CALIFORNIA COASTAL COMMISSION **Fri 8 i**

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

RECORD PACKET COPY

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Staff:	J. Johnson
Staff Report:	7/25/01
Hearing Date:	8/10/01
Comm Action	

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.: 4-00-143

APPLICANTS: Pete & Michele Weeger

PROJECT LOCATION: 2656 No. Fabuco Road, Topanga, Los Angeles County

PROJECT DESCRIPTION: Construct a two story 13 ft. to 33 ft. high, split level, 4,591 sq. ft. single family residence, attached two car 867 sq. ft. garage/workshop, pool & jacuzzi with non-chemical filtration system and pool cover for evaporation and energy conservation, after the fact development of a water well, a 5,150 gallon domestic water tank, rainwater harvesting system with buried 8,500 gallon storage tank, 120 ft. paved driveway with fire department turnaround constructed with turf block and planted with native needle grass, driveway restoration w/turf block & native needle grass for existing northern access driveway, restore existing dirt driveway on southeast portion of property with needle grass and sandstone cobble, pave 260 ft. length of No. Fabuco, grade 2,300 cu/yds of cut, 200 cu/yds of fill, export 2,100 cu/yds of material to disposal site located outside the coastal zone or a location with a coastal permit for disposal, drought resistant native landscaping, temporary living trailer, onsite drainage with catch basin and filter, entry gates, fencing, and septic system.

Lot Area:	2.5 acres
Building Coverage:	2,853 sq/ft
Driveway Coverage:	2,400 sq/ft
Landscape Coverage:	23,400 sq/ft
Parking Spaces:	4
Ht Above Finish Grade:	33 ft.
Plan Designation:	Mountain Land
Zoning:	one du/20 acres
Project Density:	one du/2.5 acres

SUMMARY OF STAFF RECOMMENDATION:

Staff recommends that the Commission determine that the proposed project with twelve (12) Special Conditions addressing removal of excavated material, landscaping and erosion control plans, road maintenance agreement, drainage and polluted runoff control plan, pool drainage and maintenance, removal of temporary construction trailer, future improvements restriction, plans conforming to geologic recommendation, wildfire waiver of liability, structural appearance restriction, condition compliance, and water use restrictions, is consistent with the requirements of the California Coastal Act. The project site is located within the Tuna Canyon Significant Watershed, but not adjacent to any environmentally sensitive habitat area. The site is accessed from Tuna Canyon Road by private paved roadways existing nearby to the intersection of Betton Drive and North Fabuco Road (Commission approved Coastal Permit No. 4-96-025, Jason for these road improvements). Additional road improvements, about 260 feet long, are proposed to access this site along North Fabuco Road.

LOCAL APPROVALS RECEIVED: Approval in Concept: Los Angeles County Regional Planning Department dated 6/15/2000; Los Angeles County Department of Health Services, dated 8/3/2000; Coastal Commission Approval, Los Angeles County Fire Department, dated 5/30/2001; Final Fuel Modification Plan, County of Los Angeles, Fire Department dated May 15, 2000; Approved Renovation for Water Well Permit, Los Angeles County Department of Health Services, dated 3/1/2000.

SUBSTANTIVE FILE DOCUMENTS: Hydrogeologic Analysis of Proposed Water Supply for Weeger Residence, dated July 17, 2001, by Cleath and Associates; Hydrogeologic Evaluation, dated November 2, 2000, by Bing Yen and Associates; Responses to Comments by California Coastal Commission, dated November 8, 2000, by PCR Services, Inc.; Report of a Preliminary Engineering Geologic Investigation, dated October 7, 1999, Limited Engineering Geologic Report, dated April 22, 2000, by Pacific Geology Consultants, Inc.; Soils Engineering Investigation, dated October 19, 1999, by Subsurface Designs Inc.; Report of Current Findings on APN # 4448-007-086, dated February 25, 2000, by PCR Services Corporation; A Phase One Cultural Survey, dated February 25, 2000, by Environmental Research Archaeologists; Land Capability/Suitability Study, Los Angeles County General Plan Revision Program, Significant Ecological Areas Report, dated 1976, by England and Nelson Environmental Consultants; Tuna Canyon Significant Ecological Area: An Assessment of the Cumulative Impacts of the Potential Maximum Development, prepared for Tuna Mesa Property Owners Association, by Phillips Brandt Reddick, Inc. dated January 9, 1978; Coastal Development Permit No. 4-00-162, Sayles; Coastal Development Permit No. 4-96-172, 4-96-172-E-1 and 4-99-164, Olson; Coastal Development Permit No. 4-96-025, 496-025-A-1, 4-96-025-A-2, 4-96-025-A-3, and Revocation Request R-4-96-025-A-3, Jason.

STAFF RECOMMENDATION:

MOTION: **I move that the Commission approve Coastal Development Permit No. 4-00-143 pursuant to the staff recommendation.**

STAFF RECOMMENDATION OF APPROVAL:

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

I. Resolution for Approval with Conditions

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

II. Standard Conditions

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

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

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

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

III. Special Conditions

1. REMOVAL OF EXCAVATED MATERIAL

The applicant is authorized to remove excess excavated or cut material consisting of 2,100 cubic yards of material and this material shall be transported to an appropriate disposal site located outside of the Coastal Zone, or an approved site located in the Coastal Zone with a valid coastal development permit for disposal of fill material.

2. LANDSCAPING AND EROSION CONTROL PLANS

Prior to issuance of a coastal development permit, the applicant shall submit revised landscaping and erosion control plans, prepared by a licensed landscape architect or a qualified resource specialist, for review and approval by the Executive Director. The revised landscaping and erosion control plan shall reflect the revised approved project description. The revised landscape and erosion control plans shall be reviewed and approved by the consulting engineering geologist and engineer to ensure that the plans are in conformance with the consultants' recommendations. The plans shall incorporate the following criteria:

A) Landscaping Plan

1) All graded & disturbed areas on the subject site and along North Fabuco Road easements graded or disturbed by construction shall be planted and maintained for erosion control purposes within (60) days of the applicant's receipt of the certificate of occupancy for the residence. The fire department turnaround along the southern access driveway shall be constructed with turf block and planted with native needle grass, the northern dirt access driveway shall be restored with turf block & native needle grass, and the dirt driveway on the southeast portion of property shall be restored with native needle grass and sandstone cobble. The area where the temporary living trailer will be located shall be replanted within thirty days of its removal. To minimize the need for irrigation all landscaping shall consist primarily of native/drought resistant plants as listed by the California Native Plant Society, Santa Monica Mountains Chapter, in their document entitled Recommended List of Plants for Landscaping in the Santa Monica Mountains, dated February 5, 1996. Invasive, non-indigenous plan species which tend to supplant native species shall not be used.

2) All cut and fill slopes shall be stabilized with planting at the completion of final grading. Planting should be of native plant species indigenous to the Santa Monica Mountains using accepted planting procedures, consistent with fire safety requirements. The plan shall include vertical elements, such as trees and shrubs, which partially screens the appearance of the proposed residence, garage/workshop, and water storage tank from Saddle Peak Road to the north and from Tuna Canyon Road to the north and west. Such

planting shall be adequate to provide 90 percent coverage within two (2) years, and this requirement shall apply to all disturbed soils;

3) Plantings will be maintained in good growing condition throughout the life of the project and, whenever necessary, shall be replaced with new plant materials to ensure continued compliance with applicable landscape requirements;

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

5) Vegetation within twenty (20) feet of the proposed house may be removed to mineral earth, vegetation within a 200 foot radius of the main structure may be selectively thinned in order to reduce fire hazard. However, such thinning shall only occur in accordance with an approved revised long-term fuel modification plan submitted pursuant to this special condition. The revised final fuel modification plan shall include details regarding the types, sizes and location of plant materials to be removed, and how often thinning is to occur. In addition, the applicant shall submit evidence that the final revised fuel modification plan has been reviewed and approved by the Forestry Department of Los Angeles County. Within the twenty (20) foot radius of the proposed house and garage native plants shall be selected from drought tolerant species or subspecies, or varieties suited to the Mediterranean climate of the Santa Monica Mountains together with limited areas may be planted with ornamental shrubs and trees and other landscaping that is non invasive and drought tolerant.

B) <u>Interim Erosion Control Plan</u>

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

2) The plan shall specify that should grading take place during the rainy season (November 1 – March 31) the applicant shall install or construct temporary sediment basins (including debris basins, desilting basins or silt traps), temporary drains and swales, sand bag barriers, silt fencing, stabilize any stockpiled fill with geo-fabric covers or other appropriate cover, install geo-textiles or mats on all cut or fill slopes and close and stabilize open trenches as soon as possible. These erosion measures shall be required on the project site prior to or concurrent with the initial grading operations and maintained through out the development process to minimize erosion and

sediment from runoff waters during construction. All sediment should be retained on-site unless removed to an appropriate approved dumping location either outside the coastal zone or to a site within the coastal zone permitted to receive fill.

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

C) **Monitoring.**

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

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

3. ROAD MAINTENANCE AGREEMENT

By acceptance of this Coastal Development Permit, the applicant agrees that should the proposed improvements to Fabuco Road or the proposed drainage structures fail or result in erosion, the applicant/landowner or successor interests shall be solely responsible for any necessary repairs and restoration of the road improvements conducted pursuant to this Permit and the drainage structures authorized or required by this Permit.

4. DRAINAGE AND POLLUTED RUNOFF CONTROL PLAN

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit for the review and approval of the Executive Director, final drainage and runoff control plans, including supporting calculations. The plan shall be prepared by a licensed engineer and shall incorporate structural and non-structural Best Management Practices (BMPs) designed to control the volume, velocity and pollutant load of stormwater leaving the developed site. The plan shall be reviewed and approved by the consulting engineering geologist to ensure the plan is in conformance with geologist's recommendations. In addition to the specifications above, the plan shall be in substantial conformance with the following requirements:

(a) Selected BMPs (or suites of BMPs) shall be designed to treat, infiltrate or filter stormwater from each runoff event, up to and including the 85th percentile, 24-hour runoff event for volume-based BMPs, and/or the 85th percentile, 1-hour runoff event, with an appropriate safety factor, for flow-based BMPs.
(b) Runoff shall be conveyed off site in a non-erosive manner.
(c) Energy dissipating measures shall be installed at the terminus of outflow drains.
(d) The plan shall include provisions for maintaining the drainage system, including structural BMPs, in a functional condition throughout the life of the approved development. Such maintenance shall include the following: (1) BMPs shall be inspected, cleaned and repaired when necessary prior to the onset of the storm season, no later than September 30th each year and (2) should any of the project's surface or subsurface drainage/filtration structures or other BMPs fail or result in increased erosion, the applicant/landowner or successor-in-interest shall be responsible for any necessary repairs to the drainage/filtration system or BMPs and restoration of the eroded area. Should repairs or restoration become necessary, prior to the commencement of such repair or restoration work, the applicant shall submit a repair and restoration plan to the Executive Director to determine if an amendment or new coastal development permit is required to authorize such work.

5. POOL DRAINAGE AND MAINTENANCE

Prior to the issuance of the Coastal Development Permit, the applicant shall submit, for review and approval of the Executive Director, a written pool/spa maintenance agreement to install and use the proposed non-chemical water purification system and a program to maintain proper pH, calcium and alkalinity balance in a manner that any runoff or drainage from the pool/spa will not include excessive amounts of chemicals that may adversely affect the designated Significant Watersheds or Environmentally Sensitive Habitat Areas. The Permittee shall undertake development and maintenance in compliance with this pool/spa maintenance agreement and program approved by the Executive Director. No changes shall be made to the agreement and program unless they are approved by the Executive Director.

6. REMOVAL OF TEMPORARY CONSTRUCTION TRAILER

With the acceptance of this coastal permit, the applicants agree that the temporary construction trailer on the site shall be removed within two years of the issuance of this Coastal Permit Amendment or within thirty (30) days of the applicant's receipt of the Certificate of Occupancy for the proposed residence from the County of Los Angeles, whichever is less, to a site located outside the Coastal Zone or a site with a valid coastal development permit for the installation of a temporary construction trailer.

7. FUTURE IMPROVEMENTS RESTRICTION

A. This permit is only for the development described and approved in Coastal Development Permit No 4-00-143. Pursuant to Title 14 California Code of Regulations Section 13250(b)(6), the exemptions otherwise provided in Public Resources Code section 30610(a) shall not apply to the entire property. Accordingly, any future improvements to the entire property including the permitted single family residence, garage/workshop, pool/spa, water tanks, and the clearing of vegetation or grading other than as provided for in the approved fuel modification landscape and erosion control plan prepared pursuant to Special Condition Number Two or future developments, shall require an amendment to Permit No. 4-00-143 from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.

B. Prior to the issuance of a coastal development permit, the applicant shall execute and record a deed restriction, in a form and content acceptable to the Executive Director, reflecting the above restrictions on development in the deed restriction and shall include legal descriptions of the applicant's entire parcel. The deed restriction 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 enforceability of the restriction. However, fuel modification consistent with the requirements of the Los Angeles County Fire Department's fuel modification standards is permitted. This deed restriction shall not be removed or changed without a Commission amendment to this coastal development permit.

8. PLANS CONFORMING TO GEOLOGIC RECOMMENDATION

All recommendations contained in the Report of a Preliminary Engineering Geologic Investigation dated October 7, 1999 and Limited Engineering Geologic Report, dated April 22, 2000, by Pacific Geology Consultants, Inc. and in the Soils Engineering Investigation, dated October 19, 1999, by Subsurface Designs, Inc., shall be incorporated into all final design and construction plans including geologic stability, surficial stability, seismic considerations, foundation support, swimming pool, retaining walls, excavation characteristics, site drainage, on-site effluent disposal, grading, temporary excavations, erosion control, drainage and maintenance, foundations, floor slabs, excavation erosion control, inspection and plan review. All plans must be reviewed and approved by the consultants. **Prior to the issuance of the coastal**

development permit, the applicant shall submit, for review and approval by the Executive Director, evidence of the consultants' review and approval of all project plans.

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

9. WILDFIRE WAIVER OF LIABILITY

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

10. STRUCTURAL APPEARANCE RESTRICTION

A. The color of the structures, roofs, and above ground water tank permitted hereby shall be restricted to a color compatible with the surrounding environment (white and galvanized metal tones shall not be acceptable). All windows shall be comprised of non-glare glass. Night lighting, if any, shall be directed downward, be of low intensity, at low height and shielded; security lighting, if any, shall be controlled by motion detector.

B. **Prior to issuance of the Coastal Development Permit**, the applicant shall execute and record a deed restriction, in a form and content acceptable to the Executive Director, which reflects the restrictions stated above on the proposed development. The document shall run with the land for the life of the structures approved in this permit, binding all successors and assigns, and shall be recorded free of prior liens and any other encumbrances that the Executive Director determines may affect the enforceability of the restriction. This deed restriction shall not be removed or changed without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

11. CONDITION COMPLIANCE

Within ninety (90) days of Commission action on this Coastal Development Permit application, or within such additional time as the Executive Director may grant for good cause, the applicant shall satisfy all requirements specified in the conditions hereto that the applicant is required to satisfy prior to issuance of this permit. Failure to comply with this requirement may result in the institution of enforcement action under the provisions of Chapter 9 of the Coastal Act.

12. WATER USE RESTRICTIONS

The applicant agrees to prohibit the future construction of equestrian stables, corrals, or barns on the subject property in the future and agrees to install and use restricted water flow plumbing fixtures as proposed and detailed in the application Section I submitted July 13, 2001 (Exhibit 19) to minimize the need for water extracted from the proposed on-site water well.

IV. Findings and Declarations

A. Project Description

The project site is located within a partially developed 16-lot subdivision created in the 1960's prior to the effective date of the Coastal Act in 1977. The site is located about two miles inland, northwest of Tuna Canyon, and southwest of Fernwood area in an unincorporated area of Los Angeles County known as Topanga. The parcel is accessed about one quarter of a mile to the south of Tuna Canyon Road, along Skyhawk Lane, Chard Avenue (also known as Hawks Nest Trail), West Betton Drive, and lastly North Fabuco Road (Exhibits 1 - 4).

Road access to the subject property starts from Tuna Canyon Road, a public road to private roads along Skyhawk Lane, Chard Avenue (Hawk's Nest Trail), Betton Drive and North Fabuco Road. These access roads along Skyhawk Lane, Chard Avenue and Betton Drive to the subject property are presently improved and paved to Los Angeles County Fire Department standards as a result of the Commission approved Coastal Permit No. 4-96-025 issued to Mark Jason for the construction of a residence at 20556 Betton Drive. Chard Avenue and Betton Drive are paved about 20 feet wide to a location just beyond and west of the intersection of Betton Drive and North Fabuco Road (Exhibit 4). The applicant proposes to construct road improvements including paving and widening (from 13 feet to 20 feet wide pursuant to Los Angeles County Fire Department requirements) a long a 260 foot length of North Fabuco Road from its intersection with Betton Drive to the applicant's access driveway. A 120 foot long driveway is proposed (20 feet wide) to access the proposed garage, including a fire truck turnaround area (Exhibits 4 - 6).

The applicant initially proposed to construct a two story 15 ft. to 26 ft. high, 3,990 sq/ft. split level single family residence with an attached two car 750 sq/ft. garage excavated into the building site at a lower level and a 740 sq. ft. barn all "Approved in Concept" by the Los Angeles County Regional Planning Department (Exhibit 20). The applicant submitted revised plans on June 29, 2001 indicating that the barn was deleted and the residence and garage enlarged in size. The revised project now consists of a two story, 13 foot to 33 foot high, split level, 4,591 sq. ft., single family residence and an attached two car 867 sq. ft. garage/workshop, and two water tanks, one above ground (Exhibits 7 – 11). The applicant is requesting approval of this revised project totaling 5,458 sq. ft. in size.

The majority of the proposed grading is a result of excavating beneath the residence and garage into the building pad. Constructing the residence and garage/workshop will require grading consisting of about 1,820 cubic yards of cut and 10 cubic yards of fill (Exhibit 12). Grading for the driveway, fire truck turnaround, and pool/spa consists of 360 cubic yards of cut and 70 cubic yards of fill. Road improvements along North Fabuco Road require a cut of 120 cubic yards and 120 cubic yards of fill. A total of 2,100 cubic yards of excess cut material will be exported to a disposal site located outside the coastal zone or a location with a coastal permit for disposal. A septic system, two entry gates, and fencing are also proposed on the property. Two existing dirt access driveways access the building pad from North Fabuco Road. The existing northern driveway is proposed to be restored and replanted with native needle grass (Exhibit 6). The existing dirt driveway on the southeastern portion of the property will be restored with native needle grass and local sandstone cobble for erosion control. The proposed southern access driveway will be paved and the fire truck turnaround area will be constructed of turf block and also planted with native needle grass. A temporary living trailer will be located on the site of the proposed pool during construction.

The 2.5 acre project site is located along a southerly trending ridge flanked on the east and west by northerly trending drainages. Slopes on the site range from 3:1 to 1.5:1. The property includes two graded flat pads, one on a small knob hill located on the northern portion of the property, the other pad is located on the western central area of the site adjacent to the proposed fire truck turnaround. An existing drainage area is located on the eastern portion of the property leading to the southern portion, where an existing culvert beneath Betton Drive is located. The proposed driveway follows a portion of an existing dirt driveway; the initial 50 feet will be realigned from North Fabuco Road. The building site for the residence and garage will be located on top of and cut into the small knob hill located on the northern portion of the parcel. The proposed pool/spa surrounded by a native grass area will be located on top of the small pad located on the western central area of the site (Exhibit 5).

The applicant also proposes to construct a swimming pool and jacuzzi with a non-chemical filtration system and a solar plastic cover to reduce evaporation and conserve energy. The proposed non-chemical filtration system is known as the "Hydro-Max Oxi-ion Pool Water Treatment System" (Exhibit 18). This system creates ionized water or ozone in low quantities to oxidize algae, micro-organisms, and other particles as pool water passes through the pool plumbing. The ionized water returns to the pool as sterilized water and oxygen, according to information provided by the applicant. The oxidizing system uses silver and copper electrodes to create the ionized water in a process similar to the one developed by NASA in the late 1960's to sterilize drinking water for astronauts traveling to the moon in Apollo spacecraft. As a result with the use of this filtration system, chlorine is not needed to sanitize the pool.

The applicant proposes to use two sources of water to provide domestic, landscape, and fire suppression water supplies for the proposed residential development. Water is proposed to be pumped from an existing water well on-site. The water well is an after the fact development proposed as a component of this application; it was approved by Los Angeles County Health Department for rehabilitation. Water is proposed to be

stored for domestic use in a 5,150 gallon tank, approximately nine feet in diameter and ten feet tall, located at the 1,720 foot elevation level immediately north of the proposed residence and its surrounding area landscaped with native trees and shrubs (Exhibit 11). The applicant also proposes to construct a rainwater harvesting system. This system collects runoff from the residence roof gutter system and channels it into a buried 8,500 gallon tank for low flow irrigation and fire protection in conjunction with well water. This underground tank will be located in the same courtyard area on the north side of the residence near the proposed above ground tank (Exhibit 6).

The applicant also proposes an on-site drainage system with three catch basins all interconnected by gravity fed piping (Exhibit 12). To address the potential pollutants and sediment from storm water runoff, a Drain Pac Filter insert will be installed in southern most catch basin to filter the runoff.

The applicant has received an "Approval in Concept" from the County of Los Angeles Department of Regional Planning on June 15, 2000 for the initially proposed residence, garage, pool/spa, road and driveway improvements (Exhibit 20). The subject lot was granted a Certificate of Compliance (CC 2323 recorded as document number 79-1344439) and determined by the County to be exempt from the provisions of the Subdivision Map Act in 1979. The project was reviewed by the County Environmental Review Board (ERB) on March 20, 2000, although it was recommended for denial to the County decision makers who approved a revised project conditioned to address fuel modification, earth tone colors for house exterior, low intensity night lighting and security lighting with motion detectors, and native plant landscaping (Exhibit 20). The applicant has deleted a formerly proposed barn from this application as recommended by the ERB. The proposed project also received a Final Fuel Modification Plan Approval dated 6-8-2000, by the Los Angeles County Fire Department (Exhibit 13).

