaf ceanothus, or greenbark ceanothus. In addition to ceanothus, other species that are usually present in varying amounts are chamise, black sage, holly-leaf redberry, sugarbush, and coast golden bush<sup>64</sup>.

Several sensitive plant species that occur in the chaparral of the Santa Monica Mountains area are: Santa Susana tarplant, Lyon's pentachaeta, marcescent dudleya, Santa Monica Mountains dudleya, Braunton's milk vetch and salt spring checkerbloom<sup>65</sup>. Several occurring or potentially occurring sensitive animal species in chaparral from the area are: Santa Monica shieldback katydid, western spadefoot toad, silvery legless lizard, San Bernardino ring-neck snake, San Diego mountain kingsnake, coast patch-nosed snake, sharp-shinned hawk, southern California rufous-crowned sparrow, Bell's sparrow, yellow warbler, pallid bat, long-legged myotis bat, western mastiff bat, and San Diego desert woodrat.<sup>66</sup>

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

Many species of animals in Mediterranean habitats characteristically move among several plant communities during their daily activities, and many are reliant on different communities either seasonally or during different stages of their life cycle. The importance of an intact mosaic of coastal sage scrub, chaparral, and riparian community types is perhaps most critical for birds. However, the same principles apply to other taxonomic groups. For example, whereas coastal sage scrub supports a higher diversity of native ant species than chaparral, chaparral habitat is necessary for the coast horned lizard, an ant specialist<sup>67</sup>. Additional examples of the importance of an interconnected communities, or habitats, were provided in the discussion of coastal sage scrub above. This is an extremely important ecosystem role of chaparral in the Santa Monica Mountains.

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

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<sup>64</sup> Ibid.

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

<sup>66</sup> Ibid.

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



penetrating the bedrock below<sup>68</sup>, so chaparral literally holds the hillsides together and prevents slippage.<sup>69</sup> In addition, the direct soil erosion from precipitation is also greatly reduced by 1) water interception on the leaves and above ground foliage and plant structures, and 2) slowing the runoff of water across the soil surface and providing greater soil infiltration. Chaparral plants are extremely resistant to drought, which enables them to persist on steep slopes even during long periods of adverse conditions. Many other species die under such conditions, leaving the slopes unprotected when rains return. Since chaparral plants recover rapidly from fire, they quickly re-exert their ground stabilizing influence following burns. The effectiveness of chaparral for erosion control after fire increases rapidly with time<sup>70</sup>. Thus, the erosion from a 2-inch rain-day event drops from 5 yd<sup>3</sup>/acre of soil one year after a fire to 1 yd<sup>3</sup>/acre after 4 years.<sup>71</sup> The following table illustrates the strong protective effect of chaparral in preventing erosion.

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

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

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

### Oak Woodland and Savanna

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

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

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

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

<sup>71</sup> *Ibid.*

tolerant of salt-laden fog than other oaks and is generally found nearer the coast<sup>72</sup>. Coast live oak also occurs as a riparian corridor species within the Santa Monica Mountains.

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

The important ecosystem functions of oak woodlands and savanna are widely recognized<sup>73</sup>. These habitats support a high diversity of birds<sup>74</sup>, and provide refuge for many species of sensitive bats<sup>75</sup>. Typical wildlife in this habitat includes acorn woodpeckers, scrub jays, plain titmice, northern flickers, cooper's hawks, western screech owls, mule deer, gray foxes, ground squirrels, jackrabbits and several species of sensitive bats.

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

### Grasslands

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

### California Perennial Grassland

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

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<sup>72</sup> NPS 2000. op. cit.

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

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

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

and substrate factors<sup>76</sup>. Mixed with these native needlegrasses are many non-native annual species that are characteristic of California annual grassland<sup>77</sup>. Native perennial grasslands are now exceedingly rare<sup>78</sup>. In California, native grasslands once covered nearly 20 percent of the land area, but today are reduced to less than 0.1 percent<sup>79</sup>. The California Natural Diversity Database (CNDDDB) lists purple needlegrass habitat as a community needing priority monitoring and restoration. The CNDDDB considers grasslands with 10 percent or more cover by purple needlegrass to be significant, and recommends that these be protected as remnants of original California prairie. Patches of this sensitive habitat occur throughout the Santa Monica Mountains where they are intermingled with coastal sage scrub, chaparral and oak woodlands.

Many of the raptors that inhabit the Santa Monica Mountains make use of grasslands for foraging because they provide essential habitat for small mammals and other prey. Grasslands adjacent to woodlands are particularly attractive to these birds of prey since they simultaneously offer perching and foraging habitat. Particularly noteworthy in this regard are the white-tailed kite, northern harrier, sharp-shinned hawk, Cooper's hawk, red-shouldered hawk, red-tailed hawk, golden eagle, American kestrel, merlin, and prairie falcon<sup>80</sup>.

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

### California Annual Grassland

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

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

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

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

<sup>79</sup> NPS 2000. op. cit.

<sup>80</sup> NPS 2000. op. cit.

these patches are dominated by invasive non-native species, it would be premature to say that they are never sensitive or do not harbor valuable annual native species. A large number of native forbs also may be present in these habitats<sup>81</sup>, and many native wildflowers occur primarily in annual grasslands. In addition, annual grasslands are primary foraging areas for many sensitive raptor species in the area.

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

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

The natural habitats of the Santa Monica Mountains are highly threatened by current development pressure, fragmentation and impacts from the surrounding megalopolis. The developed portions of the Santa Monica Mountains represents the extension of this urbanization into natural areas. About 54% of the undeveloped Santa Monica Mountains are in private ownership<sup>82</sup>, and computer simulation studies of the development patterns over the next 25 years predict a serious increase in habitat fragmentation<sup>83</sup>. Development and associated human activities have many well-documented deleterious effects on natural communities. These environmental impacts may be both direct and indirect and include the effects of increased fire frequency, of fire clearance, of introduction of exotic species, and of night lighting.

#### Increased Fire Frequency

Since 1925, all the major fires in the Santa Monica Mountains have been caused by human activities<sup>84</sup>. Increased fire frequency alters plant communities by creating conditions that select for some species over others. Strong resprouting plant species such as laurel sumac, are favored while non-sprouters like bigpod ceanothus, are at a disadvantage. Frequent fire recurrence before the non-sprouters can develop and reestablish a seed bank is detrimental, so that with each fire their chances for propagation are further reduced. Resprouters can be sending up new shoots quickly, and so they are favored in an increased fire frequency regime. Also favored are weedy and invasive species. Dr. Steven Davis in his abstract for a Coastal Commission

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

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

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

<sup>84</sup> NPS, 2000, op. cit.

Workshop stated<sup>85</sup> "We have evidence that recent increases in fire frequency has eliminated drought-hardy non-sprouters from chaparral communities near Malibu, facilitating the invasion of exotic grasses and forbs that further exacerbate fire frequency." Thus, simply increasing fire frequency from about once every 22 years (the historical frequency) to about once every 12 years (the current frequency) can completely change the vegetation community. This has cascading effects throughout the ecosystem.

### Fuel Clearance

The removal of vegetation for fire protection in the Santa Monica Mountains is required by law in "Very High Fire Hazard Severity Zones"<sup>86</sup>. Fuel removal is reinforced by insurance carriers<sup>87</sup>. Generally, the Santa Monica Mountains are considered to be a high fire hazard severity zone. In such high fire hazard areas, homeowners must often resort to the California FAIR Plan to obtain insurance. Because of the high risk, all homes in "brush areas" are assessed an insurance surcharge if they have less than the recommended 200-foot fuel modification zone<sup>88</sup> around the home. The combination of insurance incentives and regulation assures that the 200-foot clearance zone will be applied universally<sup>89</sup>. While it is not required that all of this zone be cleared of vegetation, the common practice is simply to disk this zone, essentially removing or highly modifying all native vegetation. For a new structure not adjacent to existing structures, this results in the removal or modification of a minimum of three acres of vegetation<sup>90</sup>. While the directly impacted area is large, the effects of fuel modification extend beyond the 200-foot clearance area.

### Effects of Fuel Clearance on Bird Communities

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

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

<sup>86</sup> 1996 Los Angeles County Fire Code Section 1117.2.1

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

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

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

<sup>90</sup> Ibid.

(mourning dove, American crow, Western scrub-jay, Northern mockingbird)<sup>91</sup>. It was found in this study that the number of migrators and chaparral-associated species decreased due to habitat fragmentation while the abundance of urban-associated species increased. The impact of fuel clearance is to greatly increase this edge-effect of fragmentation by expanding the amount of cleared area and "edge" many-fold. Similar results of decreases in fragmentation-sensitive bird species are reported from the work of Bolger et al. in southern California chaparral<sup>92</sup>.

### Effects of Fuel Clearance on Arthropod Communities

Fuel clearance and habitat modification may also disrupt native arthropod communities, and this can have surprising effects far beyond the cleared area on species seemingly unrelated to the direct impacts. A particularly interesting and well-documented example with ants and lizards illustrates this point. When non-native landscaping with intensive irrigation is introduced, the area becomes favorable for the invasive and non-native Argentine ant. This ant forms "super colonies" that can forage more than 650 feet out into the surrounding native chaparral or coastal sage scrub around the landscaped area<sup>93</sup>. The Argentine ant competes with native harvester ants and carpenter ants displacing them from the habitat<sup>94</sup>. These native ants are the primary food resource for the native coast horned lizard, a California "Species of Special Concern." As a result of Argentine ant invasion, the coast horned lizard and its native ant food resources are diminished in areas near landscaped and irrigated developments<sup>95</sup>. In addition to specific effects on the coast horned lizard, there are other Mediterranean habitat ecosystem processes that are impacted by Argentine ant invasion through impacts on long-evolved native ant-plant mutualisms<sup>96</sup>. The composition of the whole arthropod community changes and biodiversity decreases when habitats are subjected to fuel modification. In coastal sage scrub disturbed by fuel modification, fewer arthropod

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

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

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

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

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

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



predator species are seen and more exotic arthropod species are present than in undisturbed habitats<sup>97</sup>.

Studies in the Mediterranean vegetation of South Africa (equivalent to California shrubland with similar plant species) have shown how the invasive Argentine ant can disrupt the whole ecosystem.<sup>98</sup> In South Africa the Argentine ant displaces native ants as they do in California. Because the native ants are no longer present to collect and bury seeds, the seeds of the native plants are exposed to predation, and consumed by seed eating insects, birds and mammals. When this habitat burns after Argentine ant invasion the large-seeded plants that were protected by the native ants all but disappear. So the invasion of a non-native ant species drives out native ants, and this can cause a dramatic change in the species composition of the plant community by disrupting long-established seed dispersal mutualisms. In California, some insect eggs are adapted to being buried by native ants in a manner similar to plant seeds<sup>99</sup>.

### Artificial Night Lighting

One of the more recently recognized human impacts on ecosystem function is that of artificial night lighting as it effects the behavior and function of many different types of organisms<sup>100</sup>. For literally billions of years the only nighttime sources of light were the moon and stars, and living things have adapted to this previously immutable standard and often depend upon it for their survival. A review of lighting impacts suggests that whereas some species are unaffected by artificial night lighting, many others are severely impacted. Overall, most impacts are negative ones or ones whose outcome is unknown. Research to date has found negative impacts to plants, aquatic and terrestrial invertebrates, amphibians, fish, birds and mammals, and a detailed literature review can be found in the report by Longcore and Rich<sup>101</sup>.

### **Summary**

In a past action, the Coastal Commission found<sup>102</sup> that the Santa Monica Mountains Mediterranean Ecosystem, which includes the undeveloped native habitats of the Santa Monica Mountains, is rare and especially valuable because of its relatively pristine

<sup>97</sup> Longcore, T.R. 1999. Terrestrial arthropods as indicators of restoration success in coastal sage scrub. Ph.D. Dissertation, University of California, Los Angeles.

<sup>98</sup> Christian, C. 2001. Consequences of a biological invasion reveal the importance of mutualism for plant communities. *Nature* 413:635-639.

<sup>99</sup> Hughes, L. and M. Westoby. 1992. Capitula on stick insect eggs and elaiosomes on seeds: convergent adaptations for burial by ants. *Functional Ecology* 6:642-648.

<sup>100</sup> Longcore, T and C. Rich. 2002. Protection of environmentally sensitive habitat areas in proposed local coastal plan for the Santa Monica Mountains. The Urban Wildlands Group, Inc., P.O. Box 24020 Los Angeles, CA 90024.

<sup>101</sup> Ibid, and Ecological Consequences of Artificial Night Lighting, Conference, February 23-24, 2002, UCLA Los Angeles, California.

<sup>102</sup> Revised Findings for the City of Malibu Local Coastal Program (as adopted on September 13, 2002) adopted on February 6, 2003.