Although the subject parcel is located within Tuna Canyon Significant Watershed, the project site is located about one thousand (1,000) feet from one tributary of Tuna Canyon Creek to the east and about 1,500 feet to the south of the second tributary of Tuna Canyon Creek (Exhibit 14). As the project site drains to the south into a small drainage ravine, the project site is as close as about 1,000 feet from the designated Environmentally Sensitive Habitat Area (ESHA) located along this tributary of Tuna Canyon Creek to the east and the same distance from the tributary of Tuna Canyon Creek to the south (Exhibit 14). Although the ESHA is nearby downstream of the proposed project, the project and its proposed water well use will not have a direct impact on this ESHA.

The improvements proposed by the applicant to the existing North Fabuco Road discussed above, cross one parcel to the south and one to the west of the applicant's parcel enroute to the applicant's southern access driveway (Exhibits 4 and 5). However, the applicants have provided evidence of the ingress and egress access easement for the road over this parcel. Regarding the property owners, across whose property the proposed road improvement for North Fabuco Road is located, these individuals have been notified of this development pursuant to section 30601.5 of the Coastal Act. Section 30601.5 states as follows: "All holders or owners of any interests

of record in the affected property shall be notified in writing of the permit application and invited to join as co-applicant." These property owners were notified of the pending permit action under Section 30601.5 (Exhibit 27). As of the date of this report, no response was received. If any response to this letter is received by staff prior to the Commission's August 7 – 10, 2001 meeting, it will be reported to the Commission at the public hearing.

B. Environmentally Sensitive Resource Areas

Section 30250(a) of the Coastal Act provides that new development be located within or near existing developed areas able to accommodate it, or in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources:

> **New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources.**

Section 30105.5 of the Coastal Act defines the term "cumulatively," as it is used in Section 30250(a), to mean that:

> **the incremental effects of an individual project shall be reviewed in conjunction with the effects of past projects, the effects of other current projects, and the effects of probable future projects.**

Section 30231 of the Coastal Act is designed to protect and enhance, or restore where feasible, marine resources and the biologic productivity and quality of coastal waters, including streams.

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

In addition, Section 30240 of the Coastal Act states that environmentally sensitive habitat areas must be protected against disruption of habitat values:

(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.

The project site is located within the Los Angeles County Land Use Plan designated Tuna Canyon Significant Watershed (Exhibit 14). The Tuna Canyon Significant Watershed Area includes about 1,524 acres of land in the coastal Santa Monica Mountains within the watersheds of Tuna and Pena Canyons. The terrain is extremely steep, generally greater than 30% slope, and rugged in this canyon. The majority of the subject site and the surrounding 16-lot subdivision includes flat and sloping land with gentle to moderate slopes. The site elevation extends about 90 feet ranging from about 1,630 to 1,720 feet above sea level. The proposed building site is located at the top and the base of the small knob hill between the 1,692 to 1,713 foot elevation levels. The North Fabuco Road improvement extends about 260 feet further north from the intersection with Betton Drive.

Tuna Creek, a designated Environmentally Sensitive Habitat Area (ESHA), is located about one thousand (1,000) feet to the east of the subject parcel and about 1,000 feet to the south of the parcel. The subject parcel drains into a drainage ravine on the subject site south to the southern tributary of Tuna Creek (Exhibit 14). Due to the distance, the proposed residential and road improvements will not directly affect this ESHA. Tuna Canyon is designated a significant watershed because of the relatively undisturbed nature and the presence of wildlife. It is important to note that the England and Nelson Report prepared for Los Angeles County, titled, Land Capability/Suitability Study Los Angeles County General Plan Revision Program (1976) identified all of the Tuna Canyon watershed as a significant ecological area. However, the Los Angeles County Land Use Plan (LUP) certified by the Commission in 1986 changed the terminology to the Tuna Canyon Significant Watershed for both Tuna and Pena Canyon watershed while narrowing the ESHA designation for the Tuna Canyon Significant Ecological Area to generally the riparian vegetation along the two creeks, Tuna Canyon and Pena Creeks. A Significant Watershed is not considered an ESHA under the Coastal Act definition of ESHA's, requiring more stringent protection, as an example for riparian vegetation, because they are dominated by vegetation and wildlife common throughout the Santa Monica Mountains. However, the certified LUP did establish specific policies and development standards to protect the sensitive resources of these relatively undisturbed watersheds, providing guidance to the Commission for the review of development applications.

The habitat values contained in the Tuna Canyon Significant Watershed have been well documented. The 1976 England and Nelson Report designates the Tuna Canyon Significant Watershed as a Significant Ecological Area (SEA). The report describes the concept of a SEA as follows:

The 62 significant ecological areas selected were chosen in an effort to identify areas in Los Angeles County that possess uncommon, unique or rare biological resources, and areas that are prime examples of the more common habitats and communities.

Thus, the goal of the project was to establish a set of areas that would illustrate the full range of biological diversity in Los Angeles County, and remain an undisturbed relic of what was once found throughout the region. However, to fulfill this function, all 62 significant ecological areas must be preserved in as near a pristine condition as possible ...

If the biotic resources of significant ecological areas are to be protected and preserved in a pristine state, they must be left undisturbed. Thus, the number of potential compatible uses is limited. Residential, agricultural, industrial, and commercial developments necessitate the removal of large areas of natural vegetation and are clearly incompatible uses.

The England and Nelson Report further states:

Tuna and Pena Canyons are the last drainages in the central and eastern Santa Monica Mountains that have not sustained development either in the watershed or between the canyon mouth and the coast. A year-round stream is present in Tuna Canyon. This resource is in itself limited in distribution in the Santa Monica Mountains, and most of Southern California. Due to this feature and its coastal exposure, the riparian woodland in the canyon bottom is in excellent health and supports healthy wildlife populations. Animals utilize the stream as a water source and forage in the chaparral and coastal sage scrub on adjacent hillsides.

The combined qualities of healthy vegetation, riparian woodland, surface moisture, no development, and an unobstructed opening to the coast are unique in the western Santa Monica Mountains and have caused the canyon to become an important area to migratory bird species. In addition to migratory songbirds, waterfowl have been seen in the canyon during migration.

A report titled "Tuna Canyon Significant Ecological Area: An Assessment of the Cumulative Impacts of the Potential Maximum Development," was prepared for the Tuna Canyon Property Owners Association by Steven Nelson, Director of Biological Science, Phillips Brandt Reddick, dated January 9, 1978. The purpose of the report was to provide a detailed resource inventory and analysis of the Tuna Canyon Significant Watershed to be used by decision makers as advanced and additional environmental input to their planning process. The report is an analysis and assessment of cumulative impacts resulting from the potential buildout of the area. Measures to partially or completely mitigate impacts were suggested. The subject site is mapped by the report as a chaparral biotic community typically with broad-leaf schlerophyllous vegetation with considerable diversity in species composition.

Although, the subject site and surrounding area burned in the 1993 Malibu Fire; growth of the chaparral and coastal sage vegetation is reoccurring in this area.

The applicant submitted an update report of the current resource conditions within the Tuna Canyon Significant Ecological Area dated February 25, 2000. This update report was completed by PCR Services Corporation by Steve Nelson PCR's director of Biological Services who also co-authored the original 1976 SEA study noted above. This update report concludes:

> that the site and resource conditions have not changed appreciably since the 1976 and 1978 assessments were made and the findings of those studies remain valid today. ...
>
> The principal reason the Tuna Canyon watershed was originally designated as an SEA in 1976 was the presence of a year-round stream and well-developed riparian woodland in the canyon bottom. In order to preserve and protect these resources, any development must be sensitive to and compatible with the function of the watershed. It is our opinion that design features which have been incorporated into this project will be compatible with the function of the watershed. These features are:
>
> 1. Erosion Control: Typically, best management practices to control erosion are made conditions of a grading permit. The house, pool, and barn (staff note: barn is now not part of project description) will be constructed on existing flat pads to minimize grading quantities and land form alteration. The driveway to the house will utilize the existing dirt road that ranges from 12-15 feet in width to minimize the amount of grading required.
> 2. Siltation Control and Wastewater Treatment: All sheet flow runoff from the property, including porous and non-porous surfaces, will be channeled to catch basins outfitted with Drain Pac Filters prior to flowing into natural drainage courses. Velocity reducers will be incorporated into the drainage system at all exit points. These filters will prevent sediments, oils, chemicals and other contaminants from reaching natural drainages. The swimming pool will be treated with a non-chemical electronic filtration system and any discharge generated by the pool will have no impact on natural drainage courses. A fire department turnaround will be constructed of pre-engineered turf block to reduce the amount of surface runoff.
> 3. Landscaping Design: Native species will be utilized for landscaping per the recommended list of native plants published by the California Native Plant Society. Fire department fuel modification requirements will be integrated into the landscaping plan. Low cover native plant species such as foothill needlegrass (Stipa pulchra), purple needlegrass (Stipa lepida), blue-eyed grass (Sisyrinchium bellum), and purple nightshade (Solanum xanti) characteristic of local chaparral communities that will actually benefit from the brush thinning will be planted and encouraged to grow.
> 4. Aesthetics: Earth tone colors of the local area will be incorporated in the home design.

5. Wildlife: To reduce potential disturbances to wildlife, all exterior lighting will be directed downward and of low intensity and electronic timers will be used to minimize the duration times of usage. Fencing will only be used around the pool and barn areas, thus allowing the movement of wildlife through the property.

Given these features, the fact that the area to be developed is only 10% of the 2.5-acre lot and only 0.016% of the entire 1524-acre Tuna Canyon watershed (see attachment D), and the site's location well away from the stream and riparian woodland, it is our belief that the project will have no significant or adverse cumulative impact on the integrity of the Tuna Canyon SEA.

The Malibu/Santa Monica Mountains Land Use Plan policies addressing protection of ESHAs and Significant Watersheds are among the strictest and most comprehensive in addressing new development. In its findings regarding the Land Use Plan, the Commission emphasized the importance placed by the Coastal Act on protecting sensitive environmental resources. The Commission found in its action certifying the Land Use Plan in December 1986 that:

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

The Land Use Plan (LUP) includes several policies designed to protect the Watersheds, and ESHA's contained within, from both the individual and cumulative impacts of development. Many of these policies, particularly those in Table 1 were developed as a result of the information presented in the two above noted reports on Tuna Canyon Significant Watershed and Ecological Area. These policies may be used by the Commission as guidance during the review of applications for coastal development permits; however, these policies are not the standard of review for coastal development permits, as the Chapter 3 policies of the Coastal Act are the standard of review.

1. Protection of Environmental Resources

The certified LUP contains policy P63 that states:

> Uses shall be permitted in ESHAs, DSRs, Significant Watersheds, and Significant Oak Woodlands, and Wildlife Corridors in accordance with Table 1 and all other policies of the LCP.

Table 1 states that for "existing parcels smaller than 20 acres in proximity to existing development and/or services, and/or on the periphery of the significant watershed", residential uses are permitted: "at existing parcel cuts (build-out of parcels of legal record) in accordance with specified standards and policies ... ." The Table 1 policies applicable to Significant Watersheds are as follows:

Allowable structures shall be located in proximity to existing roadways, services and other development to minimize the impacts on the habitat.

Structures shall be located as close to the periphery of the designated watershed as feasible, or in any other location for which it can be demonstrated that the effects of development will be less environmentally damaging.

Streambeds in designated ESHAs shall not be altered except where consistent with Section 30236 of the Coastal Act.

Grading and vegetation removal shall be limited to that necessary to accommodate the residential unit, garage, and one other structure, one access road and brush clearance required by the Los Angeles County Fire Department. The standard for a graded building pad shall be a maximum of 10,000 sq. ft.

New on-site access roads shall be limited to a maximum length of 300 feet or one third of the parcel depth, whichever is smaller. Greater lengths may be allowed through conditional use, provided that the Environmental Review Board and County Engineer determine that there is no acceptable alternative.

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

Designated environmentally sensitive streambeds shall not be filled. Any crossings shall be accomplished by a bridge.

Other applicable Land Use Plan policies include:

P67 Any project or use which cannot mitigate significant adverse impacts as defined in the California Environmental Quality Act on sensitive environmental resources (as depicted on Figure 6) shall be denied.

P68 Environmentally sensitive habitat areas (ESHAs) shall be protected against significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. Residential use shall not be considered a resources dependent use.

P74 New development shall be located as close as feasible to existing roadways, services, and existing development to minimize the effects on sensitive environmental resources.

2. Stream Protection and Erosion Control

Applicable Land Use Plan policies addressing stream protection and erosion control include the following policies:

P81 To control runoff into coastal waters, wetlands and riparian areas, as required by Section 30231 of the Coastal Act, the maximum rate of storm water runoff into such areas from new development should not exceed the peak level that existed prior to development.

P82 Grading shall be minimized for all new development to ensure the potential negative effects of runoff and erosion on these resources are minimized.

P84 In disturbed areas, landscaping plans shall balance long-term stability and minimization of fuel load. For instance, a combination of taller, deep-rooted plants and low-growing covers to reduce heat output may be used. Within ESHAs and Significant Watersheds, native plant species shall be used, consistent with fire safety requirements.

P86 A drainage control system, including on-site retention or detention where appropriate, shall be incorporated into the site design of new developments to minimize the effects of runoff and erosion. Runoff control systems shall be designed to prevent any increase in site runoff over pre-existing peak flows. Impacts on downstream sensitive riparian habitats must be mitigated.

P88 In ESHAs and Significant Watersheds and other areas of high potential erosion hazard, require site design to minimize grading activities and reduce vegetation removal based on the following guidelines:

Structures should be clustered.

Grading for access roads and driveways should be minimized; the standard new on-site access roads shall be a maximum of 300 feet or one-third the parcel depth, which ever is less. Longer roads may be allowed on approval of the County Engineer and Environmental Review Board and the determination that adverse environmental impacts will not be incurred. Such approval shall constitute a conditional use.

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, hydrologic, water percolation and runoff) to the maximum extent feasible.

P96 Degradation of the water quality of groundwater basins, nearby streams, or wetlands shall not result from development of the site. Pollutants, such as chemicals, fuels, lubricants, raw sewage, and other harmful waste shall not be discharged into or alongside coastal streams or wetlands.

Past permit actions taken by the Commission generally reflect the goals contained in the certified LUP policies towards development in ESHAs and Significant Watersheds. Where the Commission has found that single-family development, including accessory

structures, would not cumulatively or individually create adverse impacts on habitat or other coastal resources, or that adequate mitigation could be provided, it has been permitted

The applicant proposes to construct a two story 13 ft. to 33 ft. high, split level, 4,591 sq/ft. single family residence, attached two car 867 sq/ft. garage/workshop, pool & jacuzzi with non-chemical filtration system and solar pool cover for evaporation and energy conservation, after the fact development of a water well, a 5,150 gallon domestic water tank, rainwater harvesting system with buried 8,500 gallon storage tank, 120 ft. paved driveway with fire department turnaround constructed with turf block and planted with native needle grass, driveway restoration w/turf block & native needle grass for existing northern access driveway, restore existing dirt driveway on southeast portion of property with needle grass and sandstone cobble, pave 260 ft. length of No. Fabuco, grade 2,300 cu/yds of cut, 200 cu/yds of fill, export 2,100 cu/yds of material to disposal site located outside the coastal zone or a location with a coastal permit for disposal, drought resistant native landscaping, temporary living trailer, onsite drainage with catch basin and filter, entry gates, fencing, and septic system (Exhibits 1 – 12).

The project site is a 2.5 acre parcel located within the designated Tuna Canyon Significant Watershed. The building site for the residence and garage is located on the northern portion of the parcel on a small knob hill while the proposed pool/spa and fire truck turnaround is located on a small hill located on the western central area of the property

There is an existing paved private roadway leading from Tuna Canyon to the project parcel. These roads are Skyhawk Lane, Chard Avenue (also known as Hawk's Nest Trail), and West Betton Drive. The applicant proposes to pave and improve a 260 foot long portion of North Fabuco Road from its intersection with Betton Drive. This section of North Fabuco Road currently is a 13 to 15 foot wide dirt road. The applicant proposes to widen North Fabuco Road to 20 feet from it's intersection with West Betton Drive to the southern driveway leading to the applicant's garage. The roadway improvements for North Fabuco Road, providing a maximum twenty foot wide roadway to the project site, will require about 240 cubic yards of total grading (120 cubic yards of cut and 120 cubic yards of fill) along the length of the road to provide additional width and for slope stability improvements. The Los Angeles County Fire Department requires a twenty foot wide paved roadway to the subject residence including the driveway which is proposed to be 120 feet in length to the proposed garage. The proposed driveway will require 240 cubic yards of grading (210 cubic yards of cut and 30 cubic yards of fill) (Exhibit 12).

3. Cumulative and Individual Impacts of Development

The 1978 report by Nelson provided an analysis and assessment of cumulative impacts resulting from the potential buildout of the area. The report concluded that continuing development in this area to the potential maximum density of parcels would result in about a 50 % increase in the number of residences. The report admitted that this buildout may be an overestimate of the ultimate conditions of development,

representing a worst case condition. A number of biological impacts were identified as a result of maximum development, however, due to the extremely low density of potential development in the area, some of these impacts are not expected to be significant. The Report states:

> If the appropriate mitigation measures suggested in Section 6.0 (actually 7.0) are implemented, these impacts, and most others, can be effectively mitigated to levels that would not result in significant adverse impacts on a local or cumulative basis.

The report indicated that unavoidable adverse impacts are primarily related to the loss and degradation of habitat wildlife resources, and the destruction of valuable riparian habitat by severe erosion and siltation processes. Those areas where both of these effects are most likely to be minimized are the more level, generally disturbed areas in the watershed. The subject site is located in the upper watershed area where the canyon is relatively level and disturbed with existing dirt roads. The report concluded by stating:

> If development is geographically restricted in this manner, and all development complies with all of the mitigation measures suggested, unavoidable adverse impacts should not be expected to have significant cumulative effects on valuable downstream resources.

The Nelson report was used by the County as the basis to develop the Table 1 policies as discussed below. These policies reflect the development constraints and mitigation measures identified in the Nelson report. The Table 1 policies were certified by the Commission as consistent with the Coastal Act.

The applicant submitted an update report of the current resource conditions within the Tuna Canyon Significant Ecological Area dated February 25, 2000. This update report was completed by PCR Services Corporation by Steve Nelson PCR's director of Biological Services who also co-authored the original 1976 SEA study noted above. This update report concludes that the site and resource conditions have not changed appreciably since the 1976 and 1978 assessments were made and the findings of those studies remain valid today. This update report also concludes that specific design features have been incorporated into this project will be compatible with the function of the watershed. These features are listed above. This update report further concluded that given these features, the fact that the area to be developed is only 10% of the 2.5-acre lot and only 0.016% of the entire 1524-acre Tuna Canyon watershed, and the site's location well away from the stream and riparian woodland, it is this consultant's belief that the project will have no significant or adverse cumulative impact on the integrity of the Tuna Canyon SEA.

Further, relative to cumulative impacts of development, the Commission's RECAP study adopted June 1999 reviewed potential cumulative impacts of build out in the Santa Monica Mountains. Specifically within the Tuna Canyon Watershed, there are about 98 total lots, about 12 lots are developed with residential development, and the remaining

86 lots are undeveloped. Of these about 86 undeveloped lots, the subject 16-lot subdivision is included in this calculation. The Commission has approved construction of a residence on three of these 16 lots in the subdivision. On one of these three lots, development has commenced for a residence and consists of the completed grading for the road improvements and paving from Tuna Canyon Road to the existing paved western end of Betton Drive beyond the driveway to the applicant's building site. In addition, a driveway to this graded building pad with retaining walls, and construction of a retaining wall for the driveway appears to be completed; the proposed residence has not been constructed at this time (Jason, Coastal Permit No. 4-96-025). This applicant, Mr. Jason has an application for an amendment (No. 4-96-025-A-4) to Coastal Permit No. 4-96-025 to revise the size and design of the approved residence now pending before the Commission. On a second lot, development was approved by Coastal Permit No. 4-00-162, Sayles,. Development has commenced consisting of partially completed road improvements continuing west along Betton Drive (this section is approved to be paved but has not been paved to date) and grading for the driveway from Betton Drive to the building site and grading for the building site. The applicant for the third lot with an approved Coastal Permit, Coastal Permit No. 4-00-188, Olson, has not commenced construction.

The applicant proposes to construct an "as built" water well to provide a domestic water supply to the subject property. It is expected that a portion of these vacant lots will be served by imported water from the Los Angeles County Water District No. 29. Another portion of these vacant lots may be served by existing or future on-site water wells, the specific numbers of wells verses District water service for future residential development is unknown at this time and too speculative to determine. At this time, two applicants (Sayles and Olson) with Coastal Permits propose to extend a water line to provide water from District 29 and one applicant (Jason) has a Coastal Permit (No. 4-96-025-A-3) approved water well to provide water service. This issue is discussed further below.

To further address individual and cumulative impacts and appropriate mitigation measures in analyzing the proposed project for conformance with the resource protection policies of the Coastal Act, the Land Use Plan and with Table 1 policies will be addressed. For instance, Table 1 specifies that grading and vegetation removal shall be limited and that the standard for a graded building pad shall be a maximum of 10,000 sq. ft. In this case, the proposed building pad is proposed to be about 2,853 sq. ft. as identified on the applicant's site plan for a split level residence and garage located on top of and cut into a small hill. A discussion of alternatives including a reduction of the footprint for residential development (reduced scale alternative) is provided below.

Furthermore, the applicant has submitted landscape and fuel modification plans for the proposed development (Exhibit 13). These plans illustrate how the areas disturbed by development activities on site will be revegetated with native plants to provide erosion control and how native plants associated with this site will be "thinned" rather than "cleared" in order to retain the erosion control properties of this vegetation. The removal of this vegetation is required, as per the Los Angeles County Fire Department's Fuel Modification Standards, and the applicant has submitted a final fuel modification plan which indicates that only vegetation specially designated as "high fire hazard" will

be completely removed within a 50 foot radius of the structures as a part of this project. Additionally, only that vegetation which is located within a 200' radius of the residential structure will be subject to the County Fire Department's fuel modification requirements. Special Condition Number Two requires a Final Revised Fuel Modification plan to reflect the revised project which now does not include a barn and includes restoration of the northern access driveway with turf block and needle grass, and restoration of the driveway on the south east portion of the property with native needle grass and sandstone cobble. Therefore, the project is in conformance with the Table 1 policies of the LUP as they pertain to the minimizing grading, vegetation removal, and the maximum allowable area of building pads.

Furthermore, Table 1 policies require that development be located as close as possible to existing roads and services, and that on-site access roads be limited to no more than 300 feet in length so that impacts to habitat are minimized. Additionally, LUP policies (P78, P82, P88, & P91) specify that grading activities be minimized and that development be designed to minimize landform alteration, and that said development is placed as close to existing services as possible. In the case of the proposed residence, no more than 2,500 cubic yards of grading is proposed, including the grading for the road improvements along North Fabuco Road. The building site is located on the flat portion of a small hill and along the downslope portion of this hill as the split level residence and garage is cut into the hillside. Cutting the residence and garage into the hillside with grading consisting of 1,820 cubic yards of cut and 10 cubic yards of fill, thus minimizes the need for grading to expand the flat building pad. Additionally, the proposed residence and garage structures are to be located within a minimum of 120 feet to a maximum of 200 feet of the road improvements proposed for North Fabuco Road (the pool will be located as far as about 90 feet from North Fabuco Road), an existing dirt road and the legal easement owned by the applicant. The on-site driveway will be about 120 feet in length from North Fabuco Road to the proposed garage. Approximately 240 cubic yards of grading is proposed along the North Fabuco Road easement for the road improvements. The roadway width will be no wider than 20 feet with a maximum of 40 feet of disturbed area with the slope improvements in one location along this road; in other locations only a few feet of additional width is needed for slope improvements (Exhibit 12). The total area of additional disturbed area for the road improvements beyond the former existing approximate 13 foot wide roadway is approximately 2,600 sq. ft or 0.06 acres. This additional grading to widen the road and install slope improvements as a disturbed area is judged to be the minimum necessary in order for the applicant to comply with the requirements of the Los Angeles County Fire Department and the Building and Safety/Land Development Division of the Public Works Department.

The project site includes a drainage swale that is located along the eastern portion of the property draining water from the land to the north and east beyond the subject site and from the subject site (Exhibit 12). This drainage swale leads to an existing culvert carrying flows beneath Betton Drive and continuing south towards a tributary of Tuna Canyon Creek located about 1,500 feet from the property. The applicant proposes a drainage system with two catch basins, one located within the courtyard on the north side of the residence, the other within the fire truck turnaround south of the residence

and garage and north of the pool. These two catch basins are connected by piping to a third catch basin located on the southern portion of the property north of the intersection of North Fabuco Road and Betton Drive. The third catch basin also collects water drainage from North Fabuco Road and the driveway. The applicant proposes to install a filter system in this third catch basin to collect sediments and contaminants; this catch basin drains to the drainage swale near the culvert leading beneath Betton Drive. Special Condition Number Four implements this drainage system with improvements such as an energy dissipater at its terminus and a maintenance requirement among other issues it addresses as discussed below in Section IV B. 5 on Water Quality.

This additional grading to widen North Fabuco Road and provide for slope stability and drainage will disturb and remove coastal chaparral plant communities. These plants includes species such as California Sagebrush, Black Sage, California Buckwheat, Laurel Sumac and Toyon. In addition, non-native annual grasses and forbs such as mustards, brome grasses and filaree will also be removed. Its important to note that this area of Tuna Canyon burned in the 1993 Malibu fire and the plant communities are in the process of a natural recovery. It is important to note that although this vegetation is located in a Significant Watershed, it is not considered ESHA.

The subject road improvements are located in the vicinity of the uppermost tributaries of Tuna Canyon Creek, a blue line stream (Exhibit 14). However, the tributaries in the vicinity of North Fabuco Road and Betton Drive are not considered a riparian corridor as they do not include riparian vegetation. These tributaries to the east and to the south are located at minimum about 1,000 feet to 1,500 feet from the project site. Further, the surrounding vegetation will not be significantly affected as the proposed grading for the North Fabuco Road widening and the slope improvements will be located along or near the road.

As required by Special Condition Number Two, the cut and fill slopes along North Fabuco Road will be landscaped and a drainage system installed for erosion control purposes to minimize potential erosion and sedimentation impacts to the drainages leading to Tuna Canyon Creek to the maximum extent feasible. In addition, as required by Special Condition Number One, the applicants are required to remove all excess material consisting of 2,100 cubic yards, except for material proposed to be used for fill on site, to an appropriate disposal site located outside in the Coastal Zone or a site located in the Coastal Zone approved for disposal with a valid Coastal Development Permit. The Commission also requires that the applicants to maintain the proposed road improvements and drainage structures and be responsible for any necessary repairs and restoration as provided in Special Condition Number Three.

The grading for improvements to North Fabuco Road are proposed along an existing dirt access road and the new impacts that will occur to habitat adjacent to the project area are the minimum necessary to comply with Fire Department safety requirements. This road widening and slope improvements will remove a small amount of vegetation that is considered habitat. This amount of habitat is only 0.06 acres. The slope along the road as required by Special Condition No. Two, will be replanted with native vegetation to replace this habitat. It is important to note that this habitat is not

considered ESHA, a wetland or habitat for rare and endangered species. Therefore, the project is found to be in conformance with the guidance provided in LUP Table 1 policies that pertain to the proximity of new development to existing services and the minimization of landform alteration. These Table 1 policies are used as guidance by the Commission in the review of this application.

Table 1 policies also specify that development be located as close to the periphery of the designated watershed as feasible, and that streambeds, and ESHAs not be altered and that they are protected to the greatest extent possible. Additionally, LUP policy P96 specifies that water quality be protected from degradation resulting from development. The proposed project site is located on a parcel that is about 1,000 feet from the boundary of the designated Tuna Canyon Environmentally Sensitive Habitat Area and about 1,000 feet from Tuna Canyon Creek located to the east of the project site. This area includes other single family residences, and in the past, the Commission has granted permits for development in this portion of the watershed; specifically, Sayles (Coastal Permit No. 4-00-162), Olson (Coastal Permit No. 4-00-188), Jason, (Coastal Permit No. 4-96-025), Anderson (Coastal Permit No. 4-96-021), Lesavoy (Coastal Permit No. 4-95-031), Geer (Coastal Permit No. 4-94-124) and Andrews (Coastal Permit No. 4-92-122).

The applicant has submitted a final landscape and fuel modification plan, approved in concept by the Los Angeles County Fire Department 6/8/00 which identifies planting zones and a maintenance program (Exhibit 13). The plan needs to be revised to include the revised project which now includes a 5,458 sq. ft. residence, the proposed 5,150 gallon domestic water tank, rainwater harvesting system with a buried 8,500 gallon storage tank, fire department turnaround constructed with turf block and planted with native needle grass, driveway restoration w/turf block & native needle grass for existing northern access driveway, restoration of the existing dirt driveway on southeast portion of property with needle grass and sandstone cobble, onsite drainage with catch basin and filter, and fencing. The revised final landscaping plan and fuel modification plan is required to be landscaped and maintained for erosion control purposes within 60 days of the applicant's receipt of the certificate of occupancy for the residence. In addition, the plans need to identify that the planting shall be adequate to provide 90 percent coverage within two years and shall be repeated, if necessary, to provide such coverage on all disturbed areas. Lastly, the plans need to identify that should grading take place during the rainy season (November 1 - March 31), sediment basins (including debris basins, desilting basins, or silt traps) shall be required on the project site prior to or concurrent with the initial grading operations and maintained through the development process to minimize sediment from runoff waters during construction and retain sediment on site. An interim erosion control plan and monitoring program are also required by Special Condition Number Two.

The applicant has submitted a grading plan that illustrates where the cut and fill areas are located on the building pads and along North Fabuco Road (Exhibit 12). These plans illustrate how runoff is to be conveyed from the building pad of the proposed residence and where drainage will be conveyed following improvements to this existing access road. The drainage plan also needs to illustrate that the above referenced

drainage devices will reduce the flow of runoff generated by the proposed improvements and convey the flows into existing drainage swale in a non-erosive manner. Lastly, these plans need to identify how erosion will be minimized during construction. Therefore, the Commission finds it necessary to require the applicant to submit a revised final landscape and erosion control plan providing for replanting of all disturbed areas with 90 percent coverage within two years, and include provisions for sediment basins if grading is to occur during the rainy season. In addition, the Commission finds it necessary to require the applicant to submit a revised drainage plan that illustrates how runoff will be conveyed from the project site and roadway in a non-erosive manner, as required by Special Condition Numbers Two and Four.

In addition, to ensure the access road and drainage improvements are maintained in the future, the Commission finds it necessary to require the applicant to be solely responsible for any necessary repairs and restoration resulting from this failure along the entire section of the access road proposed to be developed as a part of this permit. Further, this condition is necessary to ensure the road improvements and drainage structures function properly in the future to prevent erosion and sedimentation of nearby streams, as required by Special Condition Number Three. Therefore, significant unavoidable impacts are not expected.

4. Potential Water Well Withdrawal Impacts on ESHA

The specific location of the proposed 'as built' or after the fact water well is within the drainage swale on the eastern portion of the subject property. The proposed water storage tanks are located in the courtyard area north of the residence, one tank will be above ground for domestic water service, the other will be buried for the use as fire suppression and landscape irrigation (Exhibits 5 and 11). Groundwater in this area is not part of an aquifer used for public water supplies or for agriculture.

Two upper tributaries to Tuna Canyon Creek, a Commission-designated environmentally sensitive habitat area (ESHA), are located on either side of the proposed development (Exhibit 14). These tributaries are the 'blue line' designated stream portions of Tuna Canyon Creek. The proposed well site is about 900 feet to the east and about 1,000 feet north of the ESHA habitat. The designated ESHA surrounds the upper tributaries of Tuna Canyon Creek. Tuna Canyon Creek and its tributaries are intermittent watercourses that flow during the rainy season. The well site is located about 950 feet from the tributary to the east and 1,500 feet from the tributary to the south. Due to the proximity of the well site and the tributaries of Tuna Canyon Creek, staff requested in September 2000 that the applicant submit a hydrogeological report to evaluate the potential individual and cumulative impacts of the onsite domestic water well on the ground water basin in relation to Tuna Canyon Creek and its nearby tributaries. Staff also requested information on the potential individual and cumulative biological impacts of water withdrawal on the tributaries and ESHA. The applicant submitted hydrogeologic information on water extraction in relation to a similar project proposed by Mark Jason in approved Coastal Permit No. 4-96-025-A-3 in two reports dated September 21, 2000 and May 31, 2000. An additional report was submitted by the applicant dated November 2, 2000. All these report were completed by Bing Yen &

Associates and submitted on January 24, 2001. The applicant also submitted a biological report titled "Responses to Comments by California Coastal Commission", dated November 8, 2000, by Steven Nelson, PCR Services Corporation (Exhibit 22). This report concluded that:

> For the reasons discussed above, I would accept the BYA analysis and responses to Coastal Commission Staff comments as conclusive that the effects of your project, on both an incremental basis and cumulative basis, are not potentially significant in regards to downstream riparian habitats.

Therefore, the applicants submitted reports from Bing Yen & Associates and PCR Services Corporation conclude that construction of a residence on the Weeger property will not pose a significant adverse individual or cumulative impact to the hydrological conditions in the vicinity of the Weeger property and the downstream riparian habitats.

Staff reviewed these reports and requested additional information from the applicant in a memo dated 6 April 2001 from Mark Johnsson, Senior Geologist (Exhibit 23). In response, the applicant submitted a report dated titled, Hydrogeologic Analysis of Proposed Water Supply for Weeger Residence at 2656 Fabuco Road, dated July 17, 2001 by Cleath & Associates (Exhibit 24).

The Commission Staff's Geologist reviewed this report, prepared a memo dated 23 July 2001 (Exhibit 25) and found that:

> ... the applicant had demonstrated that the proposed permitting of the existing water well, to serve the development as proposed, would have no significant impact, taken singularly or cumulatively. In order to ensure that in this case, I recommend that the permit be conditioned to require landscaping by native plants, the prohibition of stables on the property, the use of restricted flow plumbing fixtures, and the use of an on-site wastewater disposal system.

Special Condition No. Two requires the use of native plants, Special Condition No. Twelve requires the prohibition of stables on the property and use of restricted flow plumbing fixtures to minimize the use of well water from this groundwater basin. Special Condition No. Seven requires the applicant to submit an application for an amendment to this coastal permit or an application for a new coastal permit for any new development, which may include a stable as an example. No Special Condition is necessary for requiring the use of on-site wastewater disposal systems, as the applicant proposes to construct one to treat waste water onsite. There are no public or private sewage disposal systems or plants in the vicinity of the project site to adequately treat sewage generated from the proposed development and no such systems or plants are proposed in the foreseeable future.

In conclusion, the ground water information provided by the applicant demonstrates that there will be no individual or cumulative adverse impacts to hydrology of the creeks and the designated ESHA located nearby in the tributaries to the Tuna Canyon Creek. Thus, the Commission finds that the proposed project and water well as conditioned is

consistent with Sections 30231 and 30240 of the Coastal Act. Further, the Commission finds that the proposed new residential development is located in close proximity to an existing developed area able to accommodate it. The Commission finds that because groundwater is available to serve the residence without adversely impacting the environmental resources, the area is able to accommodate the residential development. This is consistent with the Commission's prior approval of numerous other residences in the Santa Monica Mountains that will use private groundwater wells to supply water for the residence. (Coastal Permit Number 4-98-004, Bolanowski and Coastal Permit Number 4-00-064, Mastoras). Thus, the Commission also finds that the proposed development, as conditioned, is consistent with Section 30250 of the Coastal Act.

Thus, as conditioned, the project is found to be in conformance with the guidance provided in the LUP Table 1 policies that pertain to development within designated watersheds and close to the periphery of designated ESHAs because it will protect streams and ESHAs from alteration and disturbance to the greatest extent possible. In addition, for these reasons, the project is consistent with Sections 30231 and 30240 of the Coastal Act.

5. Water Quality

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

As described above, the proposed development includes grading for a building pad for a residence and garage, and a pad for a pool/spa and fire truck turnaround, realigned and widened driveway and to widen and improve North Fabuco Road with pavement and slope improvements. The project also proposes to construct a 5,458 sq. ft. residence and garage/workshop and other developments noted above in Section V. A. The building pad for the residence and garage, the driveway, the road with its enlarged width, and the drainage system will serve to convey drainage from the applicant's subject property, the private road and upstream areas into the watershed. The site is considered a "hillside" development, as the building sites are located on two small hills and the road and driveway improvements are located on sloping terrain all with soils that are susceptible to erosion.

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

Therefore, in order to find the proposed development consistent with the water and marine resource policies of the Coastal Act, the Commission finds it necessary to require the incorporation of Best Management Practices designed to control the volume, velocity and pollutant load of stormwater leaving the developed site. Critical to the successful function of post-construction structural BMPs in removing pollutants in stormwater to the Maximum Extent Practicable (MEP), is the application of appropriate design standards for sizing BMPs. The majority of runoff is generated from small storms because most storms are small. Additionally, storm water runoff typically conveys a disproportionate amount of pollutants in the initial period that runoff is generated during a storm event. Designing BMPs for the small, more frequent storms, rather than for the large infrequent storms, results in improved BMP performance at lower cost.

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

Furthermore, interim erosion control measure implemented during construction and post construction landscaping will serve to minimize the potential for adverse impacts to water quality resulting from drainage runoff during construction and in the post-development stage. Therefore, the Commission finds that Special Condition Number

Four and Two are necessary to ensure the proposed development will not adversely impact water quality or coastal resources.

Finally, the proposed development includes the installation of an on-site septic system to serve the residence. The applicants' geologic consultants performed percolation tests and evaluated the proposed septic system. The report concludes that the site is suitable for the septic system and there would be no adverse impact to the site or surrounding areas from the use of a septic system. Further, the County of Los Angeles Environmental Health Department has given in-concept approval of the proposed septic system, determining that the system meets the requirements of the plumbing code. The Commission has found that conformance with the provisions of the plumbing code is protective of coastal resources.

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

6. Pool Drainage and Maintenance

The applicant proposes to construct a swimming pool and jacuzzi with a non-chemical filtration system and a solar plastic cover to reduce evaporation and conserve energy. The proposed non-chemical filtration system is known as the "Hydro-Max Oxi-ion Pool Water Treatment System". This system creates ionized water or ozone in low quantities to oxidize algae, micro-organisms, and other particles as pool water passes through the pool plumbing. The ionized water returns to the pool as sterilized water and oxygen, according to information provided by the applicant. The oxidizing system uses silver and copper electrodes to create the ionized water in a process similar to the one developed by NASA in the late 1960's to sterilize drinking water for astronauts traveling to the moon in Apollo spacecraft. As a result, chlorine is not needed to sanitize the pool. Although the applicant is proposing to use an alternative water purification system (Exhibit 18) that will eliminate the need for chlorine as a water conditioner, there are other chemicals commonly added to pools and spas to maintain water clarity, quality, and pH levels.

The Commission notes that the proposed project is conditioned to incorporate the recommendations of the project's consulting geologists and geotechnical engineer related to the construction of the swimming pool and spa and to incorporate adequate site drainage, and erosion control.

However, the Commission also notes that both leakage and periodic maintenance drainage of the proposed swimming pool and spa, if not monitored and/or conducted in a controlled manner, may result in excess runoff and erosion potentially causing instability of the site and adjacent properties and potential impacts from pool and spa chemicals (i.e. pool and spa water algaecides, chemical pH balancing, and other water conditioning chemicals) on the designated ESHA and Significant Watersheds. Therefore, the Commission imposes Special Condition Number Five on the subject application which requires the applicant to submit a written pool/spa maintenance

agreement to use the proposed non-chemical water purification system and a program to maintain proper pH, calcium and alkalinity balance in a manner that any runoff or drainage from the pool/spa will not include excessive chemicals that may adversely affect the designated Significant Watershed or Environmentally Sensitive Habitat Areas, the later located to the south about 1,000 feet from the pool/spa. The Commission finds that, as conditioned to minimize potential impacts of the proposed pool and spa, the project is consistent with Sections 30231, 30240, and 30253 of the Coastal Act.

7. Cumulative Analysis of Development and Vegetation Removal

The Commission has repeatedly emphasized the need to address the cumulative impacts of new development in the significant watersheds of the Malibu/Santa Monica Mountains region through past permit actions. Specifically, the Commission notes concern about the potential for future impacts on coastal resources that may occur as a result of further development of the subject property. Specifically, the expansion of building site and developed area would require more vegetation removal as required for fuel modification by the Fire Department. Further, adding impervious surfaces to the site through future development or expansion could have adverse impacts on the existing drainage of the site, which in turn would have significant impacts on the Tuna Canyon watershed due to increased erosion and sedimentation. Therefore, the Commission finds it is necessary to require the applicant to record a future improvements deed restriction to ensure that expanded development at this site that would otherwise be exempt from Commission permit requirements will be reviewed for consistency with the Coastal Act as required by Special Condition Number Seven.

The following is a cumulative analysis of potential residential development for the 16 lots, each about 2.5 acres in size in this subdivision. The 16- lot subdivision consists of about 39.2 acres. The total length of roadways including driveways to access each of the sixteen lots within the subject subdivision (accessed from the intersection of Skyhawk Lane and Tuna Canyon Road) is about 3600 feet. Assuming a similar sized residence and garage at about 5,000 sq. ft. and a similar amount of grading as proposed by this applicant is needed to widen these roads from approximately the existing 15 feet wide to a 20 foot width with an average additional width of up to five feet for slope stability and drainage improvements, a total of about 18,000 square feet of vegetated area will be removed. It's important to note that a condition of project approval will require that the area where vegetation is removed along these roads for the cut and fill slopes will be landscaped with native plants. Because this average additional width along the road will be re-landscaped, a total of about 18,000 square feet of vegetation will be removed to widen the existing 15 foot wide road to a 20 foot wide road. This area is equivalent to about 0.41 of an acre. All of these lots have existing driveways previously cleared of vegetation that are about 10 feet wide. These driveways will be widened to about fifteen feet wide with an average driveway length of about 100 feet to access the building site on each lot. To widen these driveways, a total of 8,000 sq. ft. of additional vegetated area will be removed. This area is equivalent to about 0.18 acre. Assuming a maximum of about 21,000 sq. ft. of vegetation removal including the building pad and the removal of the vegetation immediately surrounding the structure over a 20 foot radius for fuel modification purposes, about 9,000 sq. ft. will

be for the building pad and surrounding hardscape and about a total of about 12,000 sq. ft. will be for the fuel modification of the 20 foot radius immediately surrounding the structure, known as Zone A. (As noted below in the Alternative Section, the building pad including the structures and hardscape for a large home, larger than this subject project, is between 7,000 to 9,500 sq. ft., Exhibit 17) However, it is important to note that the 12,000 sq. ft. of area where native vegetation will be removed for Zone A, a twenty foot wide radius from the structure, will be replanted primarily with native vegetation that includes less flammable vegetation. (In this application, a 20 foot radius will be removed and replanted for zone A, three other Coastal Permits identified below, Jason, Sayles, and Olson have either proposed, or a final approval for a 20, 50, and 30 foot radius, respectively, for Zone A.) Based upon a staff discussion, February 1, 2001, with Kevin Johnson of the Los Angeles County Fire Department, Fire Prevention Bureau, most of these lots will have a 20 foot radius for zone A. Therefore, the habitat loss of native vegetation as an average is about 9,000 sq. ft. for the building pad and hardscape. As discussed above, in certifying the LUP, the Commission found that adverse impacts to the significant watershed would be minimized if residential building pads are limited to 10,000 square feet. It is expected that the building pads in this subdivision will only be on average 9,000 square feet, or less.