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

The importance the native habitats in the Santa Monica Mountains was emphasized nearly 20 years ago by the California Department of Fish and Game<sup>103</sup>. Commenting on a Draft Land Use Plan for the City of Malibu, the Regional Manager wrote that, "It is essential that large areas of land be reclassified to reflect their true status as ESHAs. One of the major needs of the Malibu LUP is that it should provide protection for entire drainages and not just stream bottoms." These conclusions were supported by the following observations:

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

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

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

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

W 18h

CALIFORNIA COASTAL COMMISSION

SOUTH COAST AREA  
245 W. BROADWAY, STE. 380  
P.O. BOX 1450  
LONG BEACH, CA 90802-4416  
(213) 590-5071

Filed: 03-19-92  
49th Day: 05-07-92  
180th Day: 09-15-92  
Staff: RMR-LB  
Staff Report: 04-29-92  
Hearing Date: May 12-15, 1992  
Commission Action:



STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-92-072

APPLICANT: Nancy & Robert Rex

AGENT: Reibsamen, Nickels & Rex

PROJECT LOCATION: 901 Cold Canyon Rd., Malibu, County of Los Angeles

PROJECT DESCRIPTION: Construction of a 20 foot high, 2,690 square foot single-family residence with a 528 square foot garage, driveway, and septic system on a 75,473 square foot lot. The applicants are also proposing a temporary mobile home to be placed on site and a landscaping plan.

Lot area:	75,473 sq. ft.
Building coverage:	3,217 sq. ft.
Pavement coverage:	4,190 sq. ft.
Landscape coverage:	13,393 sq. ft.
Parking spaces:	3
Zoning:	
Plan designation:	Rural land III (1du/2ac)
Project density:	
Ht. abv fin grade:	20

LOCAL APPROVALS RECEIVED: Approval in concept from the Dept. of Regional Planning, County of Los Angeles

SUBSTANTIVE FILE DOCUMENTS: Malibu/Santa Monica Mountains Land Use Plan (LUP), Septic System Approval from the Dept. of Health Services, Coastal Development Permits P-81-7701 (Johnson), 5-83-290 (Cold Creek Assoc.), 5-91-452 (Hays), 5-91-409 (Teherani)

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends approval with special conditions regarding future improvements and conformance with geologic recommendations.

COMMISSION ACTION ON: 5/13/92

- Approved as Recommended
- Denied as Recommended
- Approved with Changes
- Denied
- Other

STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following resolution:

I. Approval with Conditions.

The Commission hereby grants a permit, subject to the conditions below, for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions.

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date this permit is reported to the Commission. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

### III. Special Conditions.

#### 1. Future Improvements:

Prior to issuance of permit the applicant shall execute and record a deed restriction in a form and content acceptable to the Executive Director, which shall provide that Coastal Commission permit 4-92-072 is only for the proposed development and that any future additions or improvements to the property will require a permit from the Coastal Commission or its successor agency. The document shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens and any other encumbrances which the Executive Director determines may affect the interest being conveyed.

#### 2. Geology

All recommendations contained in the Final Soils Engineering report dated 4/28/91 by Tierra Tech Testing Lab, Inc. shall be incorporated into all final design and construction including foundations and drainage and all plans must be reviewed and approved by the consultants prior to commencement of development. Prior to issuance of the coastal development permit the applicant shall submit evidence to the Executive Director of the consultant's review and approval of all final design and construction plans.

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

### IV. Findings and Declarations.

The Commission hereby finds and declares:

#### A. Project Description

The applicant proposes to construct a 2,690 sq. ft., 20 foot high, single-family residence with a 528 sq. ft. garage, driveway, and septic system. In addition, the applicant is proposing a landscaping plan for the graded areas.

The site is located north of the Monte Nido area, west of Cold Canyon Road. The subject property is lot no. 4 of a 10 lot, 85 acre subdivision. The subdivision was approved by the Commission in 1981 (P-81-7701 Johnson). The permit included the construction of roads, building pads, and septic systems. The Tentative Map was approved with a conceptual grading plan. The plan indicated the limits of all grading required to construct the pads and roads. Grading amounts were not included with the grading plan. Although quantitative amounts were not included, in reviewing the proposed development of the individual single-family residences, grading must be found to be in substantial conformance with the conceptual grading plan approved by the Commission or if not in conformance the applicant must amend the original coastal permit.

In this particular case the grading is slightly different, but essentially the same as the approved grading and the applicant has included as part of the single-family development, revised grading plans. The revised grading has already been completed. Due to the sale of the individual lots to various individuals or groups it is not feasible to amend the original coastal permit since no single individual owns all ten lots.

B. Grading/Visual Impacts

Section 30251 of the Coastal Act states that:

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

In addition, the Malibu LUP contains the following policies regarding protection of visual resources which are applicable to the proposed development:

- P82 Grading shall be minimized for all new development to ensure the potential negative effects of runoff and erosion on these resources are minimized.
- P90 Grading plans in upland areas of the Santa Monica Mountains should minimize cut and fill operations in accordance with the requirements of the County Engineer.
- P91 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.
- P129 Structures should be designed and located so as to create an attractive appearance and harmonious relationship with the surrounding environment.
- P130 In highly scenic areas and along scenic highways, new development (including buildings, fences, paved areas, signs, and landscaping) shall:
  - be sited and designed to protect views to and along the ocean and to and along other scenic features, as defined and identified in the Malibu LCP.
  - minimize the alteration of natural landforms.
  - be landscaped to conceal raw-cut slopes.

P134 Structures shall be sited to conform to the natural topography, as feasible. Massive grading and reconfiguration of the site shall be discouraged.

P135 Ensure that any alteration of the natural landscape from earthmoving activity blends with the existing terrain of the site and the surroundings.

The applicant is proposing a single-family residence, garage, and driveway and is also proposing to revise the originally approved grading for this particular lot (lot #4) which was approved with the subdivision (P-81-7701). The original grading plan proposed a total of approximately 7,100 cu. yds. of grading (4,610 cu. yds. of cut and 2,490 cu. yds. of fill) for lot #4. The revised plan indicates that the total grading has decreased from 7100 total cubic yards to 4695 cubic yards (950 c.y. cut and 3745 c.y. fill). Included in the total fill figures for the grading is 1140 c.y. for the original driveway and equestrian trail, and 1660 for the revised plan driveway and trail. In addition, the pad area for the original permit was 17,200 sq. ft., and the square footage of the revised plan pad area is 15,800. The revised plan required more fill for the approximately 40 foot fill slope in support of the equestrian trail and access road which splits off of Cold Canyon Rd. This accounts for the increase in the amount of fill from the original to the revised grading amounts.

The applicant's lot is located on lot 4 on a pad which is at least 30 feet below the grade of Cold Canyon Rd. The revision to the original grading is due to required remedial grading and a change in Fire Department standards. The applicant states that at the time the subdivision was approved fire department turn-arounds were not required by the County. After the subdivision was approved the Fire Department's standards changed, thus, requiring a change in the grading to accommodate the required turn-around.

The revised grading will not have a significant impact on coastal resources. There is a tributary drainage of Cold Creek which cuts across the northern portion of the site in the area indicated as flood hazard, however, the property does not abut Cold Creek.

The revised grading will not encroach into the flood hazard easement nor significantly impact the stream. Furthermore, the building pad has been reduced by approximately 1,400 square feet and will be sited in the same location as originally approved by the Commission in the subdivision permit.

There is an equestrian trail easement located along Cold Canyon Rd. and then along the north western portion of the property. The trail easement was dedicated by the applicant of the subdivision as a condition of approval of the subdivision permit. The grading will not encroach into the trail easement and will not adversely impact access along the trail.

The revised grading and construction of a 2,657 sq. ft. single-family residence will not have a significant visual impact on the surrounding area. The subject lot is 30 feet below Cold Canyon Road and due to this elevation the change in the grading will not be significantly visible from the road. However, due to the sites close proximity to the trail that traverses the western portion of the site, grading will be visible from the trail. In order to



mitigate any potential visual impacts caused by the grading the applicant shall landscape all graded slopes with native vegetation. The applicant has submitted an acceptable landscape plan, and therefore, the standard landscaping condition is not required for this permit. However, to ensure that any future development, that may be otherwise exempt from the coastal permit process, will not have adverse impacts on the stream, trail or on visual resources, a future improvement condition is necessary.

The Commission, therefore, finds that only as conditioned will the proposed project be consistent with Section 30251 of the Coastal Act and with the above mentioned policies of the LUP.

#### D. Geology

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

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

The geologic report and grading plan review conducted by Gorian and Associates, Inc., dated March 17, 1988 and states that the site is suitable for the proposed development and that the property will be safe from landslide, settlement or slippage provided that the recommendations are incorporated into the plans and implemented. Recommendations include foundations and drainage. The report further concludes that the completed work will not adversely affect adjacent properties. In addition, Tierra Tech Testing Lab, Inc. conducted a stability evaluation of cut slopes (June 10, 1991) and Final Compaction Test Results and Grading Observation Report (May 28, 1991) report. This final compaction report states that the "...lots were graded as recommended." The Commission finds, therefore, that, only as conditioned to incorporate all recommendations by the consulting geologist will the proposed project be consistent with Section 30253 of the Coastal Act.

#### E. Septic System

The Commission recognizes that the potential build-out of lots in the Santa Monica Mountains, and the resultant installation of septic systems, may contribute to adverse health effects and geologic hazards in the local area. Section 30231 of the Coastal Act states that:

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

In addition, the Malibu/Santa Monica Mountains Land Use Plan contains the following policies concerning sewage disposal:

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

P218 The construction of individual septic tank systems shall be permitted only in full compliance with building and plumbing codes...

P226 The County shall not issue a coastal permit for a development unless it can be determined that sewage disposal adequate to function without creating hazards to public health or coastal resources will be available for the life of the project beginning when occupancy commences.

The applicant has submitted preliminary design approval from the County of Los Angeles for the proposed septic system which indicates the system meets all applicable health code requirements. Therefore, the Commission finds the proposed subdivision is consistent with Section 30231 of the Coastal Act and the applicable LUP policies.

#### F. Violation

Although development has taken place prior to submission of this permit application, consideration of the application by the Commission has been based solely upon the Chapter 3 policies of the Coastal Act. Approval of this permit does not constitute a waiver of any legal action with regard to any violation of the Coastal Act that may have occurred; nor does it constitute an admission as to the legality of any development undertaken on the subject site without a coastal development permit.

#### G. Local Coastal Program:

Section 30604(a) of the Coastal Act states that:

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 Coastal Program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200).

On December 11, 1986, the Commission certified the Land Use Plan portion of the Malibu/Santa Monica Mountains LCP. The Certified LUP contains policies to guide the types, locations and intensity of future development in the Malibu/Santa Monica Mountains area. Among these policies are those specified in the preceding sections regarding grading and visual impacts, and geology. As conditioned the proposed development will not create adverse impacts and is consistent with the policies contained in the LUP. Therefore, the Commission finds that approval of the proposed development will not prejudice the County's ability to prepare a Local Coastal Program implementation program for Malibu and the Santa Monica Mountains consistent with the policies of Chapter 3 of the Coastal Act as required by Section 30604(a).

W 18h

CALIFORNIA COASTAL COMMISSION

SOUTH COAST AREA  
245 W. BROADWAY, STE. 380  
P.O. BOX 1450  
LONG BEACH, CA 90802-4416  
(213) 590-5071

Filed: 03-19-92  
49th Day: 05-07-92  
180th Day: 09-15-92  
Staff: RMR-LB  
Staff Report: 04-29-92  
Hearing Date: May 12-15, 1992  
Commission Action:



STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-92-072

APPLICANT: Nancy & Robert Rex AGENT: Reibsamen, Nickels & Rex

PROJECT LOCATION: 901 Cold Canyon Rd., Malibu, County of Los Angeles

PROJECT DESCRIPTION: Construction of a 20 foot high, 2,690 square foot single-family residence with a 528 square foot garage, driveway, and septic system on a 75,473 square foot lot. The applicants are also proposing a temporary mobile home to be placed on site and a landscaping plan.

Lot area:	75,473 sq. ft.
Building coverage:	3,217 sq. ft.
Pavement coverage:	4,190 sq. ft.
Landscape coverage:	13,393 sq. ft.
Parking spaces:	3
Zoning:	
Plan designation:	Rural land III (1du/2ac)
Project density:	
Ht abv fin grade:	20

LOCAL APPROVALS RECEIVED: Approval in concept from the Dept. of Regional Planning, County of Los Angeles

SUBSTANTIVE FILE DOCUMENTS: Malibu/Santa Monica Mountains Land Use Plan (LUP), Septic System Approval from the Dept. of Health Services, Coastal Development Permits P-81-7701 (Johnson), 5-83-290 (Cold Creek Assoc.), 5-91-452 (Hays), 5-91-409 (Teherani)

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends approval with special conditions regarding future improvements and conformance with geologic recommendations.

COMMISSION ACTION ON: 5-13-92

- Approved as Recommended
- Denied as Recommended
- Approved with Changes
- Denied
- Other

STAFF RECOMMENDATION:

The staff recommends that the Commission adopt the following resolution:

I. Approval with Conditions.

The Commission hereby grants a permit, subject to the conditions below, for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions.