Assuming 9,000 square feet building pads, on a cumulative basis, about 144,000 sq. ft. of vegetated area will be cleared for the building pad development of this 16-lot subdivision. This is equivalent to about 3.3 acres. For comparison purposes, the applicant in this case is improving a 260 foot section of a roadway, while proposing a 120 foot long driveway and a building pad about 2,853 sq. ft. of area with a twenty foot area surrounding the residential structure where vegetation will be cleared and replanted within Zone A. A review of the other three Coastal Permits for approved residences in this subdivision indicates that the proposed fuel modification area immediately surrounding one of those structures, Zone A, is 20 feet (Coastal Permit No. 4-96-025, Jason, the second Zone A is 50 feet (Coastal Permit No. 4-00-162, Sayles) and surrounding the remaining structure, Zone A, is 30 feet (Coastal Permit No. 4-00-188, Olson). The applicant has provided a revised Final Fuel Modification Plan approved by the County of Los Angeles Fire Department on 6/8/2000. This plan indicates that the Fire Department will require a 20 foot radius for Zone A immediately surrounding the residence and garage for the clearance and replanting of native vegetation. The majority if not all of this Zone A fuel modification area will be replanted with native plant species which will minimize the fire hazard while replacing the majority of the native vegetation. In this analysis, a total of 3.3 acres of vegetation will be removed out of the total of about 39.2 acres for the 16 lots. It is recognized that additional vegetated area will be thinned for fuel modification purposes surrounding the residential structure. However, mitigation measures will be required (similar to the conditions recommended for this project) to prevent any increase in erosion of sediment or pollutants from these developed lots, to protect water quality and downstream riparian habitat. This vegetation to be removed is not identified as habitat for any threatened or endangered species of plants or animals, or ESHA, or wetland. Accordingly, the Commission finds that on a cumulative basis, with the mitigation measures imposed as conditions, the environmental impacts from the vegetation removal due to residential buildout of the 16 lots will be minimized.

It is important to note that if this land were not subdivided, the guidance provided by the LUP would be to allow Mountain designated land to be divided into two 20 acre lots. Two residences might be developed according to Table 1 policies with limited fuel modification and driveways for the two residences. However, since this subdivision was created prior to the effective date of the Coastal Act, it is expected that up to 16 residences will be proposed over time each with a driveway from a road and each with a fuel modification area. These 16 lots are considered a legal non-conforming subdivision according to the Los Angeles County Land Use Plan land use designation. Provided these 16 lots are developed consistent with the Table 1 policies of the certified LUP, the cumulative impacts on coastal resources will be minimized to the greatest extent feasible.

8. County of Los Angeles Environmental Review Board (ERB)

Further, the County of Los Angeles Environmental Review Board (ERB) reviewed this project on March 20, 2000. The ERB meetings are working sessions where the appointed ERB members serve in an advisory capacity to the Regional Planning Commission (or the County decision makers) providing recommendations on whether or not the project conforms to the policies of the County LUP. LUP Policy P64 indicates that projects shall be approved for coastal permits only upon a finding that the project is consistent with all policies of the LUP.

The ERB evaluation and recommendation to the County decision makers (the Regional Planning staff in this case) concluded that the proposed project was inconsistent with the policies of the County LUP. The reasons for this recommendation are listed in the ERB minutes (Exhibit 20). These six reasons include the following: 1) that the project's habitat disruption cannot be fully mitigated as required by Table 1 (parcels less than 20 acres & distant from services such as fire and sheriff protection); 2) proposed fuel modification plan is not likely to be approved by the County Fire Department (Zone A "Wet Zone" will most probably need to be greater than 20 feet); eliminate Zone B "Irrigated Zone" from plan and make vegetation thinning within Zone C specific to the existing vegetation; vegetation clearance will occur on soils having high erosion potential; implement an erosional control plan (including bunch grasses and mechanical features such as dry stack walls along contours); chip and keep all on-site vegetation removed from thinning; 3) relocate barn within the fuel modification area for the house or delete (too many structures per Table 1 standards); 4) use California Native Plant Society (CNPS) list for landscape plants; recommend that driveway/roads remain unpaved and planted with native bunch grass (Stipa); 5) night lighting to be directed downward, of low intensity, at low height, shielded and for security purposes only; use motion detector for security lighting; 6) use natural earth tone colors of local area for house exterior. The applicant has since obtained a final fuel modification plan approval from the County Fire Department with a 20 foot wide Zone A fuel clearance area as an example, deleted the formerly proposed barn, and modified the proposed project to include most of the other recommendations made by the ERB. In addition, many of the ERB recommendations are included as conditions of the County's Approval in Concept.

As explained above, the Commission disagrees with the ERB and finds that the project is consistent with the Table 1 standards of the LUP as noted above. The ERB made a recommendation to the County decision makers that the project is inconsistent with Table 1, however, despite the ERB's recommendation, the County Department of Regional Planning granted Approval in Concept on 6/19/2000. Regarding consistency with Policy 65, the project is located on the two logical building sites, which are level graded pads on separate small hills connected by an existing dirt driveway and generally with limited vegetation thereby minimizes vegetation removal. Although widening and drainage improvements to 260 feet of North Fabuco Road, an existing 13 foot wide dirt road, will result in removal of native vegetation, widening the road is necessary to comply with County Fire Department standards. If 260 feet of North Fabuco Road is not widened as required by the County Fire Department, this would foreclose any development on the applicant's property. The road will be widened the minimum width acceptable by the Fire Department and therefore will minimize removal of vegetation. Regarding Policy 74, the proposed residence is located between 50 feet and 170 feet of the existing roadway, North Fabuco Road, and therefore is near an existing road. Regarding Policy 150, the proposed project will not require the removal of vegetation on slopes greater than 2:1 as required by the fuel modification plan, in any event, the plan also requires that the slope be replanted with primarily with native, low growing, low fuel volume plants. Regarding Policy 62, which requires that a mechanism should be established to compensate property owners for the loss of any potential development rights; with the County's approval of this project, there is no need to investigate implementing this policy. Furthermore, the County does not have any programs or ordinances to implement this policy. In this case, the County chose not to condemn and purchase the property. The Coastal Commission has no authority to require the County to purchase private property, nor does the Commission have the authority or resources to do so itself. Therefore, this does not present a viable basis for denial of this project.

Regarding Policy 271-2a which discourages development of "non-conforming" lots of less than 20 acres which are distant from existing services, the subject site is located near existing services which includes North Fabuco Road for road access. North Fabuco Road is connected to Tuna Canyon Road by private roads, Betton Drive, Chard Avenue and Skyhawk Lane, which are existing roads; all of this access route is now paved and improved. The County has previously recognized these rights of way as traveled ways through approved certificates of exception, records of surveys, certificates of compliance, etc.. As a result of the Commission's approval of a residence to the east of the subject site, the Jason property at 20556 Betton Drive (Coastal Permit Number 4-96-025), 1,900 feet of roadway has been improved to Fire Department standards along Betton Drive, Chard Road, Skyhawk Lane to Tuna Canyon Road in order to access the future Jason residence. The length of the applicant's driveway to the existing North Fabuco Road from the proposed residence is 120 feet -- less than 300 foot maximum allowed in Table 1 policies as noted above. The applicant is proposing to pave a 260 foot improved road extension from the end of the paved portion of Betton Drive to reach the applicant's driveway. Policy P271-2a prohibits approval of a project that has a significant adverse impact on the ESHA's or Significant Watersheds. In this case, the ERB did not determine that a significant adverse impact on either

ESHA's or Significant Watersheds would occur. In fact, the ERB made a number of recommendations to the County decision makers to consider during the review process. Many of these recommendations were incorporated into the project design or conditions of the County's approval. Therefore, the proposed project is consistent with the above policies, as determined by the County Department of Regional Planning and the Commission, even though the County ERB recommended otherwise.

The applicant's parcel is 2.5 acres in size. The applicant has submitted a final fuel modification plan dated 6/8/00 indicating that County Fire Department approval for the fuel modification will actually extend well beyond the applicant's parcel boundaries to achieve a selective thinning of natural vegetation (Exhibit 13). The County's approval recognized that portions of the property included sloping land within a Very High Fire Hazard Severity Zone. The County required approval of a County Fire Department fuel modification plan that balances safety policies of the Malibu LUP with other LUP policies to minimize significant impacts on the natural habitat. The County recognizes that enforcing the full fuel modification vegetation clearance and thinning requirement would result in modifying the entire subject property as well as offsite properties of others. It appears that the County approval also recognizes the non-conforming 2.5 acre size of the subject parcel. The certified Land Use Plan designates the subject site and surrounding area as Mountain Land, one dwelling unit per 20 acres. Because of the non-conforming size of the subject site, it is not feasible to meet the Land Use Plan Table 1 policy limiting land clearance to 10% of the lot area. Further, the 10% of the lot clearance limit was established when the County Fire Department only required a 100 foot radius clearance zone. As a result of numerous Santa Monica Mountain wildfires since 1986, the Fire Department has increased the approved fuel modification zone radius for new development to a 200 foot radius with selective cleared areas; in this case the applicant will be required to maintain a County approved 200 foot radius Fuel Modification Zone.

In conclusion, although the County ERB found the project inconsistent with the LUP, the ERB action was only a recommendation to the County decision makers. In this case, the County Department of Regional Planning staff, as the decision makers found the proposed project as revised June 15, 2000 by the applicant to incorporate many of the ERB recommendations consistent with the Los Angeles County Land Use Plan and approved it in concept with conditions. These conditions included recommendations by the ERB, such as, a landscape plan with native species consistent with current Fire Department standards.

9. Temporary Living Trailer

The applicant's proposed temporary living trailer will be located on the top of the small hill where a pool/spa will be constructed after its removal to allow the applicants to live on the property during the construction of this project. Water will be provided from the water well and sewage service for the trailer is self contained (Exhibit 5). The Commission finds it necessary to require the removal of this trailer to an appropriate disposal or relocation site within two years of the issuance of this Coastal Permit Amendment or within thirty (30) days of the applicant's receipt of the Certificate of

Occupancy for the proposed residence from Los Angeles County, whichever is less, as required by Special Condition Number Six. The removal of this trailer is necessary to avoid the potential conversion to a second dwelling unit and potential cumulative impacts on public services such as road capacity, sewage disposal, water, electricity as well as erosion and sedimentation impacts to the downstream Tuna Canyon Creek environmentally sensitive habitats. As required by Special Condition Number Two, the temporary site for the construction trailer will be landscaped with native plants within 30 days of occupancy of the residence and after the trailer is removed.

10. Conclusion

It is important to note that the certified Los Angeles County Land Use Plan is only guidance for the Commission to consider. The Commission's standard of review for this project is the Chapter 3 policies of the Coastal Act. The Commission finds that the project is located near existing developed areas able to accommodate it. And further, the Commission finds that the project will not have significant adverse effects, either individually or cumulatively, on coastal resources. The Commission also finds that the biological productivity and quality of coastal waters and riparian habitat, ESHA, will be protected as a result of the proposed project as conditioned. Thus, the Commission finds that the project, as conditioned, is consistent with and conforms with Sections 30231, 30240 and 30250 of the Coastal Act.

C. Project Alternatives

The applicant is proposing a single family residence on the property. The Commission must describe and evaluate alternatives to the proposed project. Alternative land uses of the property include agricultural use, commercial or industrial use, multi-family development or no development. An alternative to the size of the proposed project, is a reduced scale residential project. The Los Angeles County land use and zoning designations currently allow for single family residential use, and therefore, it appears that Los Angeles County would not allow any of these alternative uses, except no development and reduced scale residential development. However, assuming that the County could, if it chose, amend the land use plan and zoning ordinance to allow an alternative use, staff will briefly discuss the alternative uses below.

1. Agriculture

The property is too small (2.5 acres) to use for grazing livestock. Grazing livestock would generate animal wastes that would have a greater impact on water quality than the proposed residence. The property has very varied terrain and slopes that make it infeasible for growing crops. Agricultural use of the property would also be likely to result in airborne and waterborne pollution from fertilizers and pesticides that are generally used in agriculture. The low rainfall and unavailability of water for irrigation also make this option infeasible. Therefore, agricultural use is not a feasible or environmentally preferable alternative. Furthermore, there is no indication that the County would agree to change the zoning to agriculture, and therefore it appears that this option is not feasible.

2. Commercial or Industrial

Commercial or industrial use of the property would likely require a structure that would not be visually compatible with the area and that would adversely impact public views from nearby hiking trails. In addition, commercial or industrial use of the property could result in more vehicles driving to the property and parking on the property. This would require a larger parking area and increase the amount of pollutants that are discharged on the property and nearby roads, increasing the amount of pollutants entering the watershed. Therefore, this option would have greater environmental impacts than the proposed residence. Furthermore, there is no indication that the County would agree to change the zoning to commercial or industrial, and therefore it appears that this option is not feasible.

3. Multi-family Residential Development

This option would also result in more vehicles driving to the property and parking on the property. This would require a larger parking area and increase the amount of pollutants that are discharged on the property and nearby roads, increasing the amount of pollutants entering the watershed. Therefore, this option would have greater environmental impacts than the proposed residence. Furthermore, there is no indication that the County would agree to change the zoning for the property to multi-family, and therefore it appears that this option is not feasible.

4. No Development

Although environmental impacts would be reduced if the property remained as undeveloped, open space, the property is privately owned and the owner is proposing to build a residence on the property. The property has been zoned for residential use. Staff is not aware in writing of any public agency or land preservation group that is actively seeking to purchase the site to preserve it as open space. This possibility was raised several years ago, but although several years have passed, no purchase has occurred. The Commission does not have the authority or the resources to purchase private property itself. There are no hazards known that render the property unsafe for residential development, nor are there any wetlands or endangered species present on the property. In these circumstances, it is not feasible to prohibit development of a single family residence on an existing, lawfully subdivided, and privately owned residentially designated property. (Public Resources Code section 30010; *Lucas v. South Carolina Coastal Council* (1992) 505 U.S. 1003, 1016).

5. Reduced Residential Scale

Another alternative to the proposed project is a smaller single family residence. The applicant proposes a two-story, split level 5,458 square foot residence including an attached two car garage and workshop cut into the base of a small knob hill near North Fabuco Road. The proposed building coverage is 2,853 sq. ft. for the subject project. The proposed structures will be visible to a limited degree from public viewpoints along

Tuna Canyon and Saddle Peak Roads and as conditioned to include design restrictions, and landscaping will therefore not significantly impact public views of the coast or coastal mountain areas. The discussion below addresses whether reducing the footprint of the proposed structure, and future residences in the subdivision, would substantially lessen the environmental impacts on the resources in the significant watershed.

Staff requested in a prior application for a residence in this 16-lot subdivision (Sayles, Coastal Permit No. 4-00-162) that a previous applicant provide an analysis of the cumulative impacts of vegetation removal and/or thinning for development of the entire subdivision, if smaller residences were constructed. The analysis provided was based on residential development on 12 lots in the subject subdivision, including the subject site, for three hypothetical simple square residences of varying sizes. There does not appear to be any reason why the conclusions reached in the analysis of cumulative impacts of development on 12 lots would be any different if the analysis considered all 16 lots in the subdivision.

The first residential size analysis that was provided is essentially a similar size residence to the subject proposed project (although smaller) at 5,000 sq. ft. Two reduced scale residential proposals (Exhibits 15 - 17) were also analyzed at 3,400 sq. ft. and 500 sq. ft. The fuel modification area was determined using a 200 foot radius from the residential foot print. No overlap of fuel modification areas were considered in this approach. In comparing the 5,000 sq. ft. house with a 2,500 sq. ft. footprint to the 3,400 sq. ft. house with a 1,700 sq. ft. foot print (Exhibit 15) the house size was reduced by 30%, but the fuel modification area was only reduced by 5 %. In comparing the 5,000 sq. ft. two story house to the 500 sq. ft. single story house (Exhibit 16), the house size was reduced by 90%, but the fuel modification was only reduced by 12 %. In this comparison, such a significant reduction in house size, provides a much more limited reduction in the fuel modification area.

The second analysis provided involved the layout of two different size houses on 12 of the lots surrounding the Sayles project lot and area to east to show the effect of more practical house designs that fit the contour of the land, with a garage, driveway, patios, out buildings and architectural designs. Exhibit 15 illustrates the design layout of 5,000 sq. ft. two story residences with a 600 sq. ft. garage. Due to the residence design layout, with its architectural design and hardscape coverage, the actual ground foot print for the layouts in Exhibit 17 are 7,000 to 9,500 sq. ft. The larger footprint is larger than the residence proposed in this application, but was selected by the applicant to represent a large residence commonly proposed in the Santa Monica Mountains/Malibu area. Without considering overlap, the average fuel modification area on an individual basis for each residence is 302,400 sq. ft. within the 200 foot radius of the residential footprint.

However, the fuel modification area in the alternatives discussed above cannot be considered in isolation because generally the fuel modification area on lots of this size extends to the border of the property, or beyond the border and onto the adjacent parcels. A review of the fuel modification area on Exhibit 15 indicates that the 5,000 sq.

ft. residences with a 600 sq. ft. garage will have a fuel modification area that overlaps each of the adjoining fuel modification areas for adjoining residences. This fuel modification overlap occurs because the distance between the residences (150 – 250 feet) is less than two times the radius of the fuel modification area (400 feet or more). The fuel modification area extends beyond the lot boundaries due to the modest size of these lots, each about 2.5 acres. The fuel modification for this 5,600 sq. ft. design alternative would be 302,400 sq. ft. (6.94 acres) of area as noted above, without accounting for this overlap. However, when you do take into account the overlap with the required fuel modification area for development on adjacent lots, the fuel modification required for development of a 5,600 sq. ft. residence on the 12 lots is only 142,743 sq. ft. (3.28 acres) of area, as noted on Exhibit 17. The total area of these 12 lots is about 30 acres or 1,306,800 sq. ft.

This analysis also included one of a smaller residence. Exhibit 16 shows the layout of a 1,000 sq. ft. two story residence with a 500 sq. ft. garage. (Staff modified this alternative to increase the size to 1,500 sq. ft. for the residence with a 500 sq. ft. two car garage as a two story residence could include habitable space on the second floor above the garage. Such a hypothetical residence in this staff analysis is considered a small residence with 1,500 sq. ft. of habitable space and a 500 sq. ft. garage to total a 2,000 sq. ft. two story structure.

This reduced scale 2,000 sq. ft. two story residence has a 1,000 sq. ft. footprint. As identified in Exhibits 16 and 17, the layout for a 2,000 sq. ft. residence with a 1,000 sq. ft. footprint will realistically result in structure and hardscape coverage of 1,300 to 2,400 sq. ft. to account for the layout of the residence to fit the contour of the land, garage, driveway, patios, out building and architectural design. This reduced size residence represents a 64% reduction in the square footage size of the residence as compared to the 5,600 sq. ft. residence. A review of the fuel modification area on Exhibit 16 indicates that even with a reduced size of a residence at 2,000 sq. ft. the fuel modification area overlaps each of the adjoining fuel modification areas for adjoining residences. This fuel modification overlap occurs whether or not the residences are large or small because the distance between the residences (150 – 250 feet) is again less than two times the radius of the fuel modification area (400 feet or more). The fuel modification area extends beyond the lot boundaries due to the modest size of these lots. The fuel modification for this reduced size alternative would be 202,500 sq. ft. (4.65 acres) of area. However, the overlapping fuel modification area required for a 2,000 sq. ft. residence is 125,338 sq. ft. (2.88 acres) of area in the cumulative analysis. Thus, the building pad and fuel modification area, even for this reduced scale alternative of 2,000 square feet, will generally extend over the entire lot (which is approximately 2.5 acres) and will also extend onto adjacent lots.

This analysis included Exhibits 15 - 17, showing the fuel modification area for the two alternatives on the 12 lots; a 5,600 sq. ft. two story house with the garage and a 2,000 sq. ft. two story house with a garage. This analysis indicates that reducing the house size by 64% would result in only a very small reduction in the size of the overlapping fuel modification area from 142,743 square feet to 125,338 square feet. The reduction in this fuel modification area would only be 17,405 square feet (0.4 acres), out of the

total acreage of all 12 lots of about 1,306,800 sq. ft. (30 acres). The Commission finds that this small reduction in the fuel modification area would not substantially lessen the impact on native habitat from residential development on these lots.

The applicant's proposed 5,458 square foot residence and garage is considered a reasonable sized residence and garage for this area of the Santa Monica Mountains/Malibu area. The size of the proposed residence is generally consistent with the size of other residences, although slightly larger, than those recently approved by the Commission in the surrounding within and outside the Tuna Canyon Significant Watershed area, including Coastal Permit No. 4-96-025 (Jason), for a 4,800 sq. ft. residence and garage, Coastal Permit No. 4-96-210 (Smith), for a 4,658 sq. ft. residence and garage, Coastal Permit No. 4-96-162 (Jobbins), for a 4,850 sq. ft. residence and garage, and Coastal Permit No. 4-96-215 (Zanini) for a 3,569 sq. ft. residence and garage and a 750 sq. ft. guest house, totaling 4,319 sq. ft. of structures.

For the reasons discussed above, the Commission finds that given the relatively small size of the existing legal lots in the subdivision, and the County's fuel modification requirements, reducing the size of the proposed residences will not substantially lessen the impacts to native habitat resulting from the residential development. The Commission also notes that the alternative of reducing the size of the two story residence would not significantly reduce the visual impacts of the building as the structure will most likely continue to be a two story structure due to the topography of the building site. Further, Special Condition Number Ten will ensure that the structure is visually compatible with the surrounding environment relative to color and the use of non-glare glass windows. These reduced scale alternatives will not significantly reduce use of water for domestic and landscaping irrigation purposes. These alternatives will also not substantially increase water runoff, erosion, and pollution as addressed and required in Special Condition Numbers Two and Four.

Furthermore, as discussed above, mitigation measures as conditions of approval will be required that will serve to minimize impacts of this development and future development in the subdivision on water quality and habitat. The vegetation that will be removed or thinned to meet County Fire Department requirements is not habitat for any threatened or endangered species. Conditions will be imposed to prevent an increase in runoff of sediments or pollutants from the site and to protect water quality and downstream riparian habitat.

Therefore, the Commission finds that the above project alternatives, agriculture, commercial and or industrial, and multifamily residential land uses are not feasible due to the surrounding single family residential development and the sensitive nature of the Significant Watershed within the Santa Monica Mountains. The Commission finds that reduced scale single family residential alternatives will not significantly reduce the individual or the cumulative environmental impacts of the project, with the mitigation measures required as conditions of project approval.

Thus, the Commission finds that the proposed project, as conditioned, will result in development that is consistent with and conforms with Sections 30231, 30240, and 30250(a) of the Coastal Act.

D. Geologic Stability

Section 30253 of the Coastal Act states:

New development shall:

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

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

The Commission reviews the proposed project's risks to life and property in areas where there are geologic, flood and fire hazards. Regarding the geologic hazard, the applicant submitted the following: Report of a Preliminary Engineering Geologic Investigation, dated October 7, 1999, Limited Engineering Geologic Report, dated April 22, 2000, by Pacific Geology Consultants, Inc.; Soils Engineering Investigation, dated October 19, 1999, by Subsurface Designs Inc. The Subsurface Designs report dated October 19, 1999 states:

> It is the finding of this firm, based upon the subsurface data, that the subject building site will not be affected by settlement, landsliding, or slippage. Further, based upon the proposed location, development will not have an adverse affect on off-site property.

The Limited Engineering Geologic Report, dated April 22, 2000, by Pacific Geology Consultants states:

> It is the professional geologic opinion of the undersigned that construction of a residence, garage and swimming pool is feasible from a geologic standpoint. The locations of the proposed structures, as shown on the attached Geologic Map Plate A, are considered favorable from a geologic standpoint. All recommendations contained herein and those provided by the Geotechnical Engineer, Subsurface

Designs, Inc. shall be followed both during design and construction. Additionally, all applicable elements of the County of Los Angles Building Code shall be followed.

Section 111

Providing the recommendations contained in this report, in addition to those of the Geotechnical Engineer are followed, the residence, garage and swimming pool will be safe from landslide hazard, settlement and slippage. In addition, the proposed construction and grading will not adversely affect off-site properties from a geologic standpoint. All specific elements of the Los Angeles Building Code shall be followed in conjunction with design and future construction work.

The recommendations in these reports address the following issues: geologic stability, surficial stability, seismic considerations, foundation support, swimming pool, retaining walls, excavation characteristics, site drainage, on-site effluent disposal, grading, temporary excavations, erosion control, drainage and maintenance, foundations, floor slabs, excavation erosion control, inspection and plan review. Based on the findings and recommendations of the consulting engineering geologist, geologist, and engineer, the Commission finds that the development is consistent with Section 30253 of the Coastal Act so long as all recommendations regarding the proposed development are incorporated into the project plans. Therefore, the Commission finds it necessary to require the applicant to submit project plans that have been certified in writing by these consultants as conforming to their recommendations, as noted in Special Condition Number Eight for the final project design, grading, drainage, and landscape plans for the proposed project.

Minimizing erosion of the site is important to reduce geological hazards on the site and minimize sediment deposition in the drainages leading to Tuna Canyon Creek. The applicant has submitted landscape and fuel modification plans for the proposed development. These plans incorporate the use of native species and illustrate how these materials will be used to provide erosion control to those areas of the site disturbed by development activities. These plans also illustrate that vegetation will be "thinned" rather than "cleared" for fuel modification purposes, thus allowing for the continued use of existing native plant materials for on site erosion control. The thinning, rather than complete removal, of native vegetation helps to retain the natural erosion control properties, such as extensive and deep root systems, provided by these species. These plans will be revised to include the revised project description as noted above as required by Special Condition No. Two.

In order to ensure that drainage from the residential building pad is conveyed from the site and into the watershed in a non-erosive manner and erosion is controlled and minimized during construction, the Commission finds it necessary to require the applicant to submit site drainage plans, as required by Special Condition Number Two and a polluted runoff control plan, as required by Special Condition Number Four. Furthermore, the Commission finds it necessary to require the applicant, should the proposed improvements to the access road or the proposed drainage structures fail or

result in erosion, to be solely responsible for any necessary repairs and restoration resulting from this failure along the entire section of the access road subject to this permit. Special Condition Number Three provides for such maintenance of the access roadways and drainage structures.

The Coastal Act also requires that new development minimize the risk to life and property in areas of high fire hazard. The Coastal Act also recognizes that new development may involve the taking of some risk. Coastal Act policies require the Commission to establish the appropriate degree of risk acceptable for the proposed development and to establish who should assume the risk. When development in areas of identified hazards is proposed, the Commission considers the hazard associated with the project site and the potential cost to the public, as well as the individual's right to use his property.

Vegetation in the coastal areas of the Santa Monica Mountains consists mostly of coastal sage scrub and chaparral. Many plant species common to these communities produce and store terpenes, which are highly flammable substances (Mooney in Barbour, Terrestrial Vegetation of California, 1988). Chaparral and sage scrub communities have evolved in concert with, and continue to produce the potential for frequent wild fires. The typical warm, dry summer conditions of the Mediterranean climate combine with the natural characteristics of the native vegetation to pose a risk of wild fire damage to development that cannot be completely avoided or mitigated.

Due to the fact that the proposed project is located in an area subject to an extraordinary potential for damage or destruction from wild fire, the Commission can only approve the project if the applicant assumes the liability from these associated risks. In fact, the property burned in the 1993 Malibu Fire. Through the waiver of liability, the applicant acknowledges and appreciates the nature of the fire hazard which exists on the site and which may affect the safety of the proposed development, as incorporated by Special Condition Number Nine.

The Commission finds that only as conditioned is the proposed project consistent with Section 30253 of the Coastal Act.

E. Archaeological Resources

Section 30244 of the Coastal Act states that:

> **Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.**

Policy 169 of the Malibu/Santa Monica Mountains Land Use Plan, which the Commission has relied on as guidance in past land use decisions in this area, states that:

Site surveys performed by qualified technical personnel should be required for projects located in areas identified as archaeologically / paleontologically sensitive. Data derived from such surveys shall be used to formulate mitigating measures for the project.

Archaeological resources are significant to an understanding of cultural, environmental, biological, and geological history. The Coastal Act requires the protection of such resources to reduce potential adverse impacts through the use of reasonable mitigation measures. Archaeological resources can be degraded if a project is not properly monitored and managed during earth moving activities conducted during construction. Site preparation can disturb and/or obliterate archaeological materials to such an extent that the information that could have been derived would be lost. As so many archaeological sites have been destroyed or damaged as a result of development activity or natural processes, the remaining sites, even though they may be less rich in materials, have become increasingly valuable. Further, because archaeological sites, if studied collectively, may provide information on subsistence and settlement patterns, the loss of individual sites can reduce the scientific value of the sites that remain intact. The greater province of the Santa Monica Mountains is the locus of one of the most important concentrations of archaeological sites in Southern California. Although most of the area has not been systematically surveyed to compile an inventory, the sites already recorded are sufficient in both number and diversity to predict the ultimate significance of these unique resources.

The applicant submitted an archaeological report for the development site on the parcel. The report dated February 25, 2000 was prepared by E. Gary Stickel, Environmental Research Archaeologists, for the proposed project. The project area is located in an area where 13 site surveys or excavations for cultural resources were done within a one mile radius.

Based on an evaluation of an intense site survey, no cultural resources were identified. Based on these negative findings, the consultant determined that further cultural resources management measures would not be relevant. That recommendation would change, however, if any artifacts or bone material were to be discovered during the construction of the residence. In such an event, construction work should cease until a professional archaeologist could inspect the parcel and access the significance of any such finds. These are the appropriate Cultural Resources Management recommendations for the project in view of the findings of this research.

Therefore, the Commission finds that no adverse impacts on archaeological resources will be occur as a result of the proposed development, and that the project, as proposed, is consistent with Section 30244 of the Coastal Act.

F. Visual Resources.

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 certified LUP contains the following policies regarding landform alteration and the protection of visual resources that 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.

P125 New development shall be sited and designed to protect public views from LCP-designated scenic highways to and along the shoreline and to scenic coastal areas, including public parklands. Where physically and economically feasible, development on sloped terrain should be set below road grade.

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.

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 proposes to construct a two story 13 ft. to 33 ft. high, split level, 4,591 sq/ft. single family residence, attached two car 867 sq/ft. garage/workshop, pool & jacuzzi with non-chemical filtration system and pool cover for evaporation and energy conservation, after the fact development of a water well, a 5,150 gallon domestic water tank, rainwater harvesting system with buried 8,500 gallon storage tank, 120 ft. paved driveway with fire department turnaround constructed with turf block and planted with native needle grass, driveway restoration w/turf block & native needle grass for existing northern access driveway, restore existing dirt driveway on southeast portion of property with needle grass and sandstone cobble, pave 260 ft. length of No. Fabuco, grade 2,300 cu/yds of cut, 200 cu/yds of fill, export 2,100 cu/yds of material to disposal site located outside the coastal zone or a location with a coastal permit for disposal, drought resistant native landscaping, temporary living trailer, onsite drainage with catch basin and filter, entry gates, fencing, and septic system. The proposed residence and garage/workshop is located on the top and cut into the southern base of a small knob hill, while the proposed pool/spa and fire truck turnaround area is located on the top of another small hill south of the residence and garage/workshop and along the route of the driveway to the garage. The building pad area for the residence and garage/workshop is 2,853 sq. ft. In addition, the applicant proposes to install a temporary living trailer on the small knob where the pool/spa will be located after the trailer is removed.

In the review of this project, the Commission reviews the publicly accessible locations where the proposed development is visible to assess potential visual impacts to the public. The Malibu/Santa Monica Mountains Land Use Plan protects visual resources in the Santa Monica Mountains. Tuna Canyon Road is recognized as a "second priority scenic area" which is given special treatment when evaluating potential impacts caused by new development.

The Commission examines the building site, the proposed grading, and the size of the building pad and structures. The development of the residence, garage/workshop and water tank raises two issues regarding the siting and design: one, whether or not public views from public roadways will be adversely impacted, or two, whether or not public views from public trails will be impacted. It is important to note that three single family residences on adjoining or nearby parcels have been approved by the Commission but have not been constructed. Assuming these residences will be constructed, the subject project will be visible to the public from public locations within the context of a partially developed subdivision.

The siting, size and grading for the building pad will be visible from limited portions of Tuna Canyon Road to the west and north and to the north from a portion of Saddle Peak Road. Tuna Canyon Road, a public roadway, encircles the vicinity of the project site to the south, west, and north. The site will not be visible from Tuna Canyon Road to the south as the topography drops steeply from the plateau to a narrow and steep

canyon where Tuna Canyon Road and Creek are located. The site for the temporary living trailer will be limited in visibility from these public roads due to its location on the lower elevation portion of the subject property and will be on this location for only a temporary two year period or less. The proposed grading for the building site is modest as the building pad will be cut into the top of a hill and into the southern base of the hill.

In regards to the proposed improvements to North Fabuco Road, these improvements will all occur along an existing dirt roadway, and the grading associated with this development will be spread out along a 260 foot section of road. This grading is judged to be the minimum amount necessary to meet the requirements of the Los Angeles County Fire Department. Furthermore, no significant cut or fill slopes will result from the above referenced grading, and no adverse or significant visual impacts are anticipated as a result of the paved extension of North Fabuco Road, now a dirt road, will be visible to a very limited degree from Tuna Canyon and Saddle Peak Roads.

Regarding public trails, an existing equestrian and hiking trail, the Tuna Canyon trail, is located about one half of a mile to one mile south and west of the project site. Due to the distance and intervening topography and vegetation, public views of the project site will be very limited.

Because the site will be visible to a limited degree from Tuna Canyon Road to the west and north, and Saddle Peak Road to the north, mitigation to address potential visual impacts is needed for the structures. The proposed two story split level residence, garage/workshop, and above ground water tank, will be less visually intrusive through the use of earth tones for the structures and roofs of the buildings, including the water tank, and non-glare glass which helps the structures blend in with the natural setting. The Commission finds it necessary to impose Special Condition Number Ten to restrict the color of the subject structures to those compatible with the surrounding environment and prohibit the use of white tones, while requiring the use of non-glare glass windows. In addition, to ensure that any future additions to the permitted structures, which would otherwise be exempt from coastal permit requirements, are reviewed for consistency with Section 30251 of the Coastal Act, the Commission finds, that it is necessary to require that all future additions or improvements to the permitted structures, or any future development on the subject parcel, will require a permit or permit amendment, as required by Special Condition Number Seven.

Further, the Commission has found that the use of native plant materials in landscaping plans can soften the visual impact of construction in the Santa Monica Mountains. The use of native plant materials to revegetate graded or disturbed areas reduces the adverse affects of erosion, which can degrade visual resources in addition to causing siltation pollution in ESHAs, and soften the appearance of development within areas of high scenic quality. The applicant has submitted a landscape and fuel modification plan that uses numerous native species compatible with the vegetation associated with the project site for landscaping and erosion control purposes that will be as required to be revised to include the applicant's revise project description. Furthermore, the plan indicates that only those materials designated by the County Fire Department as being a "high fire hazard" are to be removed as a part of this project and that native materials

surrounding the residential structure are to "thinned" rather than "cleared" for wildland fire protection. Special Condition Number Two requires that the landscape plan be completed within sixty days of residential occupancy and at the time the construction trailer is removed, replant that area within thirty days, and that planting coverage be adequate to provide ninety (90) percent coverage within two (2) years and shall be repeated, if necessary, to provide such coverage.

Therefore, the Commission finds that the project, as conditioned, minimizes impacts to public views to and along the coast and thus, is consistent with Section 30251 of the Coastal Act.

G. Violation

Although development has taken place prior to the filing of this permit application, consideration of the application by the Commission has been based solely upon the Chapter 3 policies of the Coastal Act. Review 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.

The applicant purchased this property in 1998 with an existing water well. The applicant was unable to provide evidence that this well received a coastal permit from this Commission or a permit from the County of Los Angeles for it original construction. This water well requires a coastal permit in order to be in conformance with the Coastal Act. The Commission finds it necessary to require the applicant to fulfill all of the Special Conditions as a prerequisite to the issuance of this permit, as required by Special Condition Number Eleven within 90 days of Commission action. Only as conditioned, is the proposed development consistent with the Coastal Act.

H. Local Coastal Program

Section 30604 of the Coastal Act states that:

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

Section 30604(a) of the Coastal Act provides that the Commission shall issue a coastal permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program which conforms with Chapter 3 policies of the Coastal Act. The preceding sections provide findings that the proposed project will be in conformity with the provisions of Chapter 3 if certain conditions are incorporated into the project and accepted by the applicant. As conditioned, the proposed development will not create adverse impacts and is found to be consistent

with the applicable policies contained in Chapter 3. Therefore, the Commission finds that approval of the proposed development, as conditioned, will not prejudice the County of Los Angeles's ability to prepare a Local Coastal Program for this area of the Santa Monica Mountains that is also consistent with the policies of Chapter 3 of the Coastal Act as required by Section 30604(a).

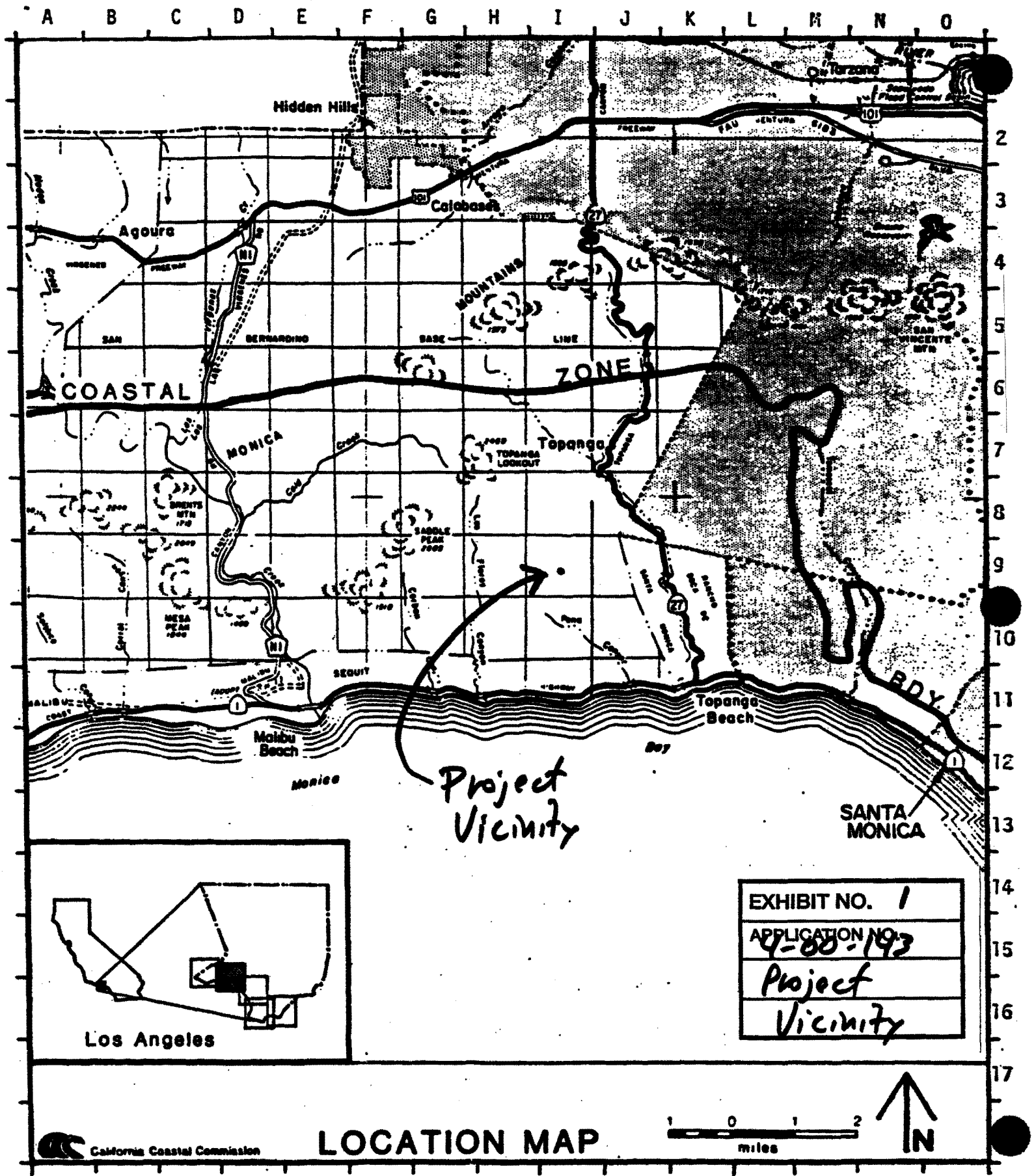
I. California Environmental Quality Act

The Coastal Commission's permit process has been designated as the functional equivalent of CEQA. Section 13096(a) of the California Coastal Commission's Code of Regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing the project, as conditioned by any conditions of approval, to be consistent with any applicable requirements of 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 that would substantially lessen any significant adverse effects that the activity may have on the environment.

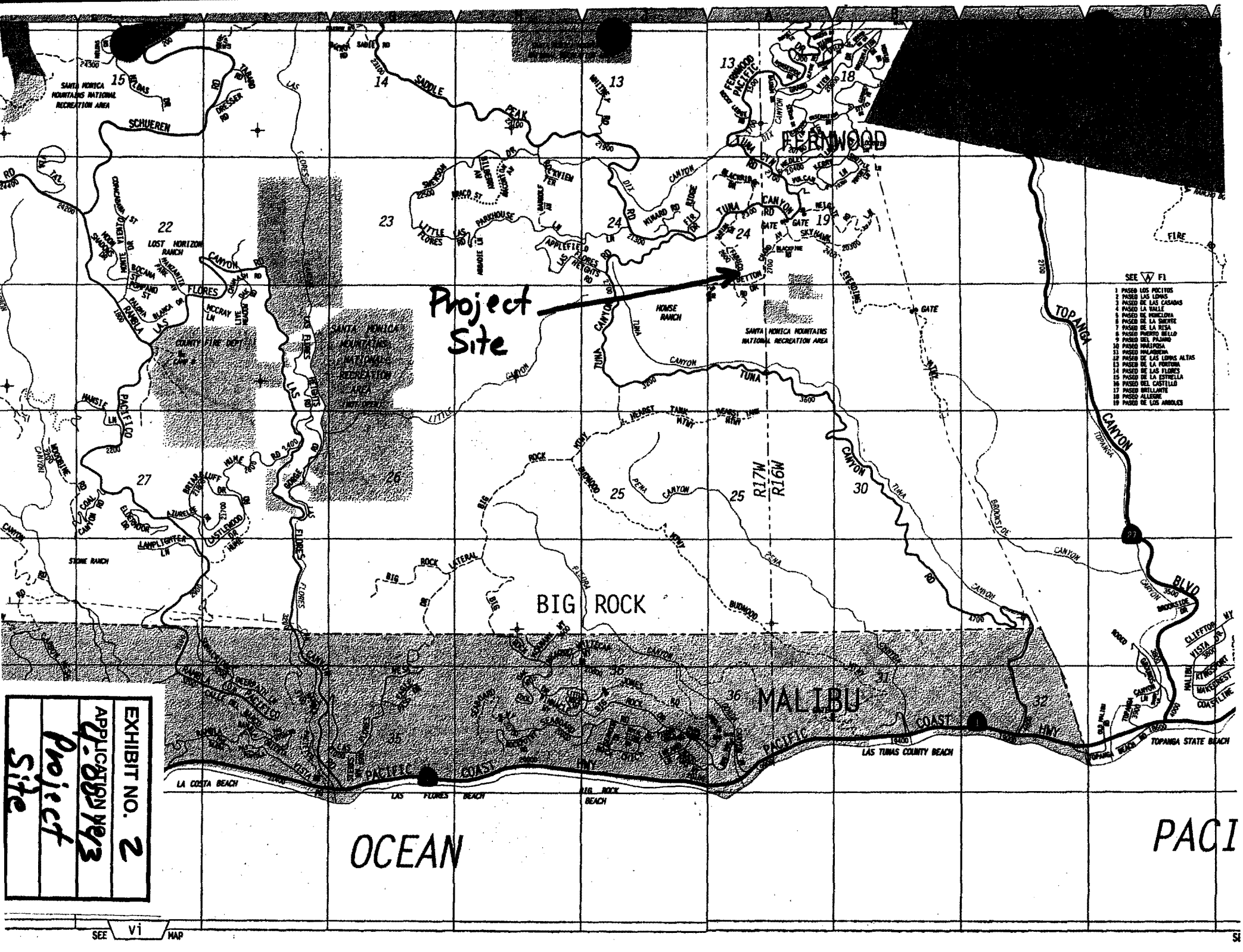
As explained in the findings set forth above in this Staff Report, and incorporated fully herein, all feasible mitigation measures have been adopted to avoid or reduce any significant adverse effects the project may have on the environment. In addition, the Commission finds that there are no other feasible alternatives available that would avoid or substantially reduce any significant adverse effects the project may have on the environment, considering the applicants right to use their property. The public has not, at this time, brought to the Commission's attention any potential adverse environmental effects of the project that are not discussed in the Staff Report. Therefore, the proposed project, as conditioned, is consistent with the applicable requirements of CEQA.