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date this permit is reported to the Commission. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

### III. Special Conditions.

#### 1. Future Improvements:

Prior to issuance of permit the applicant shall execute and record a deed restriction in a form and content acceptable to the Executive Director, which shall provide that Coastal Commission permit 4-92-072 is only for the proposed development and that any future additions or improvements to the property will require a permit from the Coastal Commission or its successor agency. The document shall run with the land, binding all successors and assigns, and shall be recorded free of prior liens and any other encumbrances which the Executive Director determines may affect the interest being conveyed.

#### 2. Geology

All recommendations contained in the Final Soils Engineering report dated 4/28/91 by Tierra Tech Testing Lab, Inc. shall be incorporated into all final design and construction including foundations and drainage and all plans must be reviewed and approved by the consultants prior to commencement of development. Prior to issuance of the coastal development permit the applicant shall submit evidence to the Executive Director of the consultant's review and approval of all final design and construction plans.

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

### IV. Findings and Declarations.

The Commission hereby finds and declares:

#### A. Project Description

The applicant proposes to construct a 2,690 sq. ft., 20 foot high, single-family residence with a 528 sq. ft. garage, driveway, and septic system. In addition, the applicant is proposing a landscaping plan for the graded areas.

The site is located north of the Monte Nido area, west of Cold Canyon Road. The subject property is lot no. 4 of a 10 lot, 85 acre subdivision. The subdivision was approved by the Commission in 1981 (P-81-7701 Johnson). The permit included the construction of roads, building pads, and septic systems. The Tentative Map was approved with a conceptual grading plan. The plan indicated the limits of all grading required to construct the pads and roads. Grading amounts were not included with the grading plan. Although quantitative amounts were not included, in reviewing the proposed development of the individual single-family residences, grading must be found to be in substantial conformance with the conceptual grading plan approved by the Commission or if not in conformance the applicant must amend the original coastal permit.

In this particular case the grading is slightly different, but essentially the same as the approved grading and the applicant has included as part of the single-family development, revised grading plans. The revised grading has already been completed. Due to the sale of the individual lots to various individuals or groups it is not feasible to amend the original coastal permit since no single individual owns all ten lots.

**B. Grading/Visual Impacts**

Section 30251 of the Coastal Act states that:

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

In addition, the Malibu LUP contains the following policies regarding protection of visual resources which are applicable to the proposed development:

- P82 Grading shall be minimized for all new development to ensure the potential negative effects of runoff and erosion on these resources are minimized.
- P90 Grading plans in upland areas of the Santa Monica Mountains should minimize cut and fill operations in accordance with the requirements of the County Engineer.
- P91 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.
- P129 Structures should be designed and located so as to create an attractive appearance and harmonious relationship with the surrounding environment.
- P130 In highly scenic areas and along scenic highways, new development (including buildings, fences, paved areas, signs, and landscaping) shall:
  - be sited and designed to protect views to and along the ocean and to and along other scenic features, as defined and identified in the Malibu LCP.
  - minimize the alteration of natural landforms.
  - be landscaped to conceal raw-cut slopes.



P134 Structures shall be sited to conform to the natural topography, as feasible. Massive grading and reconfiguration of the site shall be discouraged.

P135 Ensure that any alteration of the natural landscape from earthmoving activity blends with the existing terrain of the site and the surroundings.

The applicant is proposing a single-family residence, garage, and driveway and is also proposing to revise the originally approved grading for this particular lot (lot #4) which was approved with the subdivision (P-81-7701). The original grading plan proposed a total of approximately 7,100 cu. yds. of grading (4,610 cu. yds. of cut and 2,490 cu. yds. of fill) for lot #4. The revised plan indicates that the total grading has decreased from 7100 total cubic yards to 4695 cubic yards (950 c.y. cut and 3745 c.y. fill). Included in the total fill figures for the grading is 1140 c.y. for the original driveway and equestrian trail, and 1660 for the revised plan driveway and trail. In addition, the pad area for the original permit was 17,200 sq. ft., and the square footage of the revised plan pad area is 15,800. The revised plan required more fill for the approximately 40 foot fill slope in support of the equestrian trail and access road which splits off of Cold Canyon Rd. This accounts for the increase in the amount of fill from the original to the revised grading amounts.

The applicant's lot is located on lot 4 on a pad which is at least 30 feet below the grade of Cold Canyon Rd. The revision to the original grading is due to required remedial grading and a change in Fire Department standards. The applicant states that at the time the subdivision was approved fire department turn-arounds were not required by the County. After the subdivision was approved the Fire Department's standards changed, thus, requiring a change in the grading to accommodate the required turn-around.

The revised grading will not have a significant impact on coastal resources. There is a tributary drainage of Cold Creek which cuts across the northern portion of the site in the area indicated as flood hazard, however, the property does not abut Cold Creek.

The revised grading will not encroach into the flood hazard easement nor significantly impact the stream. Furthermore, the building pad has been reduced by approximately 1,400 square feet and will be sited in the same location as originally approved by the Commission in the subdivision permit.

There is an equestrian trail easement located along Cold Canyon Rd. and then along the north western portion of the property. The trail easement was dedicated by the applicant of the subdivision as a condition of approval of the subdivision permit. The grading will not encroach into the trail easement and will not adversely impact access along the trail.

The revised grading and construction of a 2,657 sq. ft. single-family residence will not have a significant visual impact on the surrounding area. The subject lot is 30 feet below Cold Canyon Road and due to this elevation the change in the grading will not be significantly visible from the road. However, due to the sites close proximity to the trail that traverses the western portion of the site, grading will be visible from the trail. In order to

mitigate any potential visual impacts caused by the grading the applicant shall landscape all graded slopes with native vegetation. The applicant has submitted an acceptable landscape plan, and therefore, the standard landscaping condition is not required for this permit. However, to ensure that any future development, that may be otherwise exempt from the coastal permit process, will not have adverse impacts on the stream, trail or on visual resources, a future improvement condition is necessary.

The Commission, therefore, finds that only as conditioned will the proposed project be consistent with Section 30251 of the Coastal Act and with the above mentioned policies of the LUP.

#### D. Geology

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

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

The geologic report and grading plan review conducted by Gorian and Associates, Inc., dated March 17, 1988 and states that the site is suitable for the proposed development and that the property will be safe from landslide, settlement or slippage provided that the recommendations are incorporated into the plans and implemented. Recommendations include foundations and drainage. The report further concludes that the completed work will not adversely affect adjacent properties. In addition, Tierra Tech Testing Lab, Inc. conducted a stability evaluation of cut slopes (June 10, 1991) and Final Compaction Test Results and Grading Observation Report (May 28, 1991) report. This final compaction report states that the "...lots were graded as recommended." The Commission finds, therefore, that, only as conditioned to incorporate all recommendations by the consulting geologist will the proposed project be consistent with Section 30253 of the Coastal Act.

#### E. Septic System

The Commission recognizes that the potential build-out of lots in the Santa Monica Mountains, and the resultant installation of septic systems, may contribute to adverse health effects and geologic hazards in the local area. Section 30231 of the Coastal Act states that:

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

In addition, the Malibu/Santa Monica Mountains Land Use Plan contains the following policies concerning sewage disposal:

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

P218 The construction of individual septic tank systems shall be permitted only in full compliance with building and plumbing codes...

P226 The County shall not issue a coastal permit for a development unless it can be determined that sewage disposal adequate to function without creating hazards to public health or coastal resources will be available for the life of the project beginning when occupancy commences.

The applicant has submitted preliminary design approval from the County of Los Angeles for the proposed septic system which indicates the system meets all applicable health code requirements. Therefore, the Commission finds the proposed subdivision is consistent with Section 30231 of the Coastal Act and the applicable LUP policies.

#### F. Violation

Although development has taken place prior to submission of this permit application, consideration of the application by the Commission has been based solely upon the Chapter 3 policies of the Coastal Act. Approval of this permit does not constitute a waiver of any legal action with regard to any violation of the Coastal Act that may have occurred; nor does it constitute an admission as to the legality of any development undertaken on the subject site without a coastal development permit.

#### G. Local Coastal Program:

Section 30604(a) of the Coastal Act states that:

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 Coastal Program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200).

On December 11, 1986, the Commission certified the Land Use Plan portion of the Malibu/Santa Monica Mountains LCP. The Certified LUP contains policies to guide the types, locations and intensity of future development in the Malibu/Santa Monica Mountains area. Among these policies are those specified in the preceding sections regarding grading and visual impacts, and geology. As conditioned the proposed development will not create adverse impacts and is consistent with the policies contained in the LUP. Therefore, the Commission finds that approval of the proposed development will not prejudice the County's ability to prepare a Local Coastal Program implementation program for Malibu and the Santa Monica Mountains consistent with the policies of Chapter 3 of the Coastal Act as required by Section 30604(a).



4-92-072

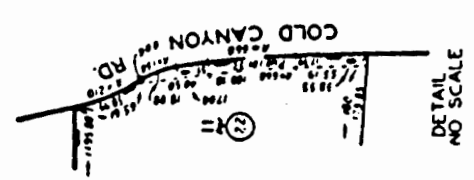
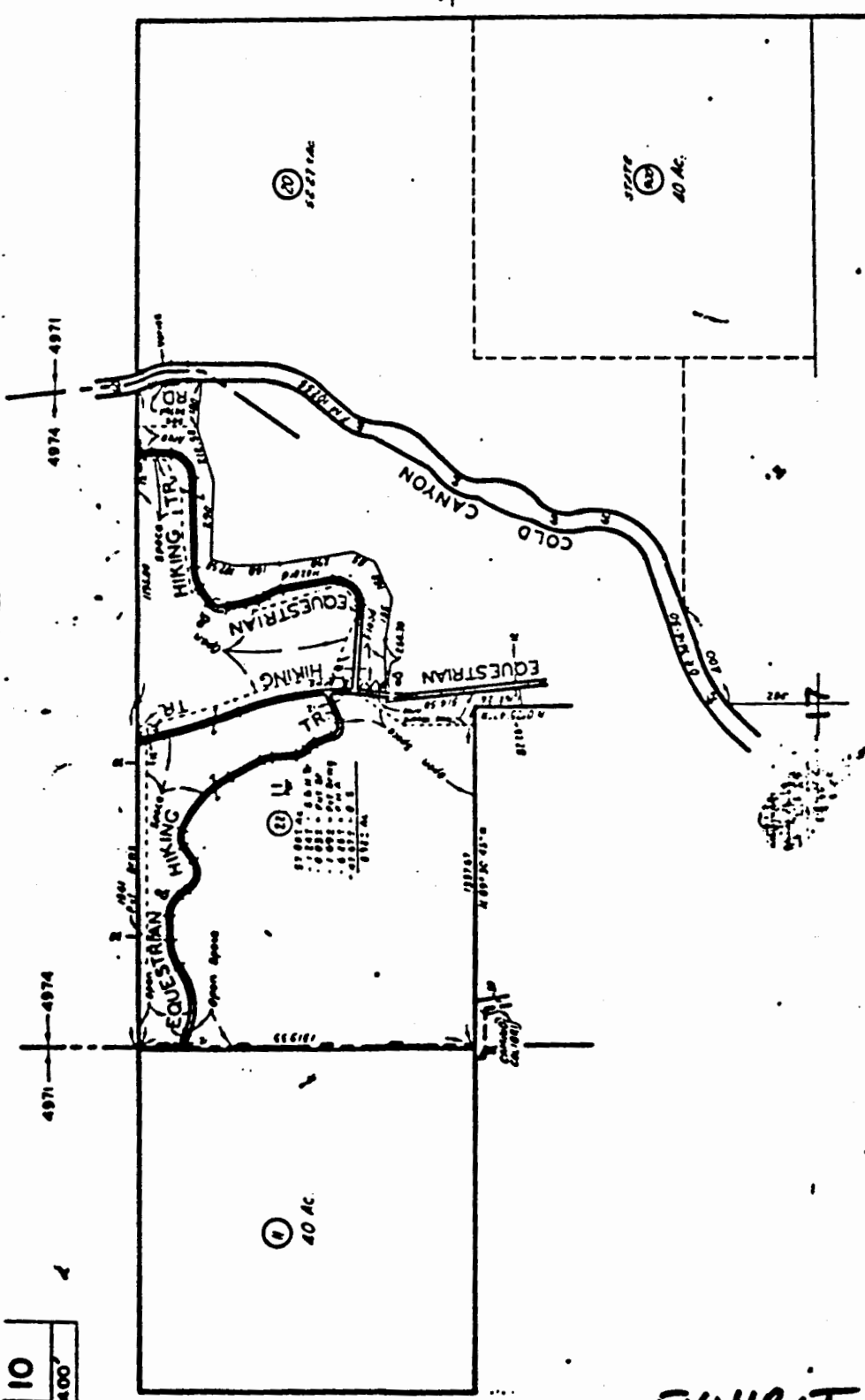
EXHIBIT 1 4-92-072  
VICINITY

4456 10  
SCALE 1" = 400'

4-92-072

EXHIBIT 2 4-92-072  
ASSESSOR'S MAP

19-27-64  
J C CS  
9057605  
10-26-60  
2-20-64  
5-1-64  
89:47:08:00:00:07



T.I.S., R.17 W.  
TRACT NO. 33873  
M.B. 1136 - 12 - 19

PREP. ASSMT. SEE 4456-10

ASSESSOR'S MAP  
COUNTY OF LOS ANGELES, CALIF.