J. Response to Written Comments/Document Received

Staff received one document, Exhibit 26 on July 10, 2001 from one interested party, Kay Austen, to date raising issues about this application for Coastal Permit No. 4-00-143. The issues raised include what appears to be a proposal from the Santa Monica Mountains Resource Conservation District (RCDSMM) possibly from a report dated in the year 2000 and titled "Tuna Canyon Significant Ecological Area". The document identifies numerous plant and animal species, some which apparently are on state or federal sensitive, rare, threatened or endangered lists. No information was provided that the subject property includes any of these listed species or that the proposed project creates any significant adverse effects on these species. This issue of environmentally sensitive habitats is discussed adequately in detail above in Section IV. B.



County of Los Angeles


Project Site
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BIG ROCK
MALIBU
OCEAN
PACI
SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA
LOST HORIZON RANCH
HOUSE RANCH
STONE RANCH
SCHUEREN
SADDLE PEAK
TUNA CANYON
TOPANGA CANYON
PACIFIC COAST HWY
LAS TUNAS COUNTY BEACH
TOPANGA STATE BEACH
LA COSTA BEACH
LAS FLORES BEACH
BIG ROCK BEACH
EXHIBIT NO. 2
APPLICATION NO. 4-82-300
Project Site

ESRI ArcExplorer 1.1

Tuna Canyon 16 lot subdivision and subject lot/building site

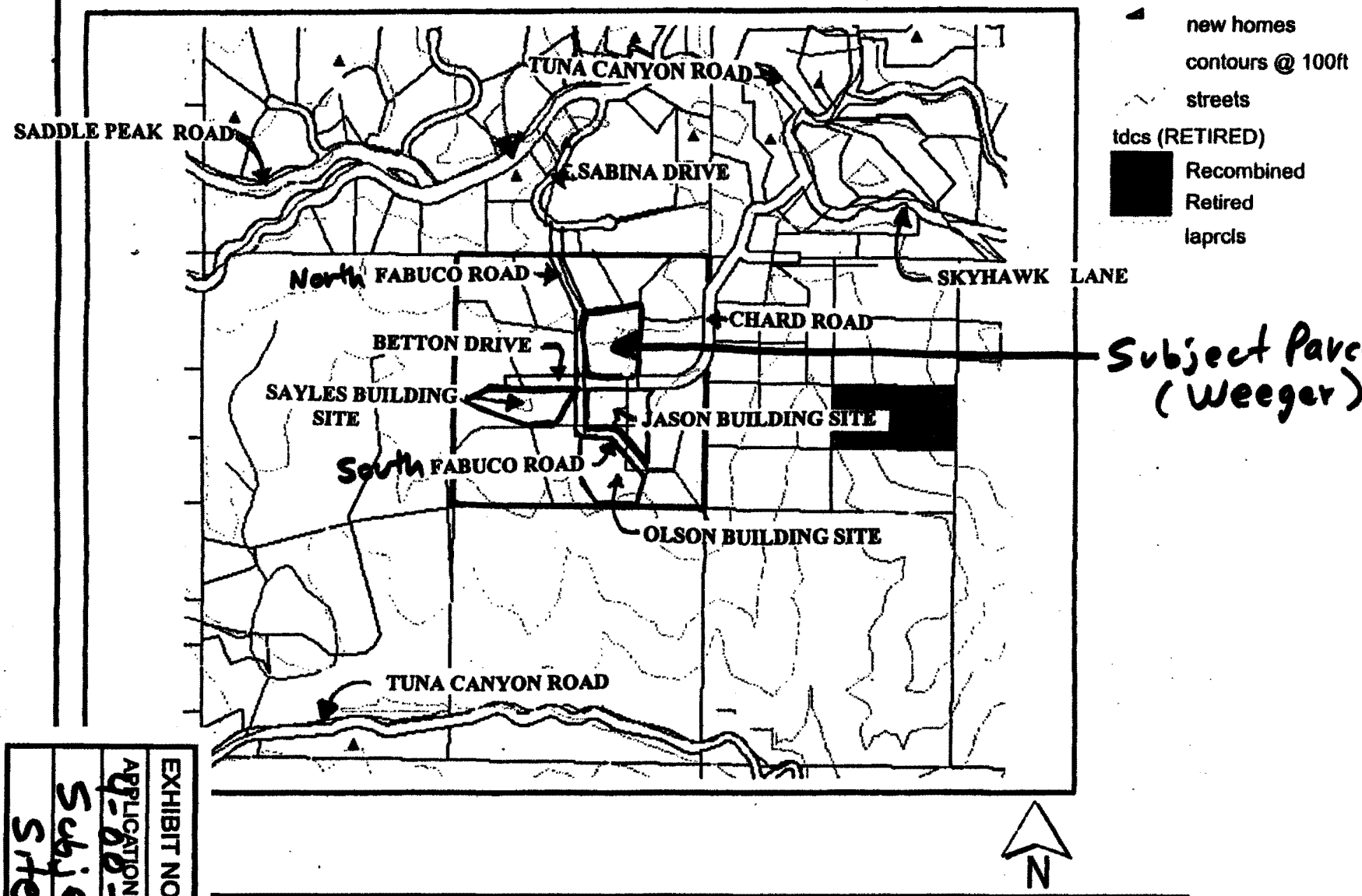
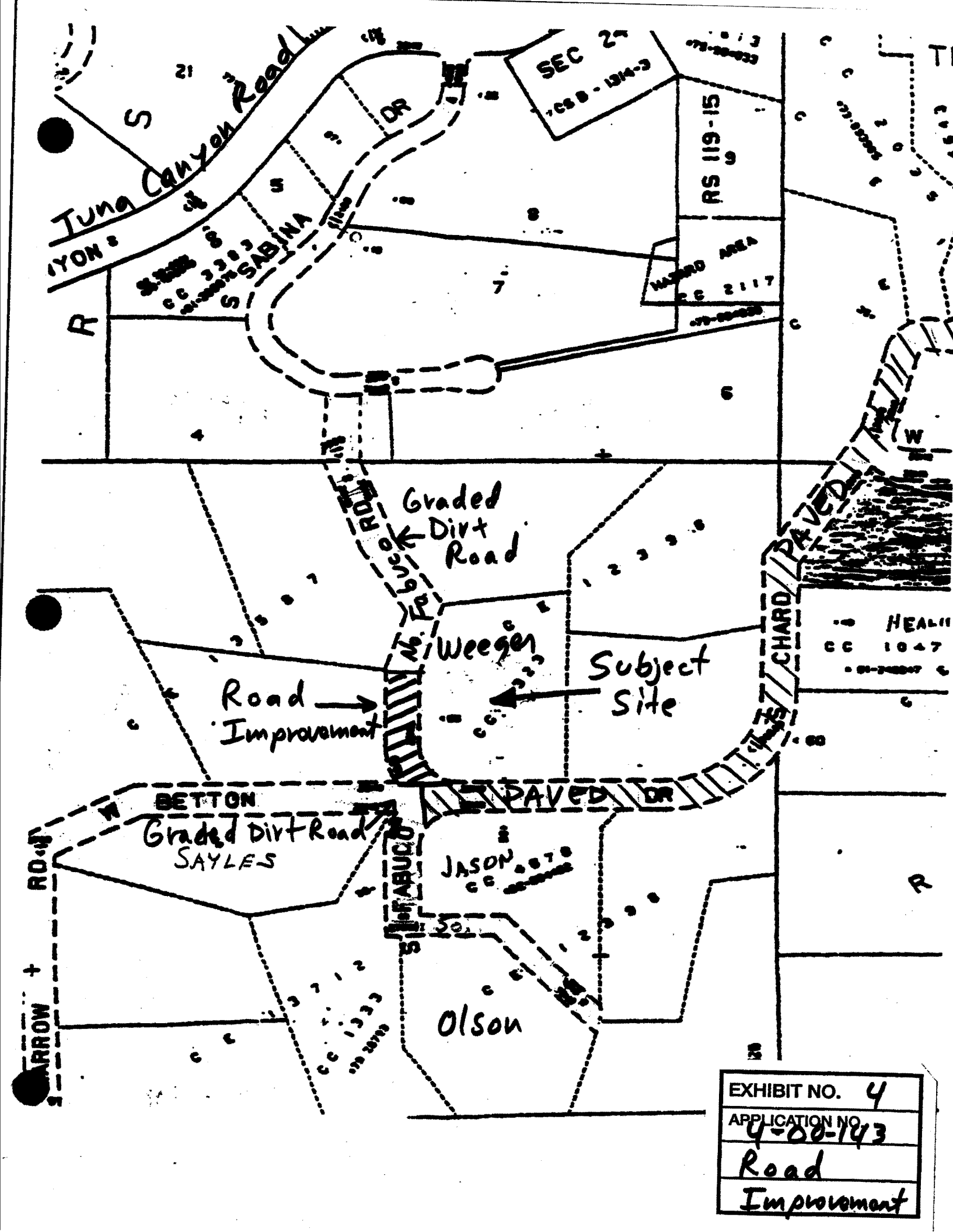


EXHIBIT NO. 3
APPLICATION NO. 4-88-143
Subject Site


Tuna Canyon Road
SEC 2
RS 119-15
SABINA
Graded Dirt Road
Weeger
Subject Site
Road Improvement
PAVED
BETTON
Graded Dirt Road
SAYLES
JASON
Olson
EXHIBIT NO. 4
APPLICATION NO. 4-00-143
Road Improvement

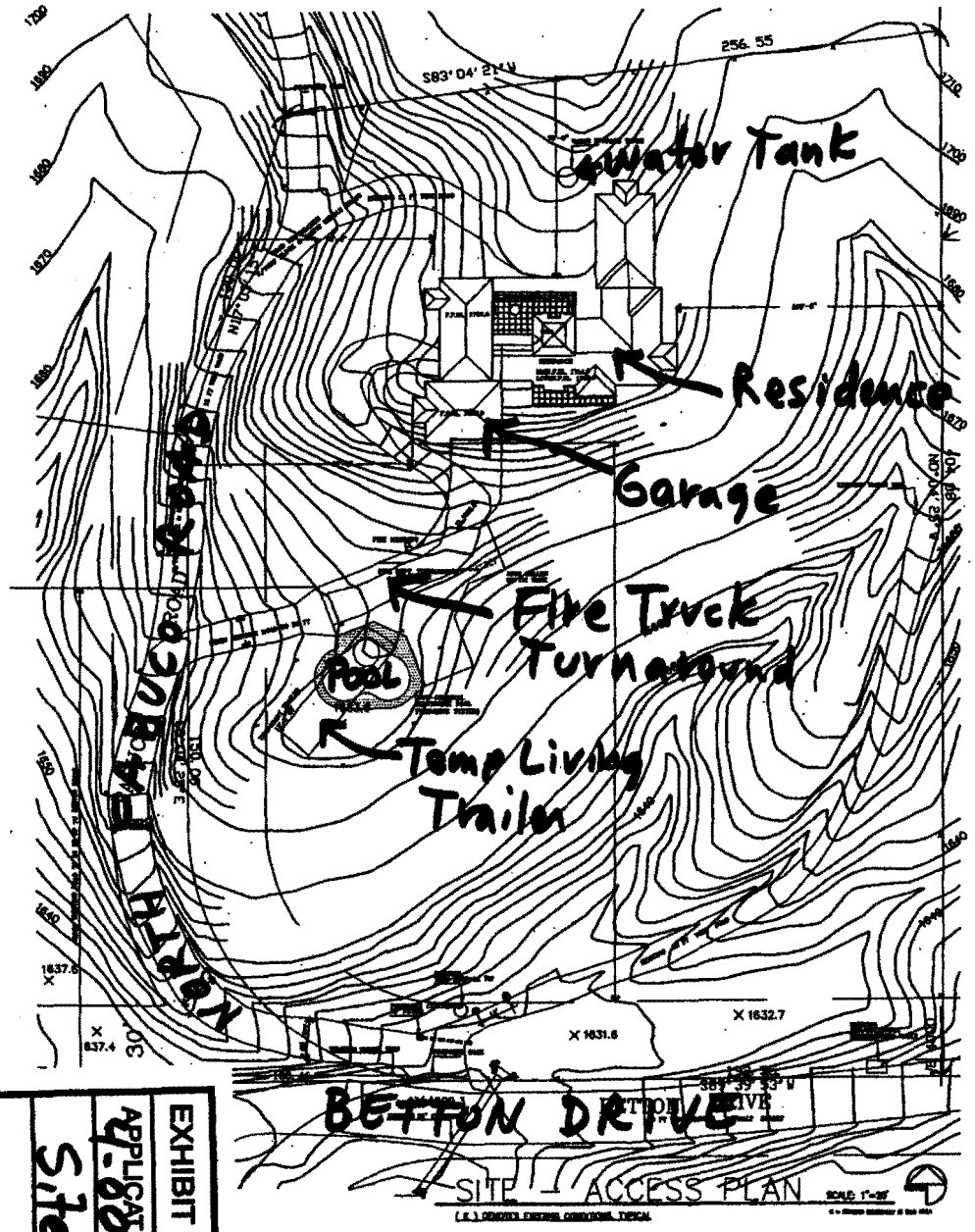
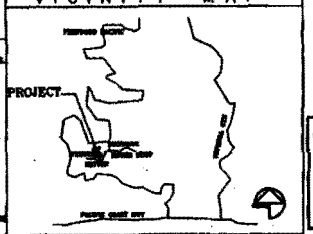


EXHIBIT NO. 5
APPLICATION NO. 4-00-193
Site plan

COUNTY OF LOS ANGELES FIRE DEPT. ZONE 4 – GENERAL NOTES

VICINITY MAP



PROJECT DATA

OWNER / ADDRESS :

LEGAL DESCRIPTION :

SCOPE OF WORK :

AREA BREAKDOWN :

CONSULTANTS :

SHEET INDEX

Cary W. Wagner & Associates, Architects
23231 Industrial Highway • Suite 113
Calabasas, CA 91302
(818) 591-7172 • (310) 455-7245
FAX (818) 591-7179

Sheet Title

PLOT PLAN
PROJECT DATA
FIRE ACCESS REQ'S

Job Name

WEEGER RESIDENCE
2656 FABUCO DRIVE
TOPANGA, CA

Date-Revs.

6-1-2000

Sheet

C-0

of

RECEIVED
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CALIFORNIA
COASTAL COMMISSION
SOUTH CENTRAL COAST DISTRICT

DRIVEWAYS TO BE RESTORED

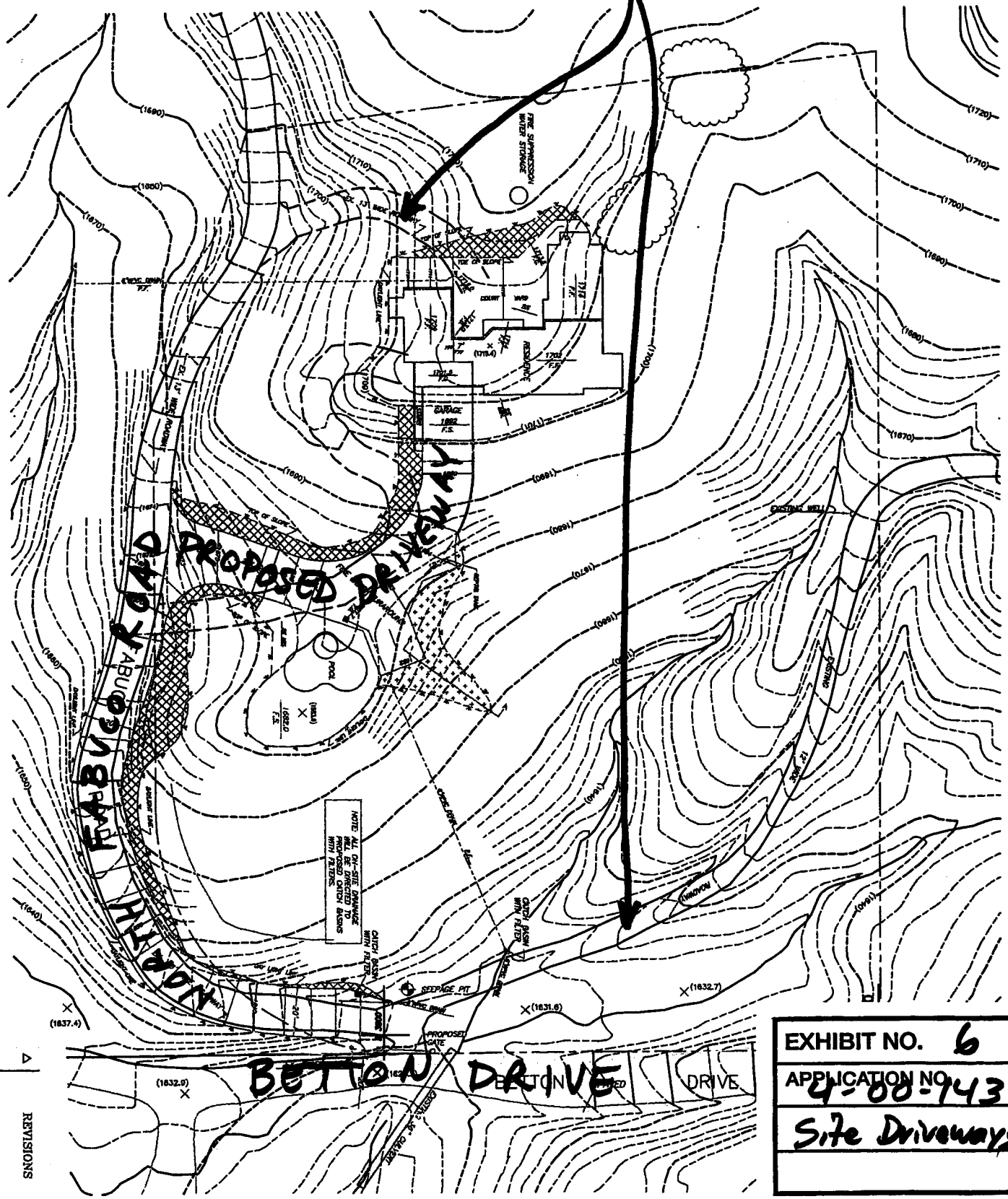


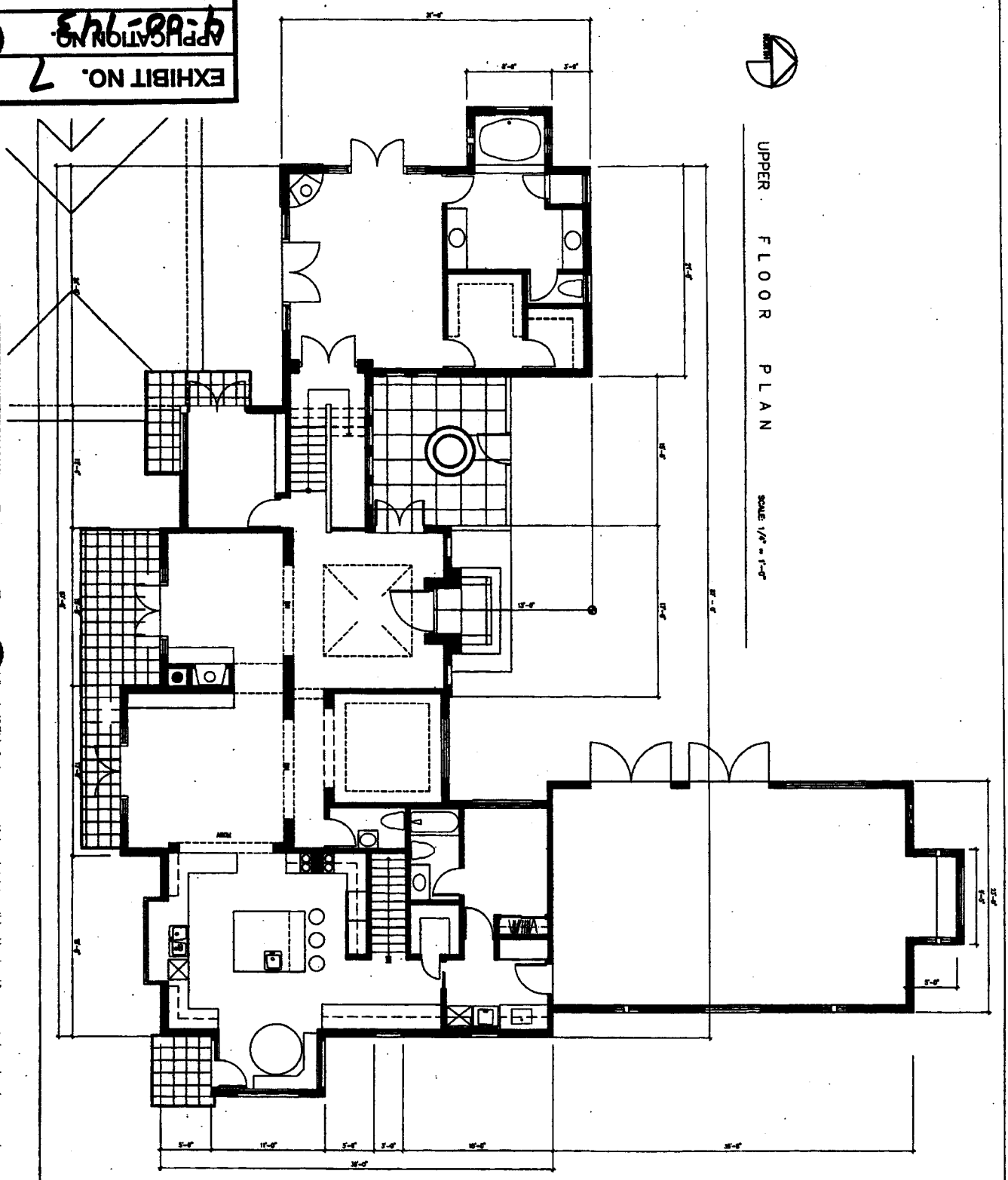
EXHIBIT NO. 6
APPLICATION NO. 4-00-143
Site Driveways

REVISIONS

EXHIBIT NO. 7

APPLICATION NO. 4-00-143

Upper Floor Plan



UPPER FLOOR PLAN

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

A-2					Floor Plan	

Owners:
Pete & Michele Weeger
447 San Vicente Blvd., Apt #1
Santa Monica, Ca 90402
310-260-9118

PROJECT: WEEGER RESIDENCE
2656 Fabuco Road
Topanga, CA

EXHIBIT NO. 8

APPLICATION NO. 4-00-193

Lower Floor Plan

A-3

Floor Plan

Owners:
Pete & Michele Weeger
447 San Vicente Blvd., Apt #1
Santa Monica, Ca 90402
310-260-9118

PROJECT: WEEGER RESIDENCE
2656 Fabuco Road
Topanga, CA

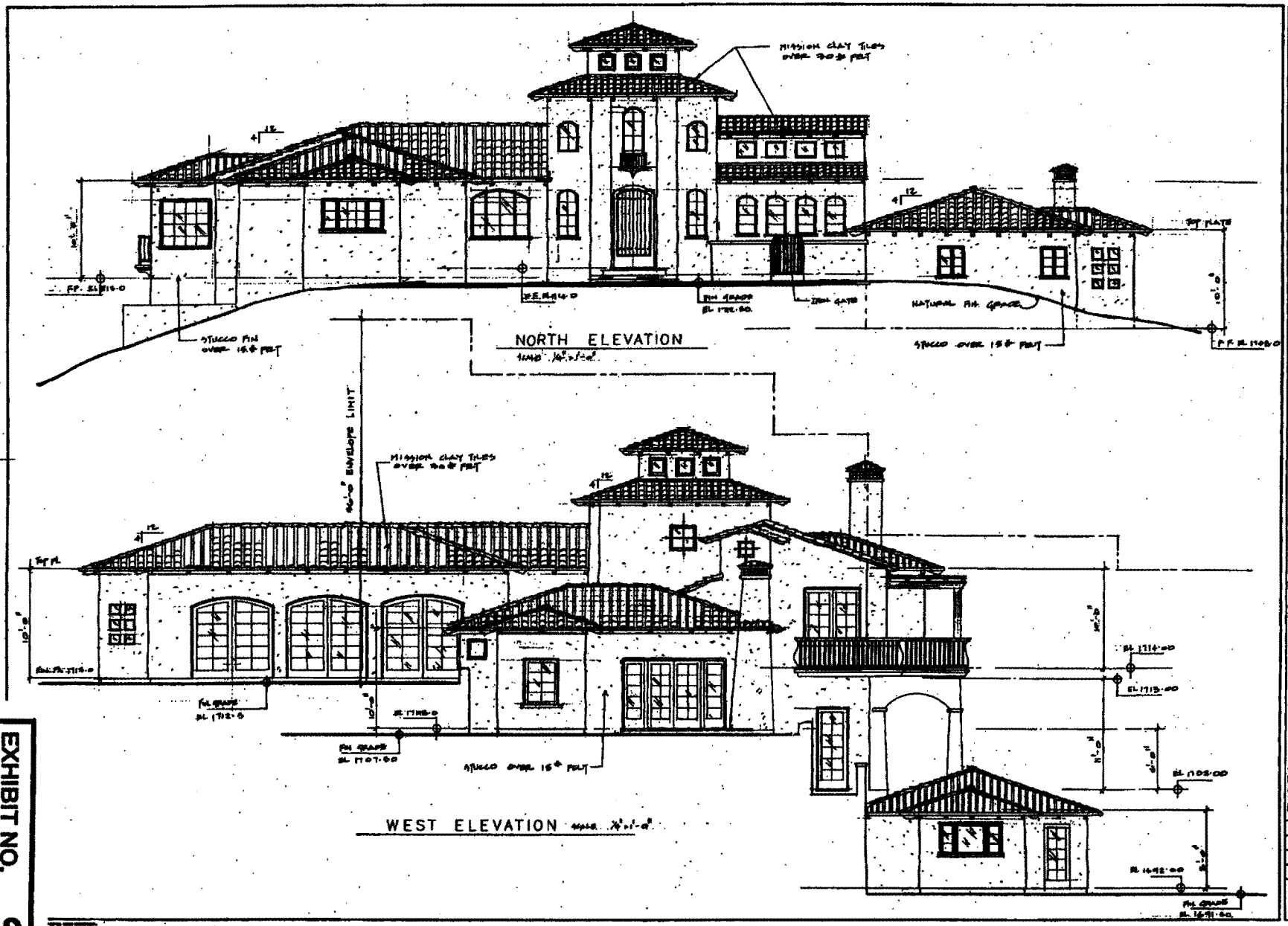


EXHIBIT NO. 9
APPLICATION NO. 3
North & West Elevations

OWNERS:
PEPE & MICHELE VINEGER
447 SAN VICENTE BLVD. APT#1
SANTA MONICA, CA. 90402
310-260-9118

PROJECT: VINEGER RESIDENCE
22 SO. PACIFIC ROAD
MALIBU, CA.

7/1/01

A4

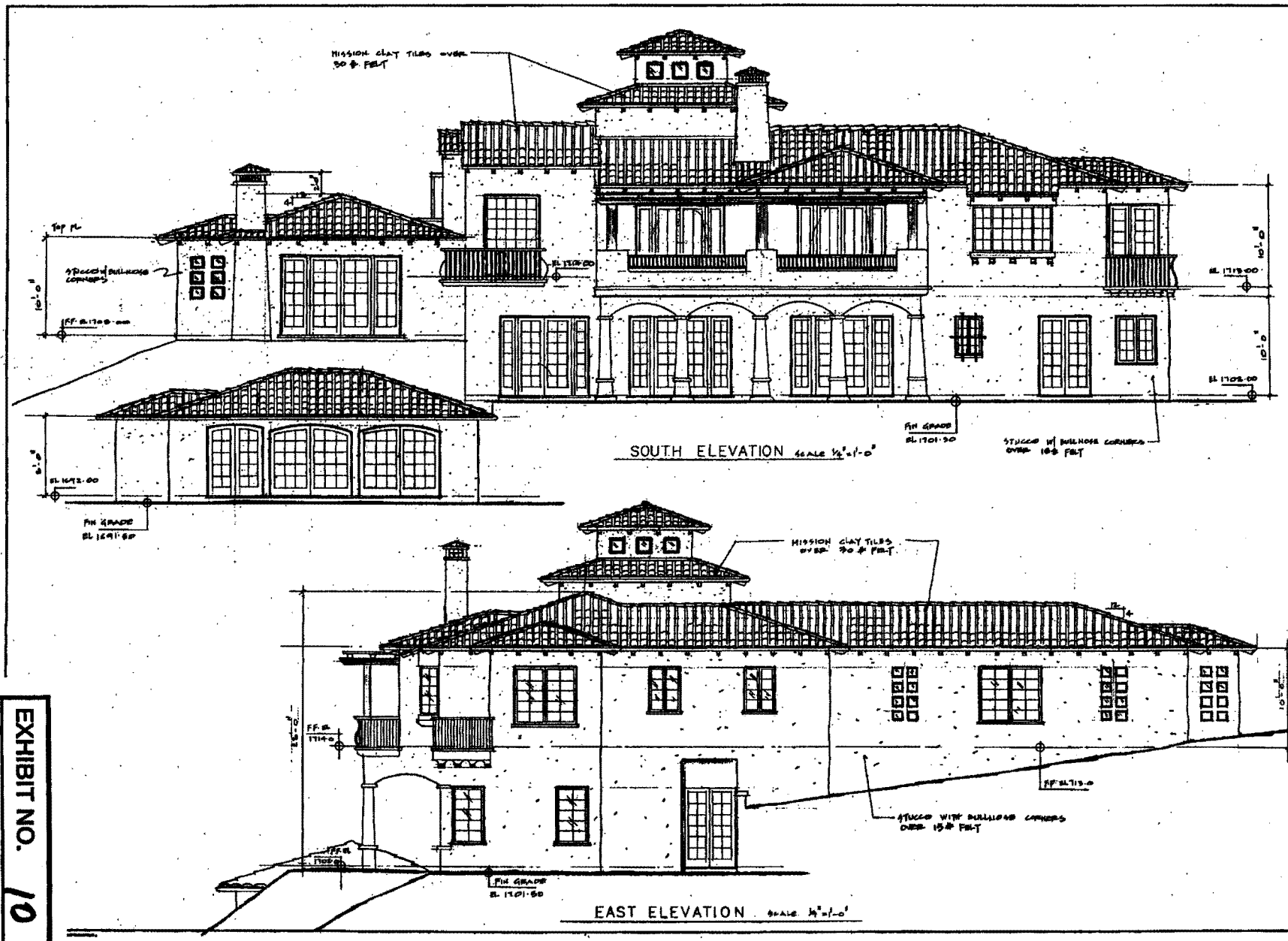


EXHIBIT NO. 10
APPLICATION NO. 4-00-193
South & East Elevations

REVISIONS | BY

PROJECT: WEBSER RESIDENCE
2456 FABUCO ROAD
TOPANGA, CA

OWNER:
PAUL & MICHELE WEBSER
441 SAN VICENTE BLVD APT #1
SANTA MONICA, CA 90402
310-220-9118

Date 7/9/01
Revised PRE PLANS
Drawn K-HOMES
Job WEBSER
Sheet A5

EXHIBIT NO. 11
APPLICATION NO. 4-00-143
Above Ground Water Tank

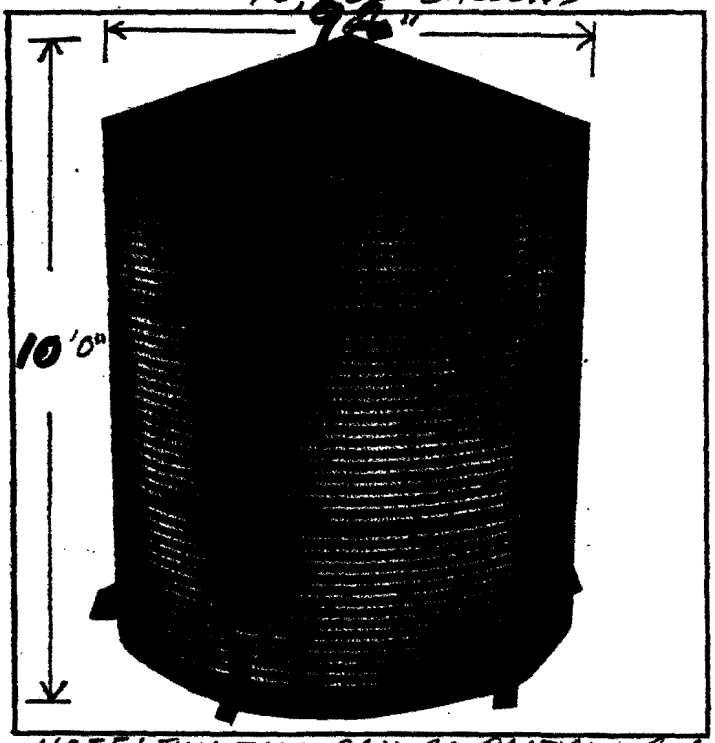
BH TANK

CORRUGATED GALVANIZED STEEL WATER TANKS

A Tradition of Quality Craftsmanship

When product durability is of vital importance, even in Today's modern world of automated technology, Man still puts his trust in the work of his own two hands. There might be faster and easier ways of making water tanks, but because B.H. TANK considers Water be of vital importance, our Corrugated Water Storage Tanks are hand assembled with proven methods that have provided durable quality tanks for over 100 years.

5,150 GALLONS



NOTE: THIS TANK CAN BE PARTIALLY BURIED

APPLICATIONS

Whatever your storage requirements demand...

- Potable domestic water supply.
- Fire Protection Reserve.
- Irrigation water storage.
- Surface water collection.

Emergency reserve and other applications, ...we will advise you of the most cost effective water storage solution.

FACTORY COATED

All B.H. TANKS are galvanized and factory coated with a Ceramic Bituminous Coating for additional protection.

- Accepted by County Health Department for potable water storage.
- Non-toxic clay composition that permanently adheres to galvanized steel.
- N.S.F. (National Sanitation Foundation), E.P.A. and F.D.A. approved sealant
- Industrial grade exterior coating systems.

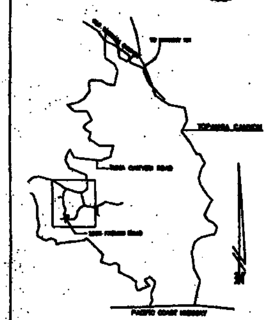
CONSTRUCTION

The tensile bearing strength of corrugated steel is nine (9) times stronger than flat steel. Because it is pre-stressed, it will resist the "buckling effect" that can occur with flat steel tanks under seismic loads. Corrugated tanks seams are overlapped, hand riveted and sealed to form a double thickness of steel that further enhances the lateral and vertical strength of the tank. This process does not destroy the protective mill galvanized surface.

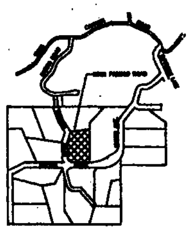
ENGINEERED

B.H. TANKS can be engineered to meet Uniform Building Code and American Water Works Association seismic standards. When a permit is required, B.H. Tank can provide structural calculations and shop drawings certified by a California Civil Engineer.

REGISTERED PROFESSIONAL ENGINEER JOHN C35420 STATE OF CALIFORNIA



VICINITY MAP
NOT TO SCALE



DETAIL MAP
NOT TO SCALE

GENERAL NOTES:

(a) Any modifications of or changes in approved grading plans must be approved by the Building Official.

(b) All grading and construction shall conform to Chapters 70 and 71 of the Los Angeles County Building Code unless specifically noted on these plans.

(c) All graded sites must have drainage swales, berms, and other drainage devices prior to approval of rough grading (Section 7020.3.2 of the Building Code).

(d) A copy of the grading permit and approved grading plans must be in the possession of a responsible person and available at the site at all times.

(e) The Field Engineer must set drainage stakes for all drainage devices.

(f) All storm drain work is to be done under continuous inspection by the Field Engineer. [illegible]

(g) Final grading must be approved before occupancy of buildings will be allowed. (Section 7021 of the Building Code.)

(h) Comply with Chapter 22.56 of the Planning and Zoning Code by showing locations and sizes of all oak trees on the grading plan and obtaining the appropriate permit.

(i) The retaining wall details shown on the plans are not checked by the Grading Section. [illegible]

(j) Separate plans for temporary drainage and Stormwater Pollution (Erosion Control) measures to be used during the rainy season must be submitted prior to October 1. [illegible]

(k) Provisions shall be made for contributory drainage at all times.

(l) Every effort should be made to eliminate the discharge of non-Stormwater from the project site at all times.

(m) A preventive program to protect the slopes from potential damage from burrowing rodents is required. [illegible]

(n) Roof drainage must be diverted from graded slopes. (Section 7019.5 of the Building Code.)

(o) All construction and grading within a storm drain easement are to be done per Private Drain No.

(p) All subdrain outlets are to be surveyed for line and elevation. This can be shown on an as-built grading plan.

AGENCY NOTES:

(a) Permission to operate in Fire Zone 4 must be obtained from the local Fire Department prior to commencing work.

(b) Secure permission from Caltrans for construction and/or discharge or drainage in their right of way.

FILL NOTES:

(a) Fill shall be compacted throughout their full extent to a minimum of 90 percent of maximum dry density as determined by A.S.T.M. Soil Compaction Test D1557-91, Method "D", where applicable. [illegible]

(b) Field density shall be determined by a method acceptable to the Building Official. [illegible]

(c) Sufficient tests of the fill soils shall be made to determine the relative Compaction of the fill in accordance with the following minimum guidelines:

(1) One test for each two-foot vertical lift.

(2) One test for each 1,000 cubic yards of material placed.

(3) One test at the location of the final fill slope for each building site (lot) in each four-foot vertical lift or portion thereof.

(4) One test in the vicinity of each building pad for each four-foot vertical lift or portion thereof.

(d) Sufficient tests of fill soils shall be made to verify that the soil properties comply with the design requirements. [illegible]

(1) Prior and subsequent to placement of the fill, shear tests shall be taken on each type of soil or soil mixture to be used for all fill slopes steeper than 3 horizontal to one vertical.

(2) Shear test results for the proposed fill material must meet or exceed the design values used in the geotechnical report to determine slope stability requirements. [illegible]

(3) Fill soils shall be free of deleterious materials.

(e) The results of such testing shall be included in the reports required by Section 7018 of the Building Code.

(f) Fill shall not be placed until stripping of vegetation, removal of unsuitable soils, and installation of subdrain (if any) have been inspected and approved by the Geotechnical Engineer. [illegible]

(g) Rock or similar material greater than 12 inches in diameter shall not be placed in the fill unless recommendations for such placement have been submitted by the Geotechnical Engineer and approved in advance by the Building Official.

(h) Continuous inspection by the Geotechnical Engineer, or his responsible representative, shall be provided during all fill placement and compaction operations where fills have a depth greater than 30 feet or slope surface steeper than 2:1.

(i) Continuous inspection by the Geotechnical Engineer, or his responsible representative, shall be provided during all subdrain installations.

(j) Fill slopes in excess of 2:1 steepness ratio are to be constructed by the placement of soil at sufficient distance beyond the proposed finish slope to allow compaction equipment to be operated at the outer limits of the final slope surface. [illegible]

(k) The Geotechnical Engineer shall provide sufficient inspections during the preparation of the natural ground and the placement and compaction of the fill to be satisfied that the work is being performed in accordance with the plan and applicable Code requirements.

(l) The grading contractor shall submit the statement required by Section 7021 of the Building Code at the completion of rough grading.

INSPECTION NOTES:

(a) The permittee or his agent shall notify the Building Official at least one working day in advance of required inspections at following stages of the work. (Section 7020 of the Building Code.)

(1) Initial. When the site has been cleared of vegetation and unapproved fill has been scarified, benched or otherwise prepared for fill. Fill shall not have been placed prior to this inspection.

(2) Rough. When approximate final elevations have been established; drainage terraces, swales and berms installed at the top of the slopes and the statements required in this Section have been received.

(3) Final. When grading has been completed; all drainage devices installed; slope planting established, irrigation systems installed and the As-Built plans, required statements, and reports have been submitted.

IN-GRADING INSPECTIONS MUST BE MADE BY THE CONSULTING GEOLOGIST AND SOILS ENGINEER. [illegible]

ENGINEERING GRADING INSPECTION NOTE:

In addition to the inspection required of the Building Official for regular grading, reports and statements shall be submitted to the Building Official in accordance with Sections 7020 and 7021 of the Building Code.

GEOTECHNICAL NOTES:

(1) Grading operations must be conducted under periodic geological inspections with monthly inspection reports to be submitted to the Geology and Soils Section.

(2) All recommendations included in the consultant's geotechnical report(s) must be complied with and are a part of the grading plans and specifications.

(3) The Consulting Geologist and Geotechnical Engineer must state in a final report, prior to the approval of rough grading by the Materials Engineering Division, that geotechnical hazards have been removed, mitigated or designated as "Restricted Use Area". [illegible]

(4) Foundation, wall and pool excavations must be inspected and approved by consulting geologist and geotechnical engineer prior to the placing of steel or concrete.

(5) Building pads located in cut/fill areas shall be overexcavated a minimum of three (3) feet below the proposed bottom of footing.

PLANTING AND IRRIGATION NOTES:

(1) The plans of a designed irrigation system for full coverage of all portions of the slopes shall be submitted and approved prior to rough grading approval by the County Inspector (Section 7019.1 of the Building Code).

(2) All cut slopes over five (5) feet and fill slopes over three (3) feet shall be planted with an approved ground cover and provided with an irrigation system as soon as practical after rough grading (Section 7019.2 of the Building Code).

(3) Planting and irrigation plans for slopes greater than 20 feet in height must be prepared and signed by a Licensed Landscape Architect or Registered Civil Engineer.

ATTACHMENT "A" NOTES:

a. Eroded sediments and other pollutants must be retained on site and may not be transported from the site via sheetflow, swales, area drains, natural drainage courses or wind.

b. Stockpiles of earth and other construction related materials must be protected from being transported from the site by the forces of wind or water.

c. Fuels, oils, solvents, and other toxic materials must be stored in accordance with their listing and are not to contaminate the soil and surface waters. [illegible]

d. Excess or waste concrete may not be washed into the public way or any other drainage system. [illegible]

e. Trash and construction related solid wastes must be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.

f. Sediments and other materials may not be tracked from the site by vehicle traffic. [illegible]

g. Any slopes with disturbed soils or denuded of vegetation must be stabilized so as to inhibit erosion by wind and water.