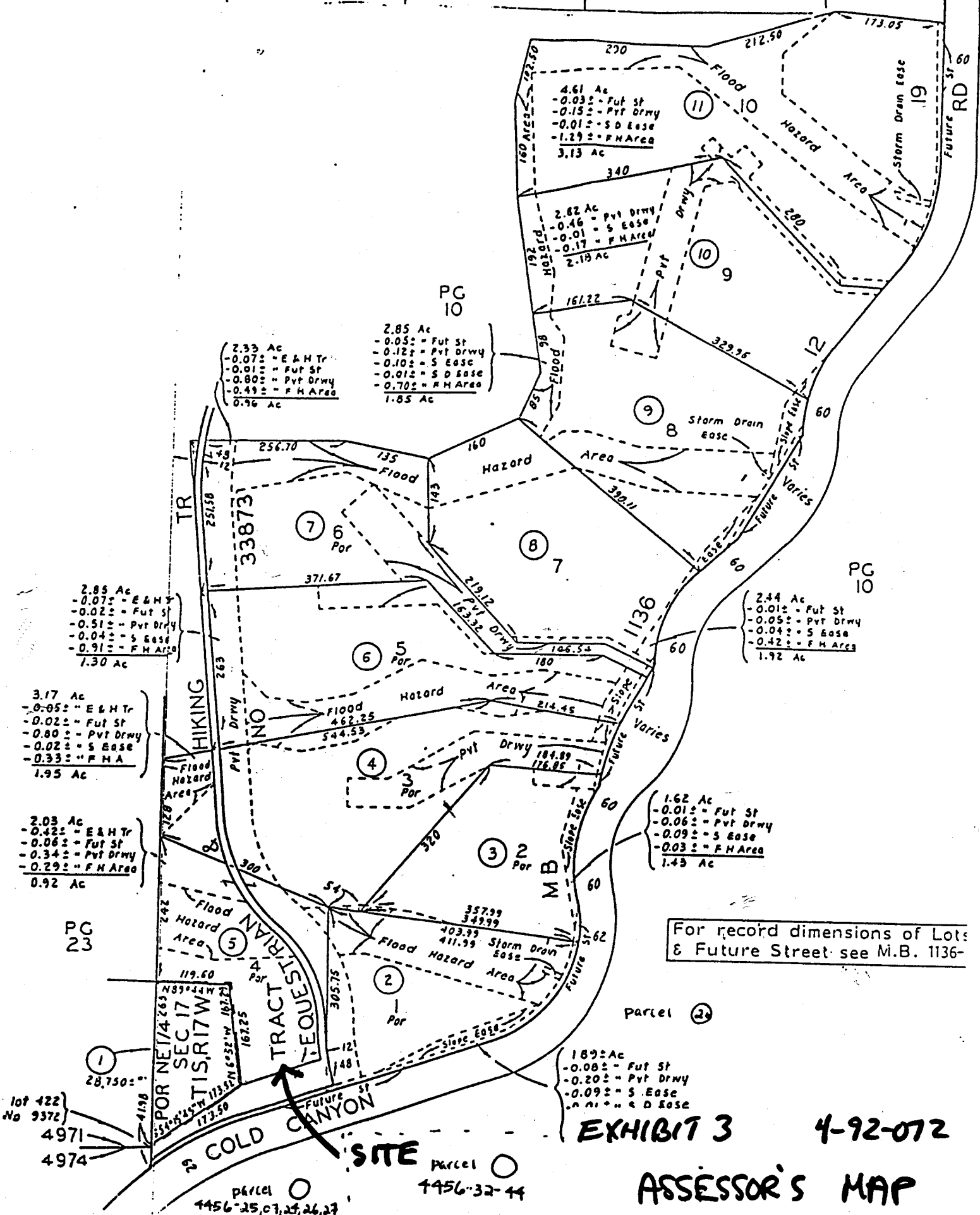
4456

39

SCALE 1" = 100'  
P.A. 4456-10

FRA  
4471  
4974

OFFICE OF ASSESSOR  
COUNTY OF LOS ANGELES



2.33 Ac  
-0.07 = E & H Tr  
-0.01 = Fut St  
-0.80 = Pvt Drwy  
-0.49 = F H Area  
0.96 Ac

2.85 Ac  
-0.05 = Fut St  
-0.12 = Pvt Drwy  
-0.10 = S Eas  
-0.01 = S D Eas  
-0.70 = F H Area  
1.85 Ac

2.85 Ac  
-0.07 = E & H Tr  
-0.02 = Fut St  
-0.51 = Pvt Drwy  
-0.04 = S Eas  
-0.91 = F H Area  
1.30 Ac

3.17 Ac  
-0.05 = E & H Tr  
-0.02 = Fut St  
-0.80 = Pvt Drwy  
-0.02 = S Eas  
-0.33 = F H Area  
1.95 Ac

2.03 Ac  
-0.42 = E & H Tr  
-0.06 = Fut St  
-0.34 = Pvt Drwy  
-0.29 = F H Area  
0.92 Ac

2.44 Ac  
-0.01 = Fut St  
-0.05 = Pvt Drwy  
-0.04 = S Eas  
-0.42 = F H Area  
1.92 Ac

1.62 Ac  
-0.01 = Fut St  
-0.06 = Pvt Drwy  
-0.09 = S Eas  
-0.03 = F H Area  
1.43 Ac

1.89 Ac  
-0.08 = Fut St  
-0.20 = Pvt Drwy  
-0.09 = S Eas  
-0.01 = S D Eas

For record dimensions of Lots & Future Street see M.B. 1136-

EXHIBIT 3 4-92-072

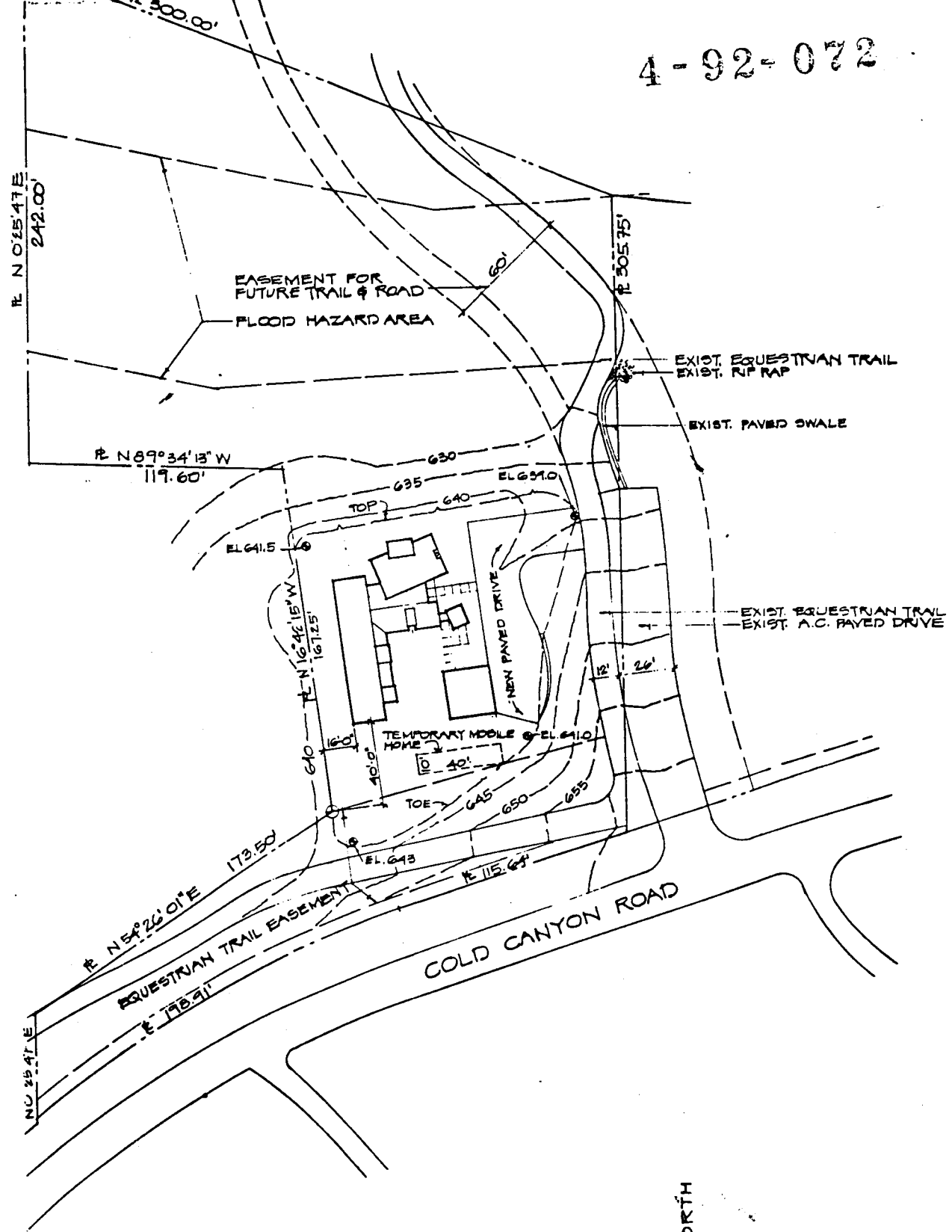
ASSESSOR'S MAP

lot 422  
No 9372  
4971  
4974

parcel 4456-25, 27, 26, 27  
parcel 4456-32-44



4-92-072

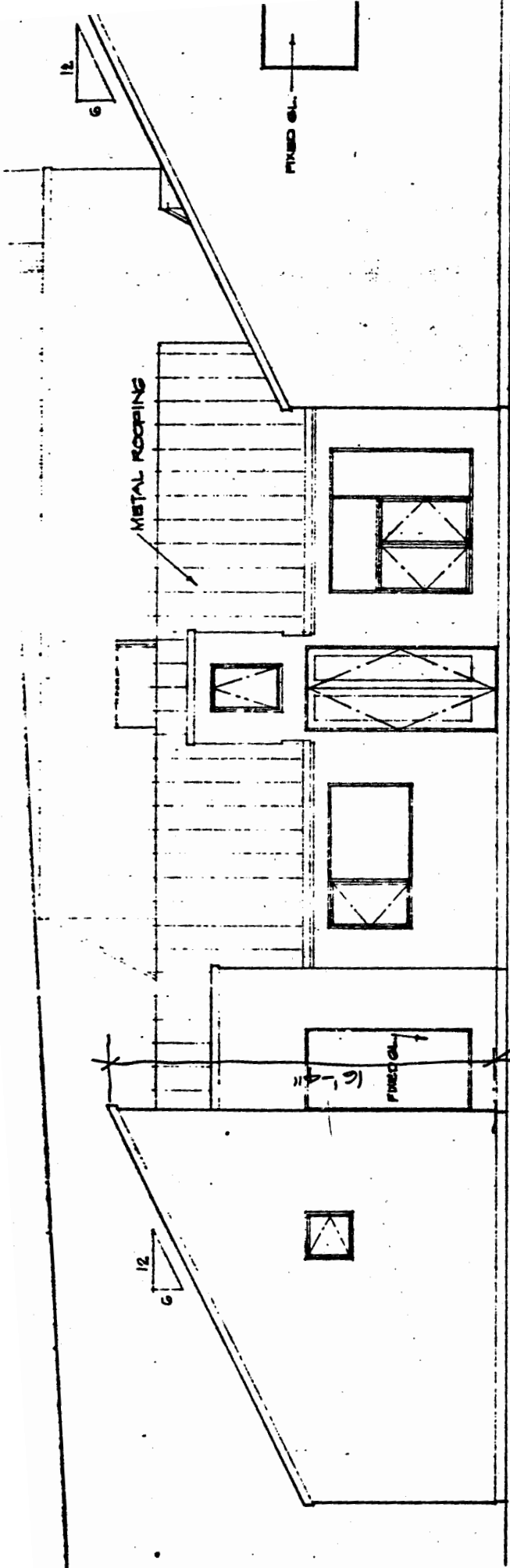


**SITE PLAN**  
 SCALE: 1" = 40'-0"  
 0 10 20 40

SINGLE STORY HOUSE & DETACHED GARAGE  
 AREA HOUSE: 2,690 SF  
 AREA GARAGE: 528 SF

**EXHIBIT 4 4-92-072**

**SITE P**



3 OVERALL SOUTH ELEVATION  
 SCALE: 1/4" = 1'-0"

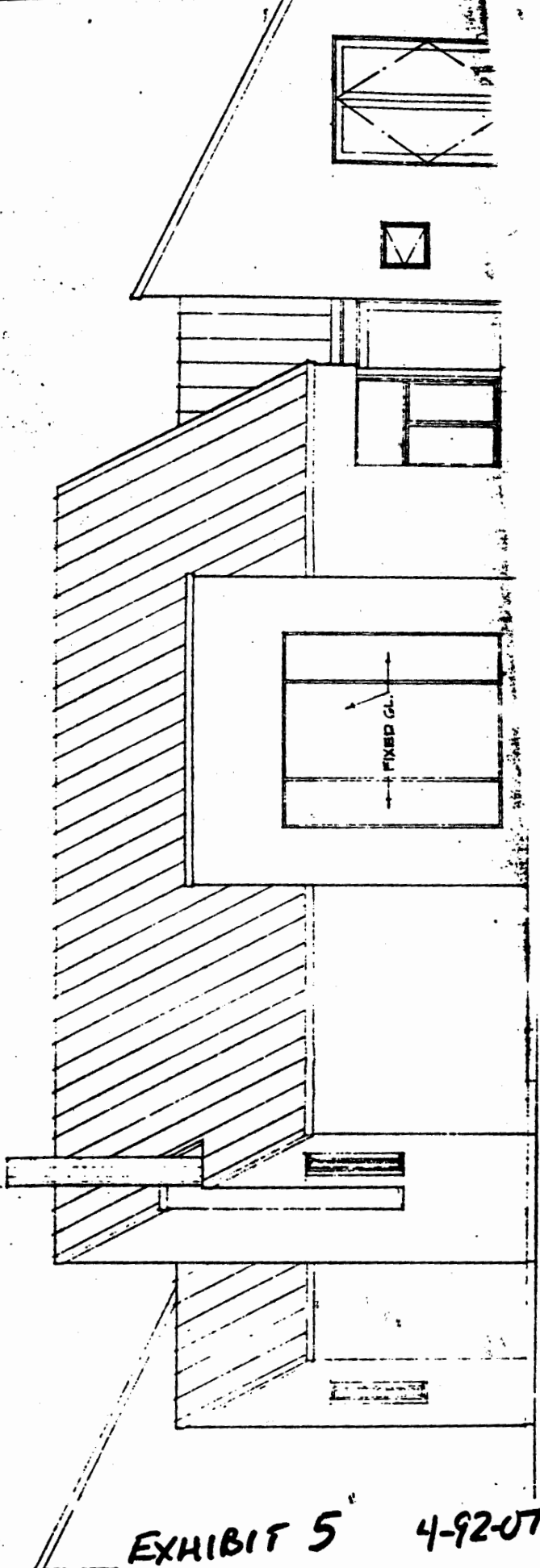
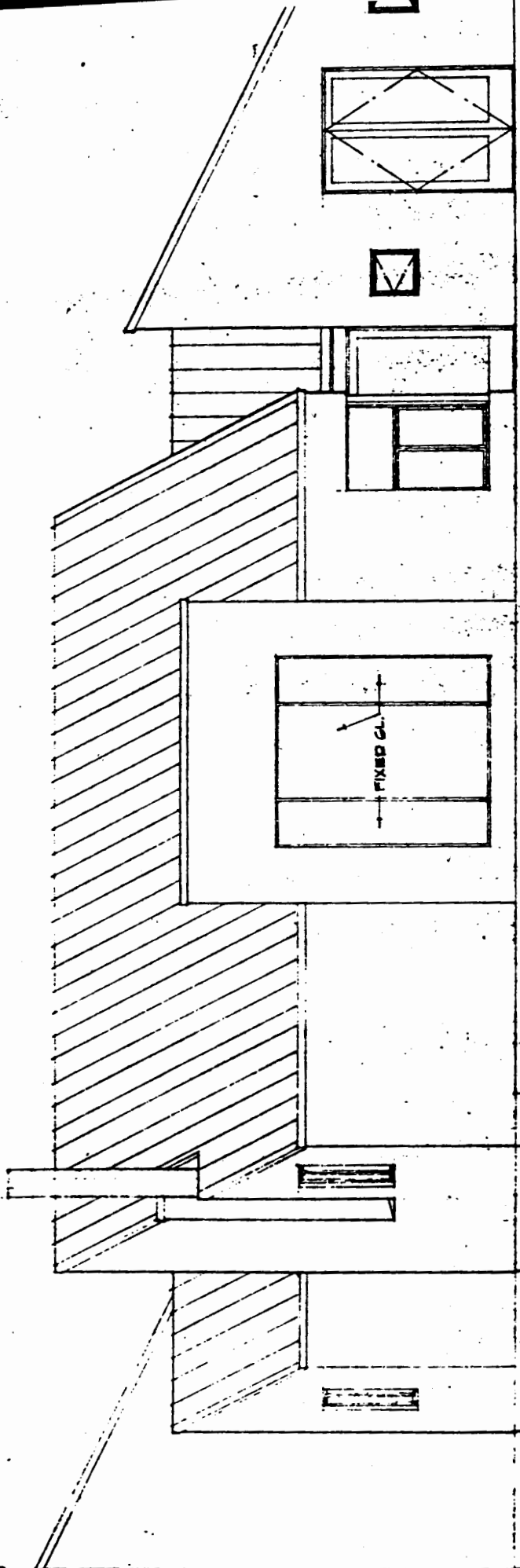


EXHIBIT 5 4-92-072  
 ELEVATION

OVERALL SOUTH ELEVATION  
SCALE: 1/4" = 1'-0"



TRUE ELEVATION  
ORIGIN ELEVATION  
SIZE C A4 FOR TRUE ELEV.

OVERALL NORTH ELEVATION  
SCALE: 1/4" = 1'-0"

EXHIBIT 6 4-92-072  
ELEVATION

This Approval Expires One Year From the Above Date.

EXISTING SEWERAGE SYSTEM FAILURE/ADDITION  
 NO. BEDROOMS / F. U. (THREE BEDROOMS)  
 SEPTIC TANK SIZE 1200 gallon  
 PRESENT: (1) 5' x 16' BT WITH 5' CAP DOWN  
 FUTURE: (1) 5' x 16' BT WITH 5' CAP DOWN  
 SYSTEM ADDITION  
 PERC. RATE / SOIL CAT. 7150 gal / DAY / BT  
 SPECIAL NOTES / REQUIREMENTS PRIOR TO FINAL APPROVAL - SUBMIT GEOLOGIST ADVISORY AND GROUNDWATER STATEMENT, BOREHOLE MAP

Septic Disposal Sys. Approved For DESIGN PURPOSES ONLY, As Required For California Coastal Commission Review. Final Approval Required Prior To Start Of Construction Or Issuance Of Permits.  
 4-8-92 Cathy  
 DATE HEALTH O.  
 COUNTY OF LOS ANGELES DEPARTMENT OF HEALTH SERVICES

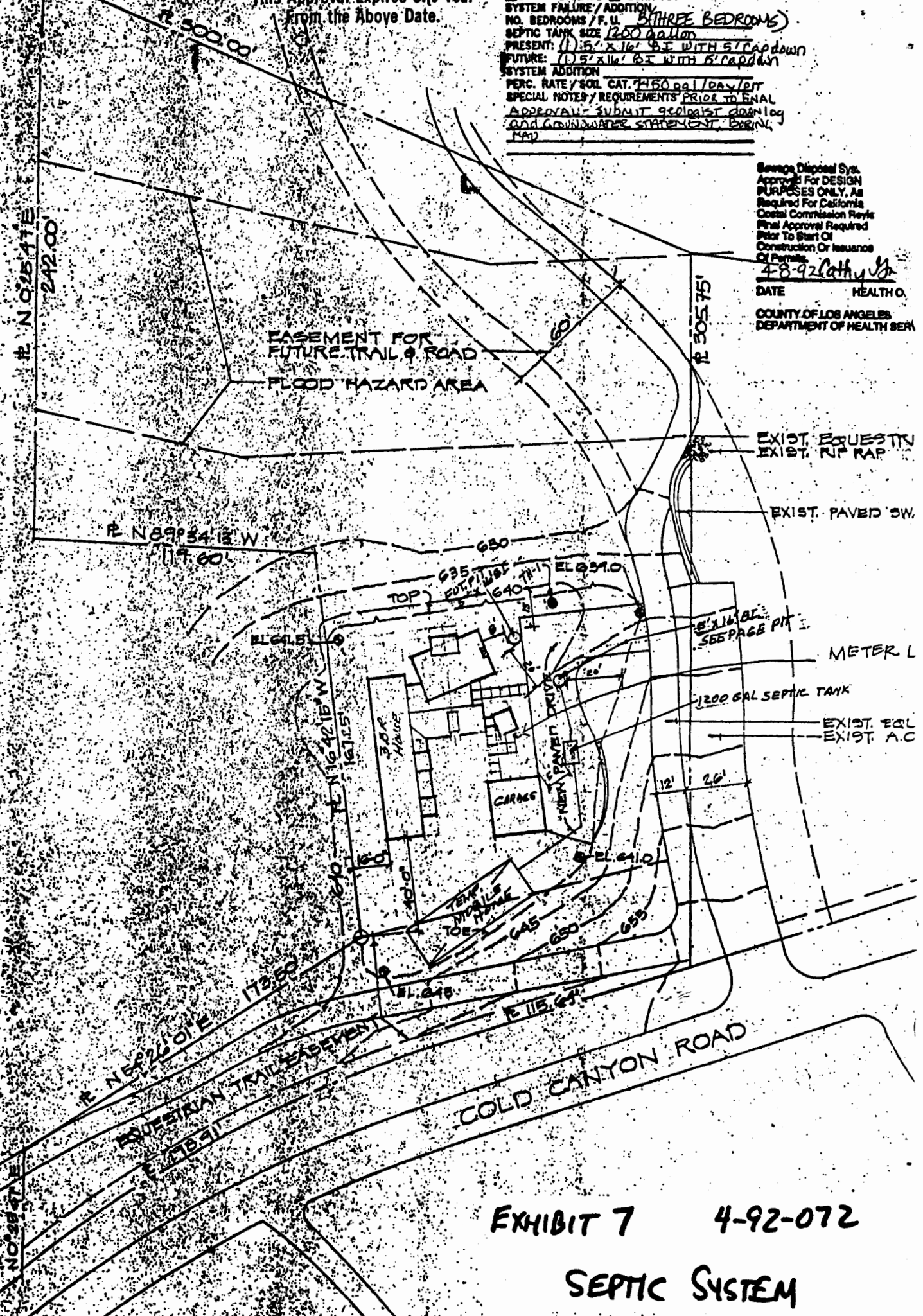


EXHIBIT 7 4-92-072  
 SEPTIC SYSTEM

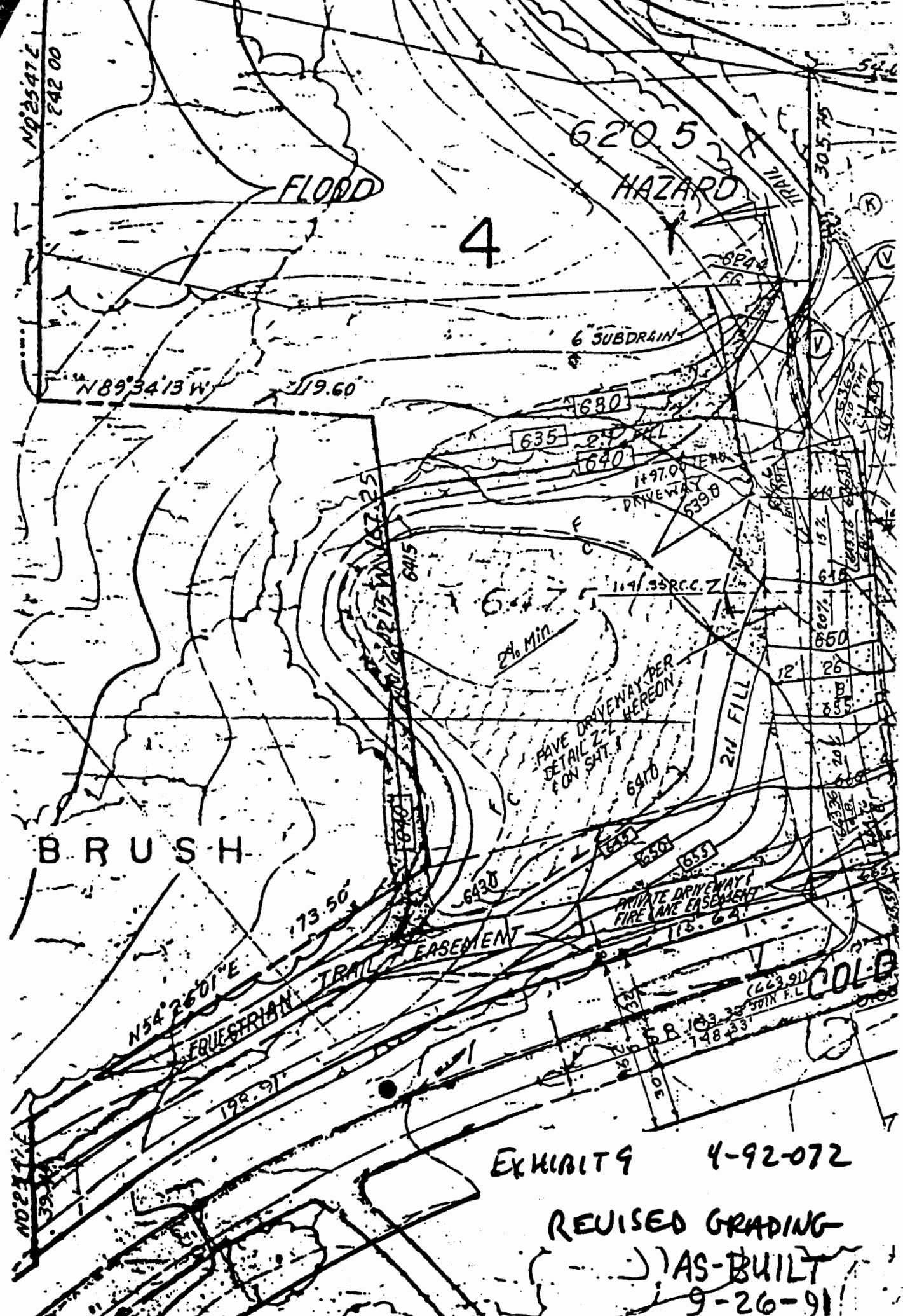


TENTATIVE TRACT NO 338

EXHIBIT 8 4-92-072

CONCEPTUAL GRADING





N02547C  
242.00

N89°34'13" W 119.60

BRUSH

N54°26'01" E  
198.91

EQUESTRIAN TRAIL EASEMENT

EXHIBIT 9 4-92-072

REVISED GRADING  
AS-BUILT  
9-26-91



**CALIFORNIA COASTAL COMMISSION**

SOUTH CENTRAL COAST AREA  
89 SOUTH CALIFORNIA STREET, SUITE 200  
VENTURA, CA 93001  
(805) 641-0142

**NOTICE OF PERMIT WAIVER EFFECTIVENESS**

DATE: May 22, 1997  
TO: All Interested Parties  
FROM: Peter M. Douglas, Executive Director  
SUBJECT: Waiver Number 4-97-045-W

Please be advised that Waiver Number 4-97-045-W, which was reported to the Commission on May 13, 1997, became effective as of that date. Any deviation from the application and plans on file in the Commission office may require a coastal development permit for the entire project.

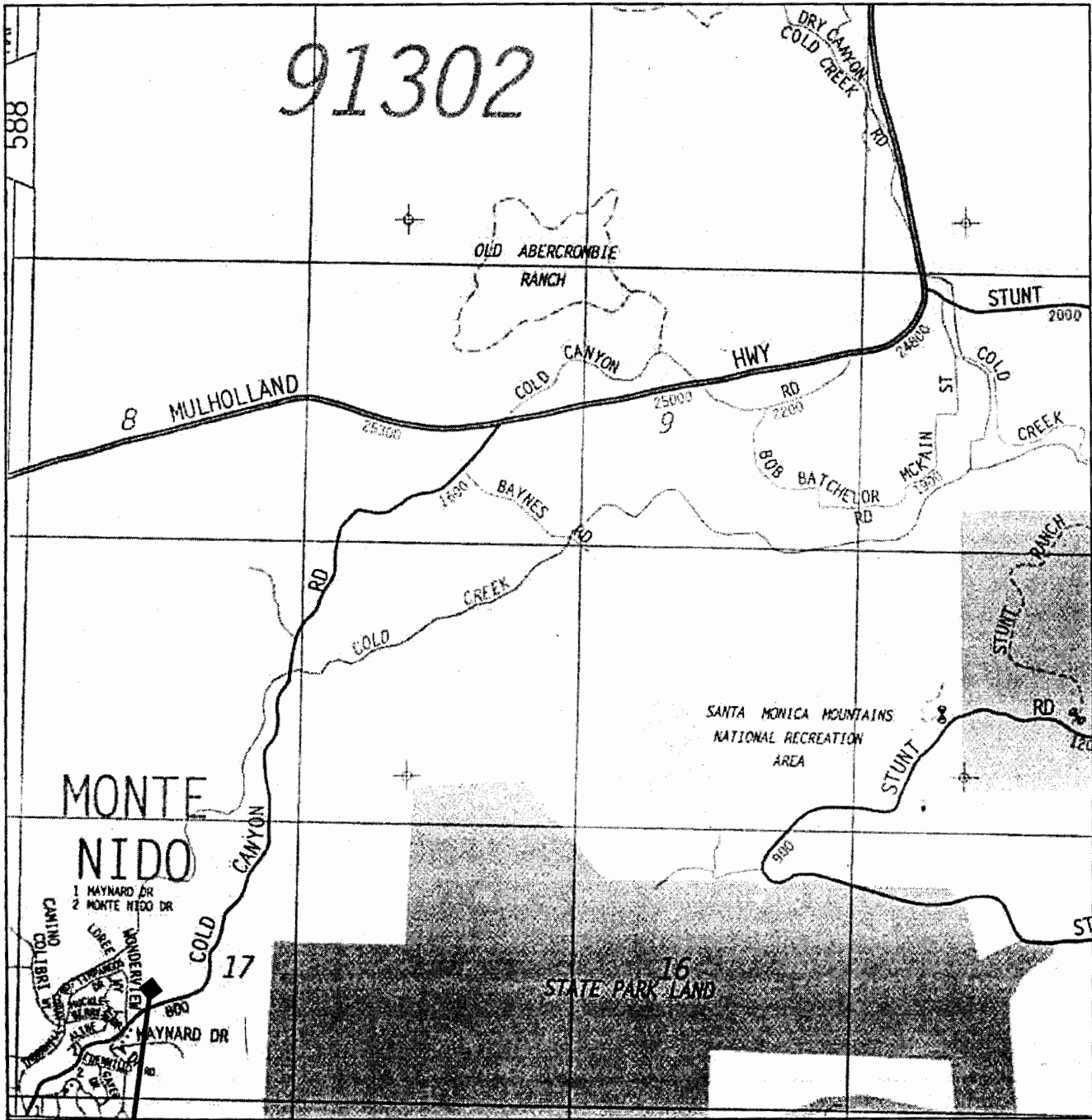
APPLICANT: **Mr. & Mrs. Robert Rex**  
LOCATION: **901 Cold Canyon Rd., Calabasas (Los Angeles County) (APN(s) 4456-039-13)**  
DESCRIPTION: **Construct one story additions, 832 sq. ft. to existing 3,218 sq. ft., one story residence. The additions consist of a new family room, hall extension, new bedroom, bath, and hallway extension. Existing septic system will serve new addition. Finish grading of about 80 cubic yards of material is proposed to be cut for the foundations, and distributed on site.**

Should you have any questions, please contact our office.

Sincerely,

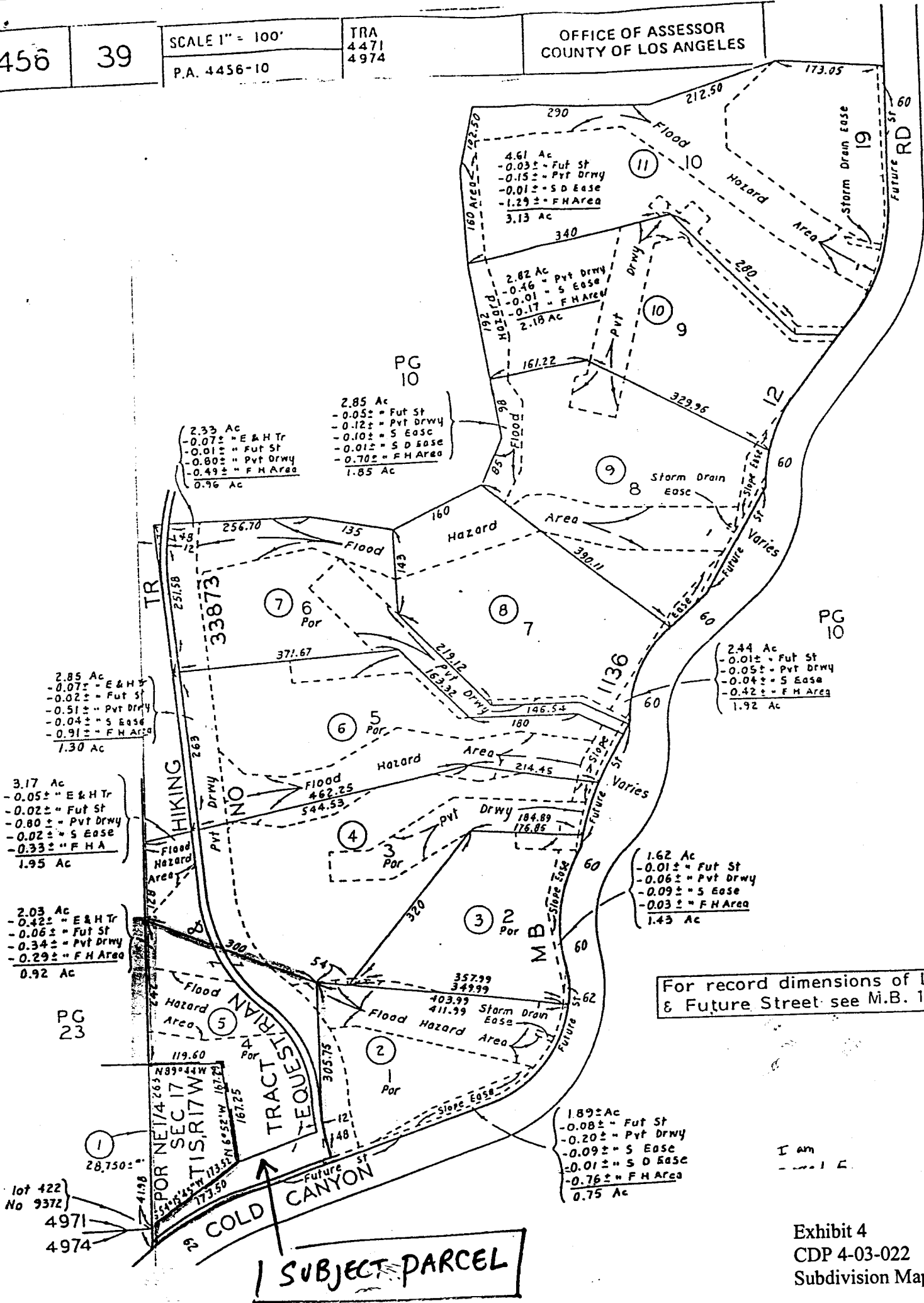
PETER M. DOUGLAS  
Executive Director

  
By: JAMES JOHNSON  
Coastal Program Analyst



Project Site

Exhibit 3  
 CDP 4-03-022  
 Vicinity Map



2.33 Ac  
 -0.07± E & H Tr  
 -0.01± Fut St  
 -0.80± Pvt Drwy  
 -0.49± F H Area  
 0.96 Ac

2.85 Ac  
 -0.05± Fut St  
 -0.12± Pvt Drwy  
 -0.10± S Easc  
 -0.01± S D Easc  
 -0.70± F H Area  
 1.85 Ac

2.85 Ac  
 -0.07± E & H Tr  
 -0.02± Fut St  
 -0.51± Pvt Drwy  
 -0.04± S Easc  
 -0.91± F H Area  
 1.30 Ac

3.17 Ac  
 -0.05± E & H Tr  
 -0.02± Fut St  
 -0.80± Pvt Drwy  
 -0.02± S Easc  
 -0.33± F H Area  
 1.95 Ac

2.03 Ac  
 -0.42± E & H Tr  
 -0.06± Fut St  
 -0.34± Pvt Drwy  
 -0.29± F H Area  
 0.92 Ac

2.44 Ac  
 -0.01± Fut St  
 -0.05± Pvt Drwy  
 -0.04± S Easc  
 -0.42± F H Area  
 1.92 Ac

1.62 Ac  
 -0.01± Fut St  
 -0.06± Pvt Drwy  
 -0.09± S Easc  
 -0.03± F H Area  
 1.43 Ac

1.89± Ac  
 -0.08± Fut St  
 -0.20± Pvt Drwy  
 -0.09± S Easc  
 -0.01± S D Easc  
 -0.76± F H Area  
 0.75 Ac

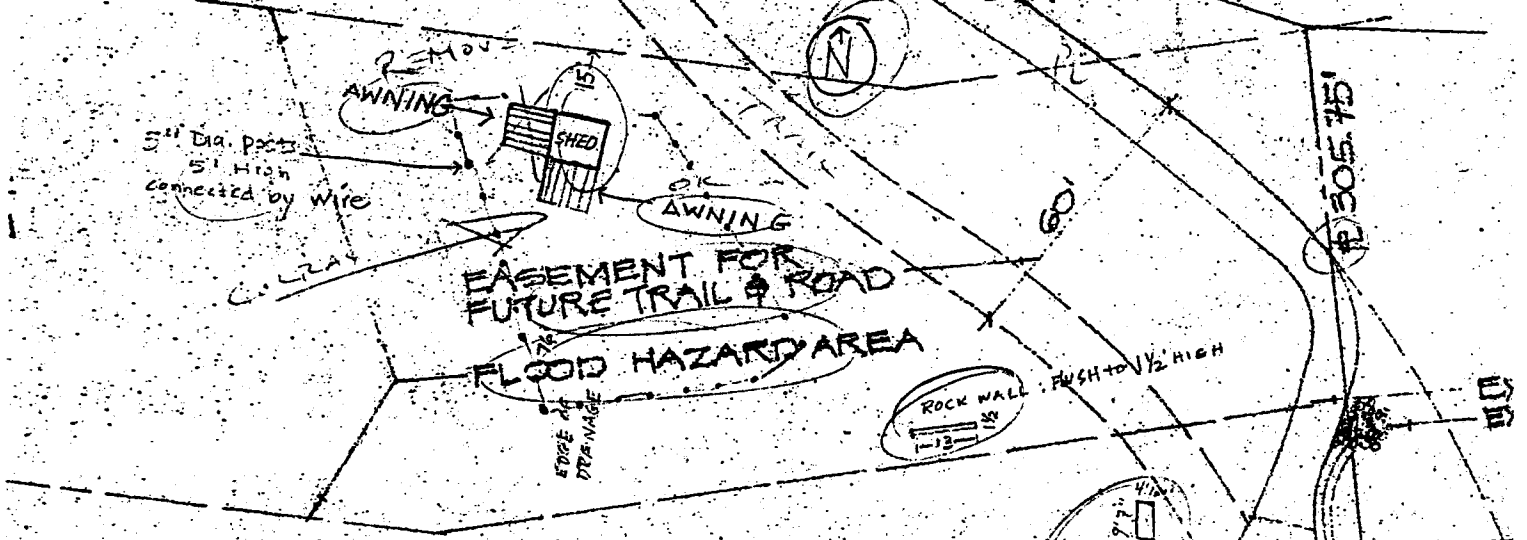
For record dimensions of Lot 6 & Future Street see Mi.B. 1136-1

**SUBJECT PARCEL**

I am  
 -----

ACCESSORY UNIT 10'3" X 12'3" W/ AWNING 10' X 10' E 10' X 12' Corral posts 5" H, 5" DIA, 7-8' apart, SHED 76' N of intermittent stream

PORTABLE ACCESSORY UNIT ON SKIDS 9'7" X 4'10", SLOPING CORRUGATED METAL ROOF 57" LOW, 71" HIGH 15' FROM PROPERTY LINE, DRAINAGE IS AN INTERMITTENT STREAM



PP 421997 34' 13" W  
119.60'

Date 4-7-03

PERMITTED COMPLETED HOUSE

SHADED AREA INDICATES 5' WIDE FLAT WALKING ACCESS BORDER AROUND HOUSE & GARAGE

SCALE 1/2" = 20'

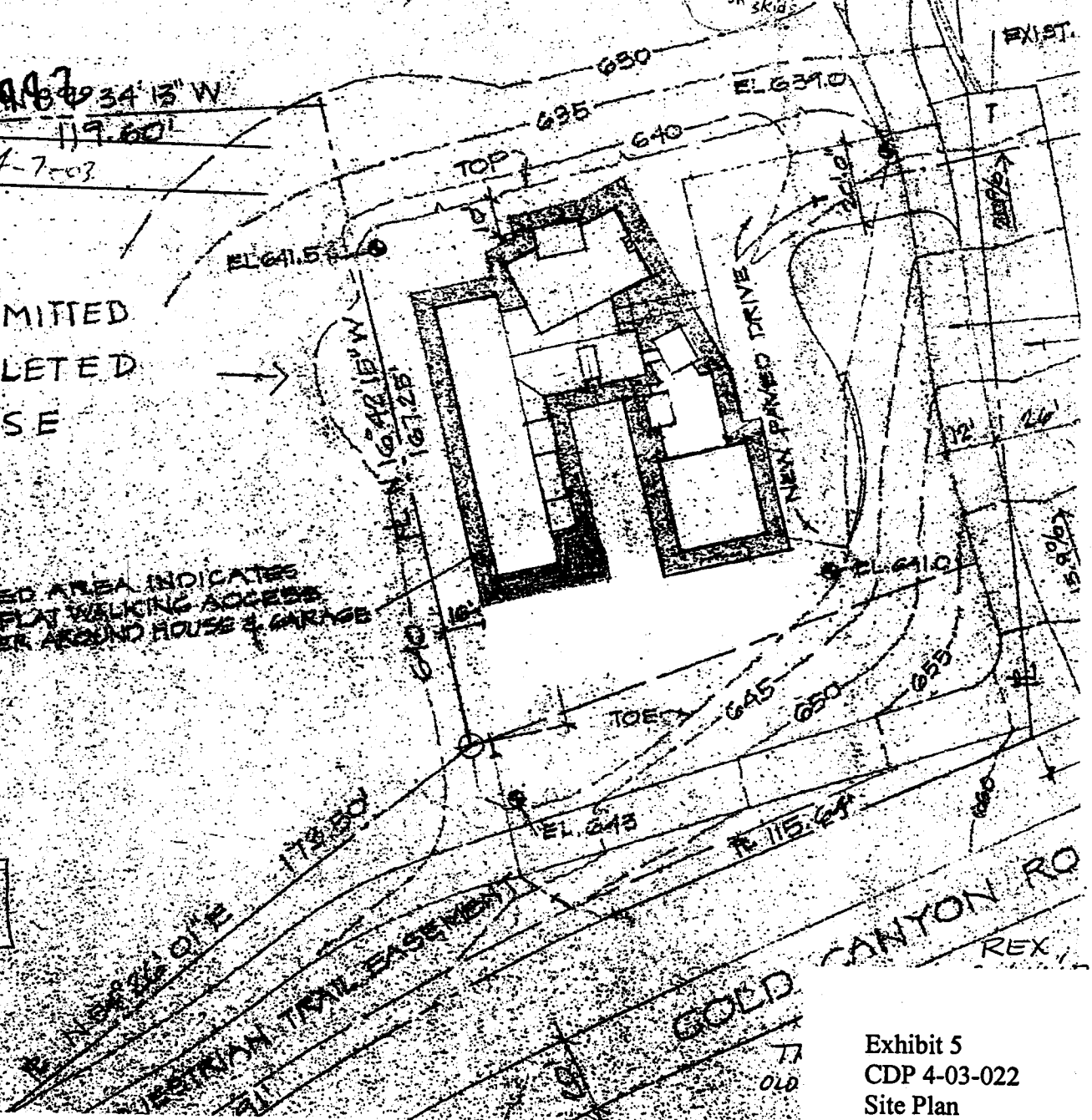
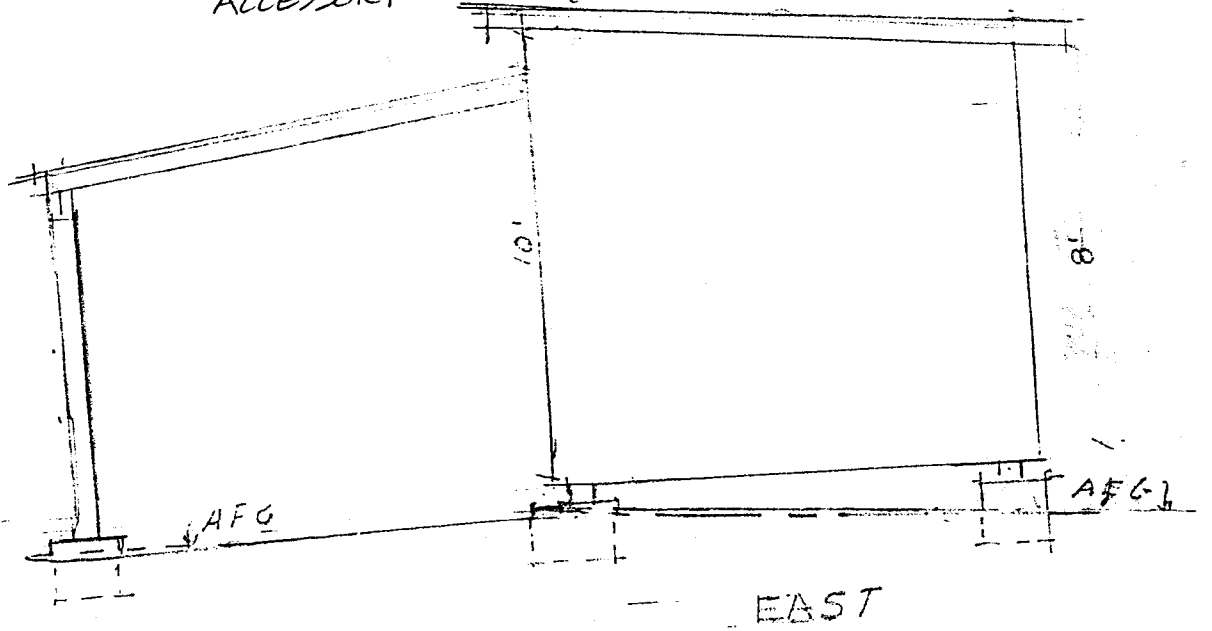


Exhibit 5  
CDP 4-03-022  
Site Plan

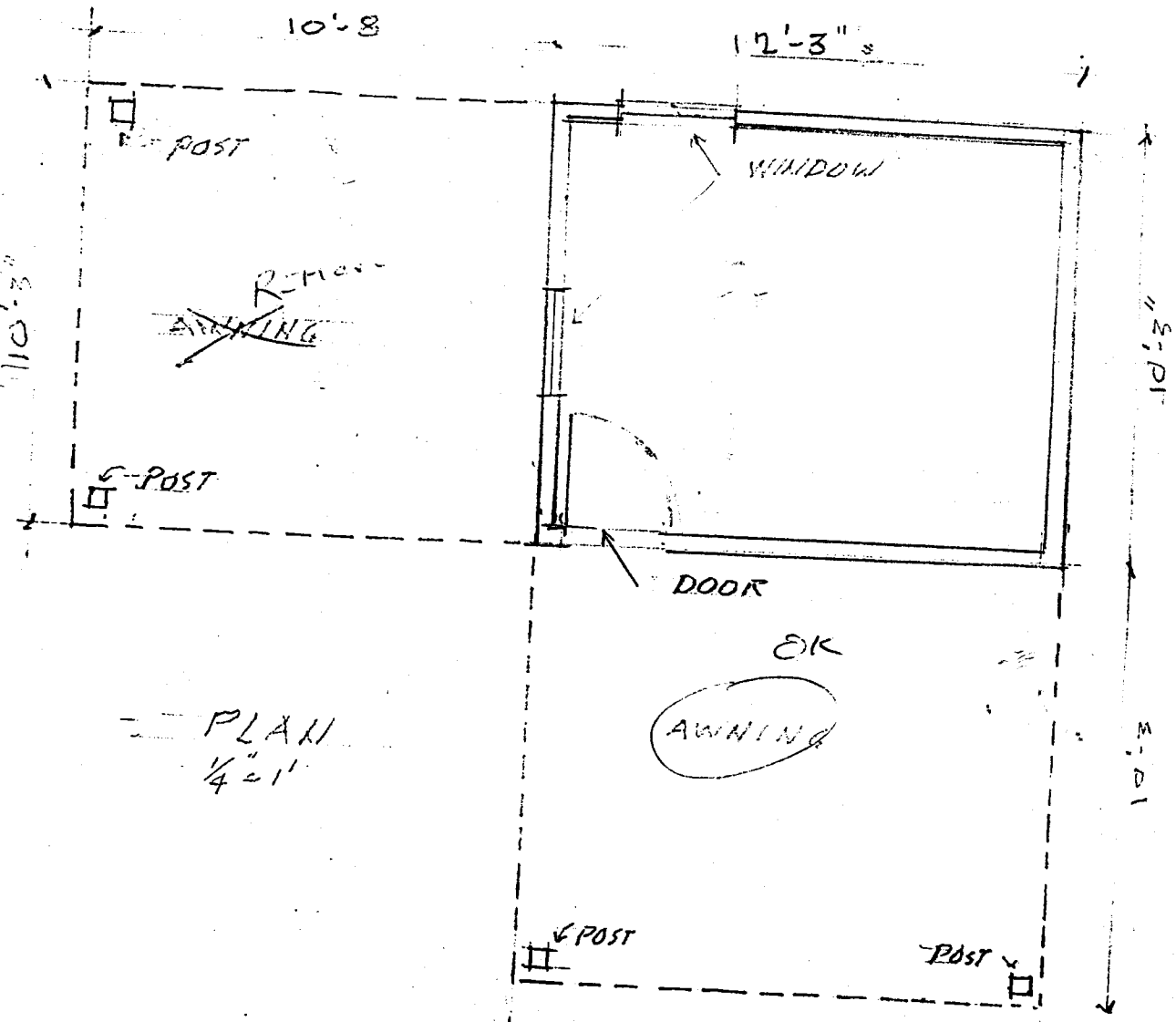
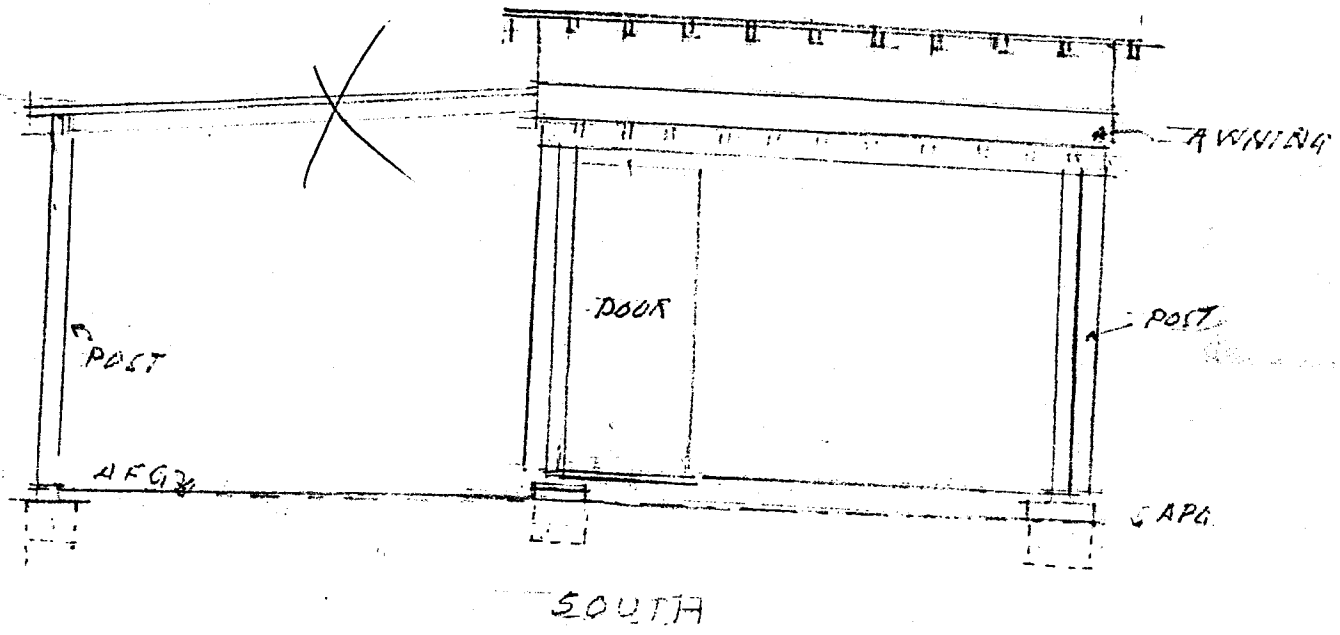
REX, 825 COLD CYN. RD., CALABASAS, CA. (818) 222-0331, TRACT 33873, LOT 4

ACCESSORY UNIT (TACK SHED)



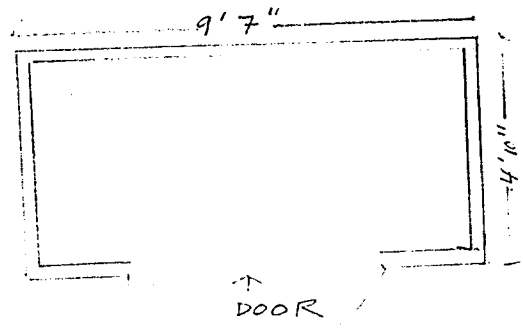
SCALE 1/4" = 1"

### ACCESSORY UNIT (TACK SHED)

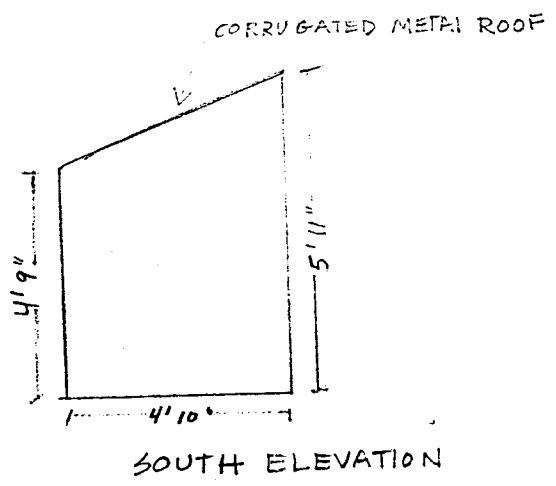




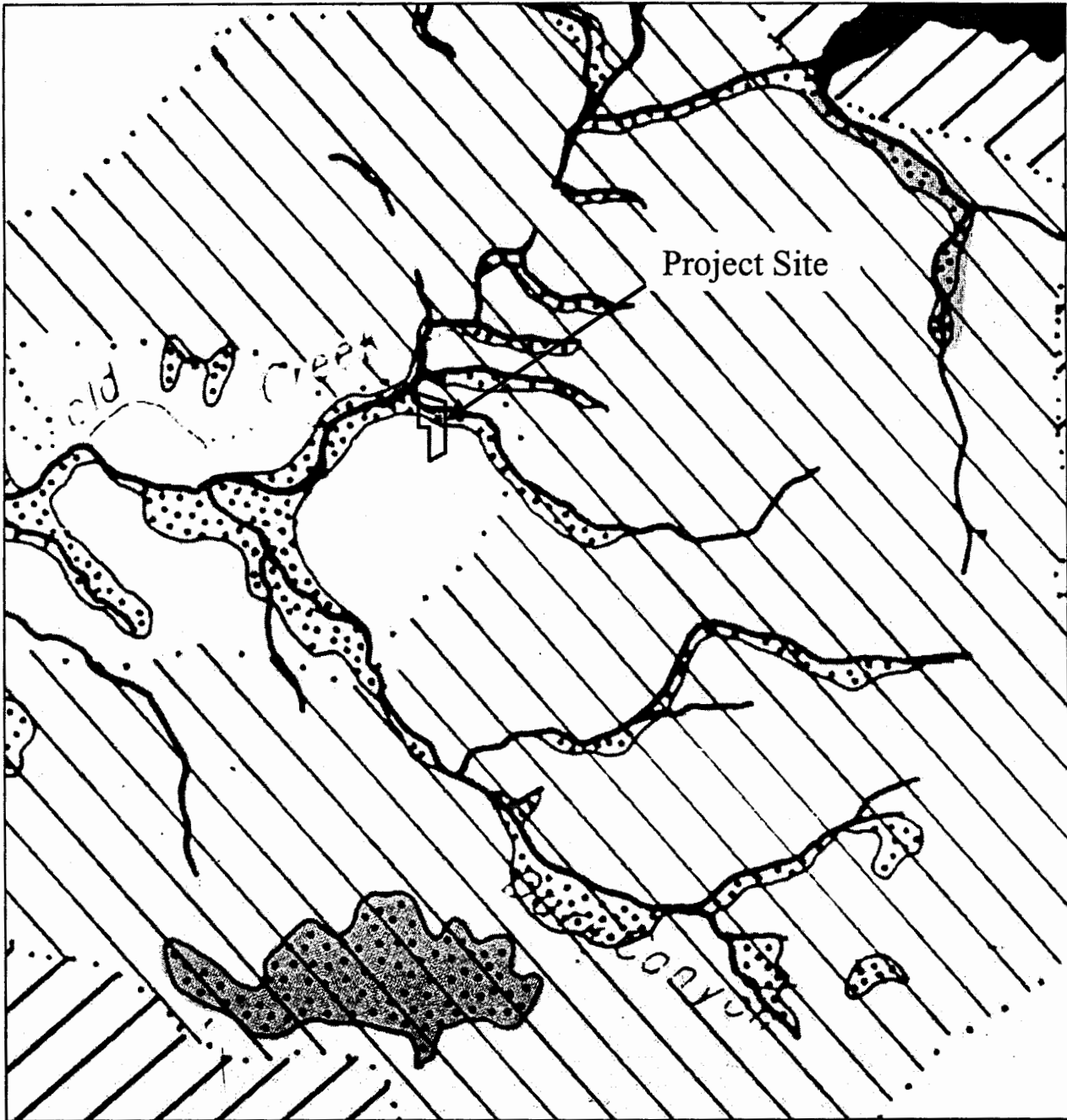
REX, 825 COLD CYN. RD. CALABASAS, CA. (818) 222-0331, TRACT 3373, LOT 4  
ACCESSORY UNIT (HAY SHED)  
PORTABLE ON SKIDS



EAST



SCALE 1/4" = 1'



## SENSITIVE ENVIRONMENTAL RESOURCES

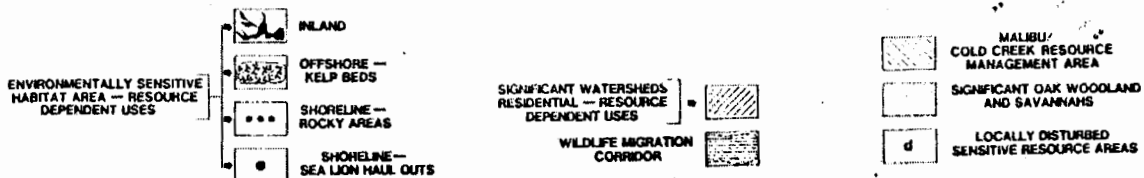
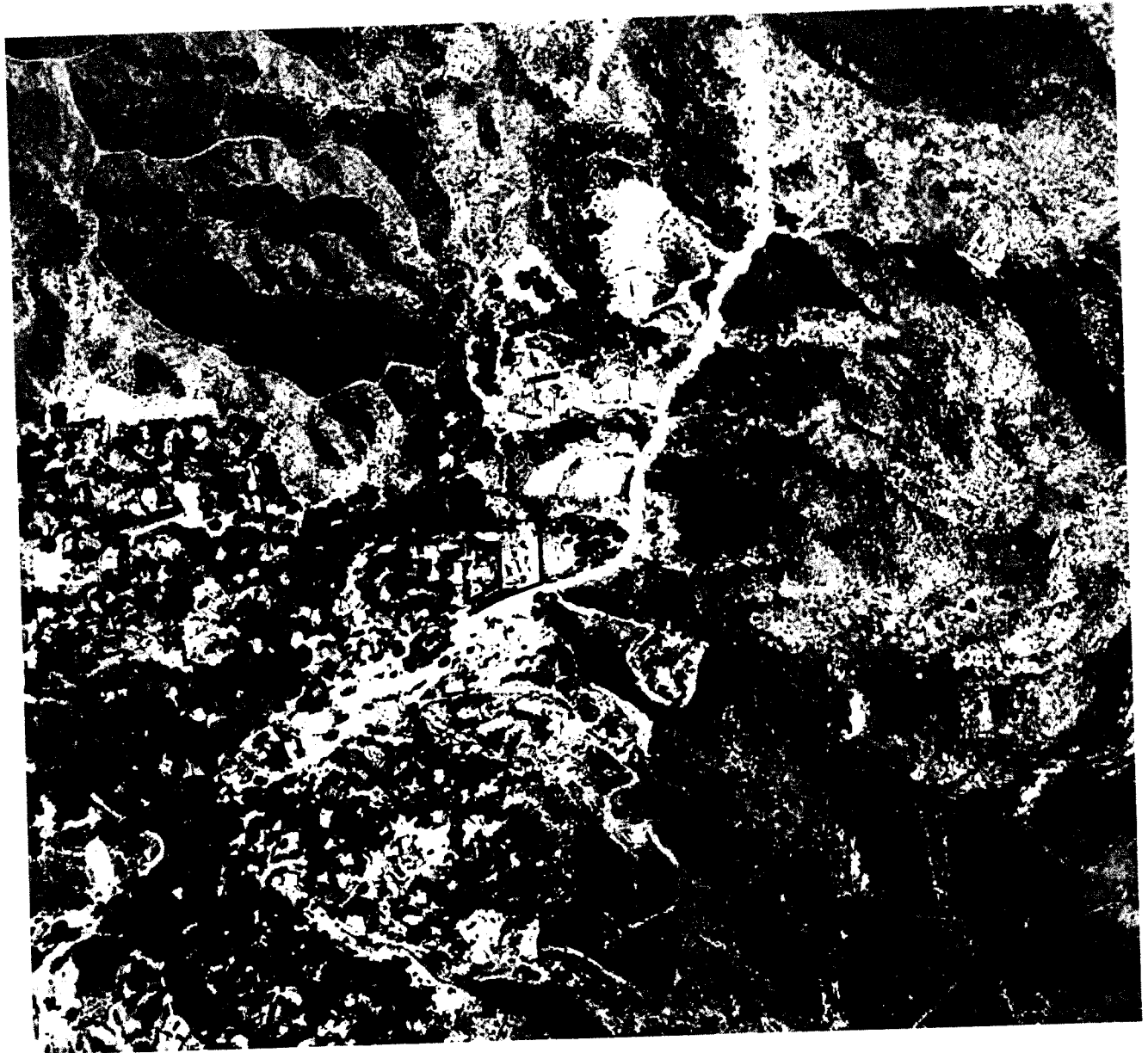


Exhibit 8  
 CDP 4-03-022  
 LUP ESHA Map



— Approximate site boundaries

Exhibit 9  
CDP 4-03-022  
Aerial View





Photo 1. Riparian canopy and unpermitted corral. Note unpermitted rock wall to left of path. View is to the west.



Photo 2. Riparian canopy and unpermitted corral and tack shed. View is to the south.

Exhibit 10  
CDP 4-03-022  
Site Photos