ATTACHMENT B NOTES
the following BMPs as outlined in, but not limited to, the Best Management Practice Handbook, California Stormwater Taskforce, Sacramento, California 1993 or the latest revised edition, may apply during the construction of this project (additional measures may be required if deemed appropriate by County Inspectors):

CA001 DEWATERING OPERATIONS
CA002 PAVING OPERATIONS
CA003 STRUCTURE CONSTRUCTION AND PAINTING
CA010 MATERIAL DELIVERY AND STORAGE
CA011 MATERIAL USE
CA012 SPILL PREVENTION AND CONTROL
CA020 SOLID WASTE MANAGEMENT
CA021 HAZARDS WASTE MANAGEMENT
CA022 CONTAMINATED SOIL MANAGEMENT
CA023 CONCRETE WASTE MANAGEMENT
CA030 VEHICLE AND EQUIPMENT MANAGEMENT
CA032 VEHICLE AND EQUIPMENT CLEANING
CA033 VEHICLE AND EQUIPMENT FUELING
CA033 VEHICLE AND EQUIPMENT MAINTENANCE
CA040 EMPLOYEE SUBCONTRACTOR TRAINING
ESC01 SCHEDULING
ESC02 PRESERVATION OF EXISTING VEGETATION
ESC10 SEEDING AND PLANTING
ESC11 MULCHING
ESC20 GEOTEXTILES AND MATS
ESC21 DUST CONTROLS
ESC22 TEMPORARY STREAM CROSSING
ESC23 CONSTRUCTION ROAD STABILIZATION
ESC30 EARTH DIKE
ESC31 TEMPORARY DRAINS AND SWALES
ESC32 SLOPE DRAIN
ESC40 OUTLET PROTECTION
ESC41 CHECK DAMS
ESC42 SLOPE ROUGHENING \ TERRACING
ESC50 SILT FENCE
ESC51 STRAW BALE BARRIERS
ESC52 SAND BAG BARRIERS
ESC53 BRUSH OR ROCK FILTER
ESC54 STORM DRAIN INLET PROTECTION
ESC55 SEDIMENT TRAP
ESC56 SEDIMENT BASIN

LEGEND

F.S. .... INDICATES FINISHED SURFACE
F.F. .... INDICATES FINISH FLOOR
F.G. .... INDICATES FINISHED GRADE
F.L. .... INDICATES FLOW LINE
T.G. .... INDICATES TOP OF GRATE
T.W. .... INDICATES TOP OF WALL
(1683.6) .... INDICATES EXISTING ELEVATION
(1680) .... INDICATES EXISTING CONTOUR
1713.0 .... INDICATES PROPOSED ELEVATION
1675 .... INDICATES PROPOSED CONTOUR
PROPOSED 1.5 TO 1 FILL SLOPE PER THE REQUIREMENTS OF THE SOILS REPORT
PROPOSED 1.5 TO 1 CUT SLOPE PER THE REQUIREMENTS OF THE SOILS REPORT

GRADING QUANTITIES

CUT 2,300 CUBIC YARDS
FILL 200 CUBIC YARDS
OVEREXCAVATION -0- CUBIC YARDS
RECOMPACTION -0- CUBIC YARDS
IMPORT / EXPORT 2,100 CUBIC YARDS

TOTAL DISTURBED (GRADE AREA) = 0.80 ACRES

THIS PLAN WAS PREPARED BY OR UNDER THE DIRECTION OF:

VICTOR J. PIAI, R.C.E. 20327
EXPIRES 9-30-01

05/22/01
DATE

BENCH MARK: NAIL SET AT THE INTERSECTION OF TUNA CANYON ROAD AND SKYHAWK LANE
ELEVATION: 1681.58

OWNERS: PETE & MICHELE MEEKER
447 SAN VICENTE, APT 21
SANTA MONICA, CA 90402
TEL: 310-260-8118

GRADING/DRAINAGE PLAN

GR 01-0227-0003

Δ	REVISIONS	DATE
1	PLAN CHECK CORRECTIONS	5/15/01

PIAI ENGINEERING, INC.
340 24TH STREET
HERMOSA BEACH, CA 90254
(310) 379-4941

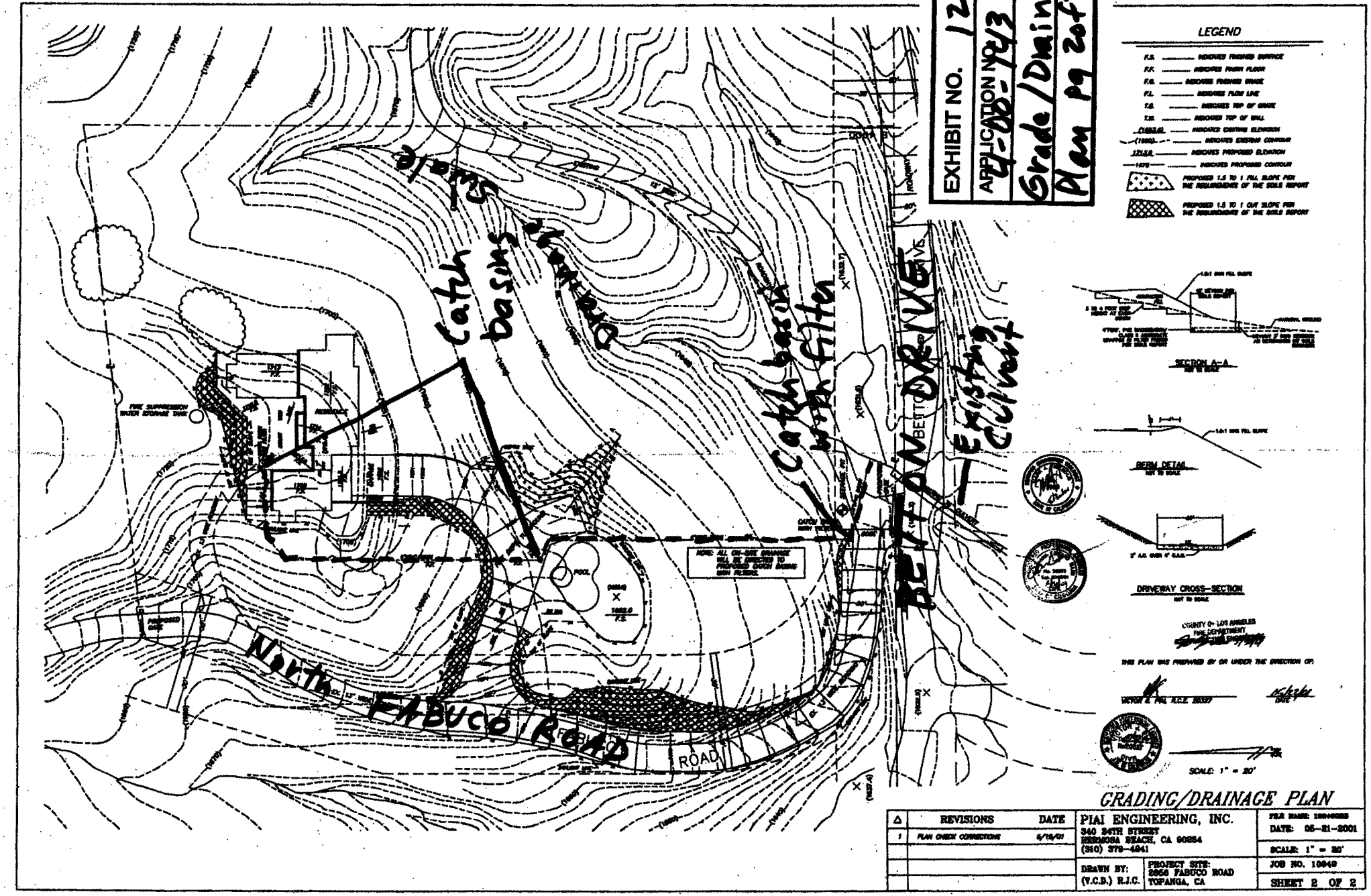
DRAWN BY: VJP

PROJECT SITE:
2656 FABUCO ROAD
TOPANGA, CA

FILE NAME: 10949GR3
DATE: 05-21-2001
SCALE:
10949
SHEET 1 OF 2

EXHIBIT NO. 12
APPLICATION NO. 4-00-143
Grading/Drain Plan pg 1of2

EXHIBIT NO. 12
APPLICATION NO. 4-01-123
Grade/Drain Plan pg 2 of 2



GRADING/DRAINAGE PLAN

Δ	REVISIONS	DATE
1	PLAN CHECK CORRECTIONS	6/15/01

PIAI ENGINEERING, INC.
340 34TH STREET
HERMOSA BEACH, CA 90254
(310) 379-4841

DRAWN BY: (V.C.D.) R.J.C.

PROJECT SITE: 2956 FABUCO ROAD TOPANGA, CA

FILE NAME: 10949GRD
DATE: 05-21-2001
SCALE: 1" = 20'
JOB NO. 10949
SHEET 2 OF 2

RECEIVED

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CALIFORNIA
COASTAL COMMISSION
SOUTH CENTRAL COAST DISTRICT

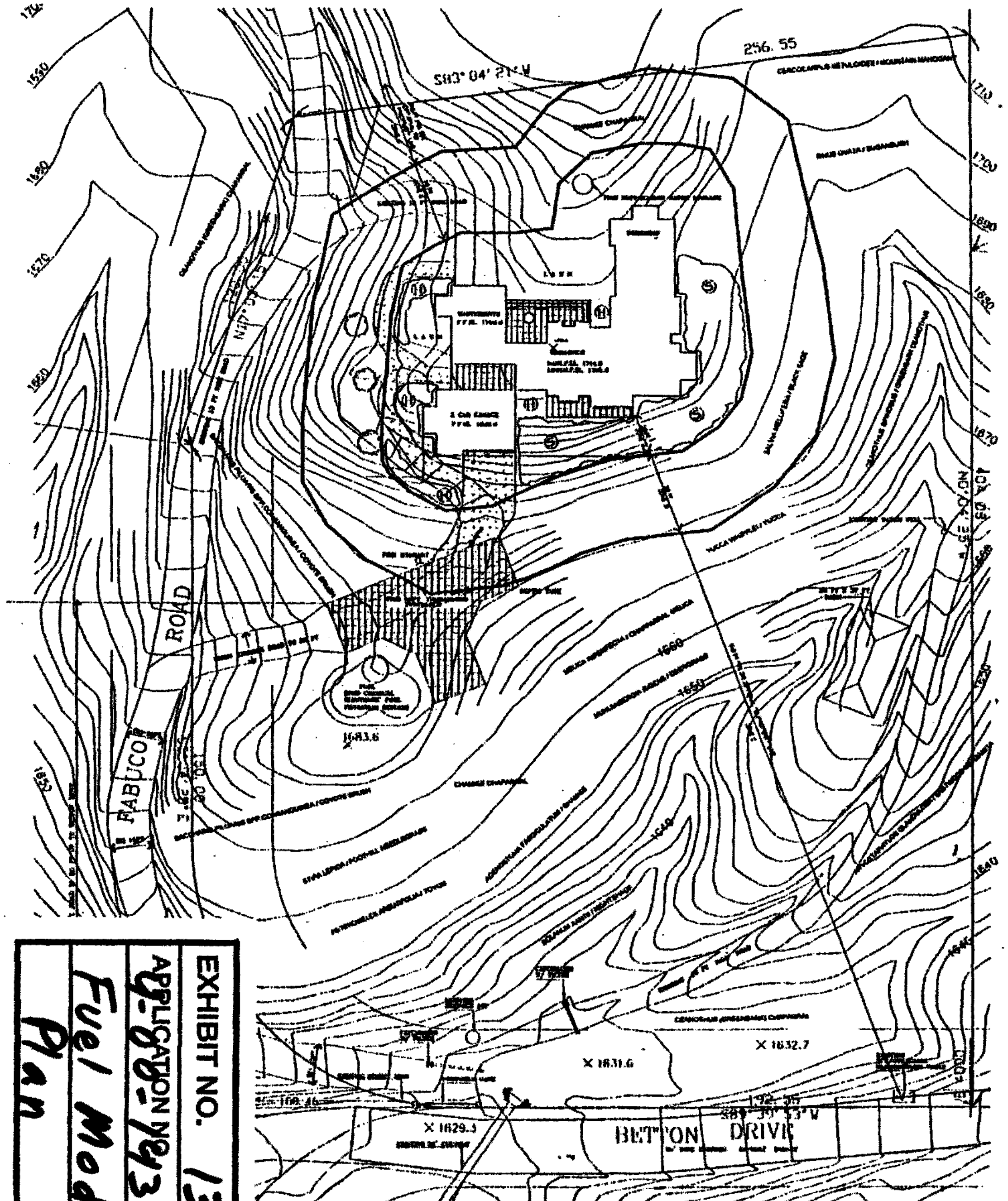
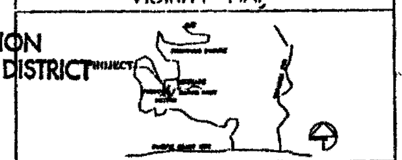


EXHIBIT NO. 13
APPLICATION 4-00-143
Fuel Mod Plan

FUEL MODIFICATION PLAN

SCALE: 1"=20'

VICINITY MAP



PLANTING LEGEND

FUEL MODIFICATION NOTES

ZONE A - SETBACK ZONE

ZONE B - IRRIGATED ZONE

ZONE C - THINNING ZONE

MAINTENANCE

FIRE ACCESS ROAD

IDENTIFICATION OF EXISTING PLANT SPECIES

CHAMISE CHAPARRAL
CEANOTHUS/GREENBARK/CHAPARRAL
ADENOSTOMA FASCICULATUM / CHAMISE
ARTOSTAPHYLOS GLANDULOSA / EASTWOOD MANZANITA
BACCHARIS PILULARIS SPP CONSANGUINEA / COYOTE BRUSH
CEANOTHUS SPINOSUS / GREENBARK CEANOTHUS
CERCOCARPUS BETULOIDES / MOUNTAIN MAHOGANY
HETEROMELES ARBUTIFOLIA / TOYON
MUHLENBERGIA RIGENS / DEERGRASS
RHUS OVATA / SUGARBUSH
SALVIA MELLIFERA / BLACK SAGE
STIPA LEPIDA / FOOTHILL NEEDLEGRASS
SOLANUM XANTII / NIGHTSHADE
YUCCA WHIPPLEI / YUCCA
MELICA IMPERFECTA / CHAPPARRAL MELICA

IRRIGATION CONCEPT NOTES

UNDESIRABLE PLANT SPECIES

LEGEND

LONG TERM MAINTENANCE AGREEMENT

#770

COUNTY OF LOS ANGELES
FIRE DEPARTMENT
FIRE PREVENTION BUREAU
FINAL
FUEL MODIFICATION PLAN
APPROVED

By [signature] Date 6-8-00

FUEL MODIFICATION UNIT
The stamping of this plan and specifications SHALL NOT be held to permit or to be an approval of the violation of any provisions of any County/City or State law.

Cary W. Gepner & Associates, Architects
22231 Mulholland Highway - Suite 113
Calabasas, CA 91302
(818) 591-7172 · (310) 455-7245
FAX (818) 591-7175

Sheet Title

FUEL MODIFICATION PLAN

Job Name

WEEGER RESIDENCE
2656 FABUCO DRIVE
TOPANGA, CALIFORNIA

A.P.N. # 4448-001-056

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Date-Revs.

4-24-2000

Sheet

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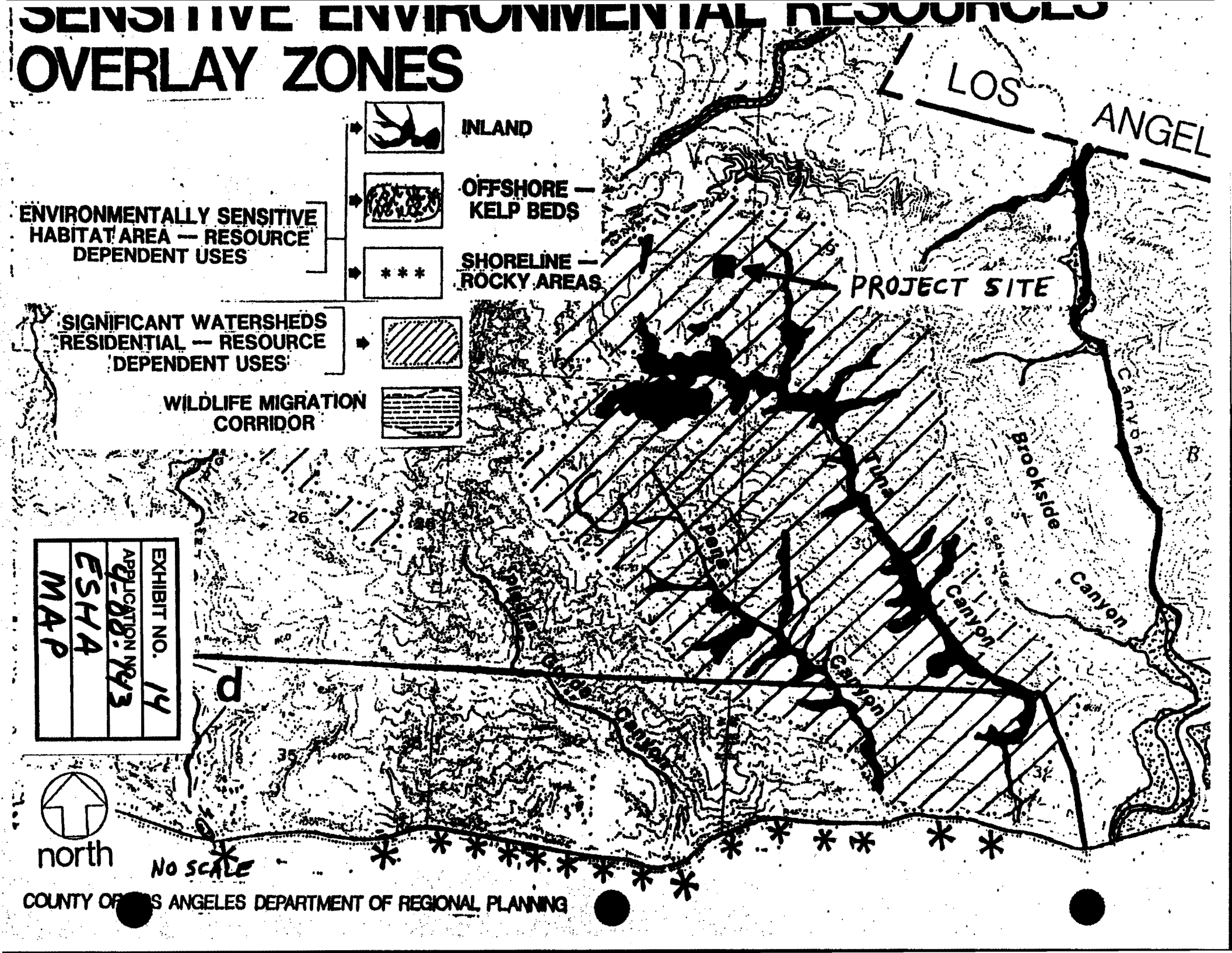
of


SENSITIVE ENVIRONMENTAL RESOURCES
OVERLAY ZONES
ENVIRONMENTALLY SENSITIVE HABITAT AREA — RESOURCE DEPENDENT USES
INLAND
OFFSHORE — KELP BEDS
SHORELINE — ROCKY AREAS
SIGNIFICANT WATERSHEDS RESIDENTIAL — RESOURCE DEPENDENT USES
WILDLIFE MIGRATION CORRIDOR
LOS ANGEL
PROJECT SITE
Brookside
Canyon
Canyon
Canyon
Canyon
Canyon
EXHIBIT NO. 14
APPLICATION NO. 82-823
ESHA MAP
north
NO SCALE
COUNTY OF LOS ANGELES DEPARTMENT OF REGIONAL PLANNING

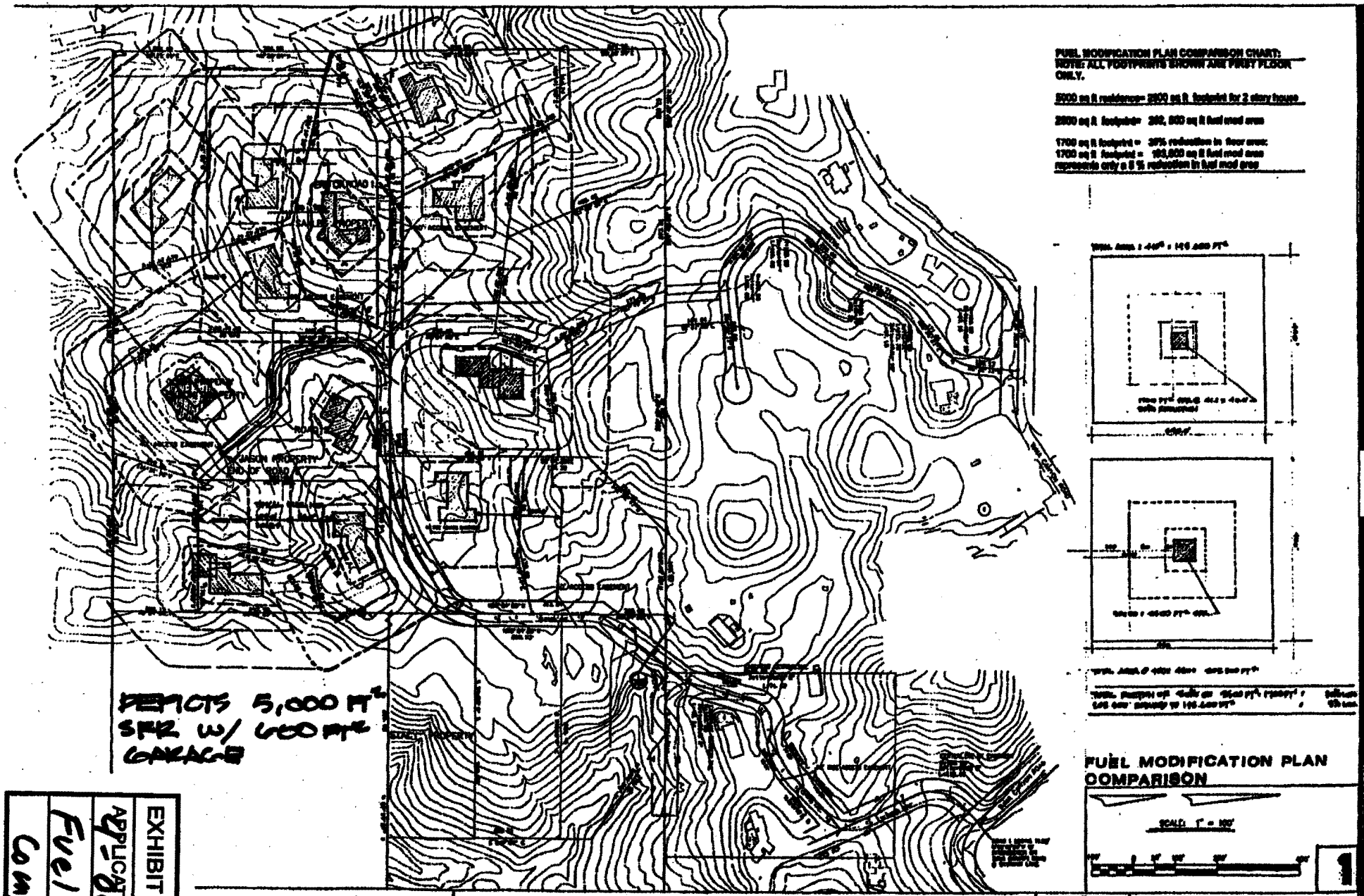


EXHIBIT NO. 15
APPLICATION NO. 4-98-183
Fuel Mod Comparison

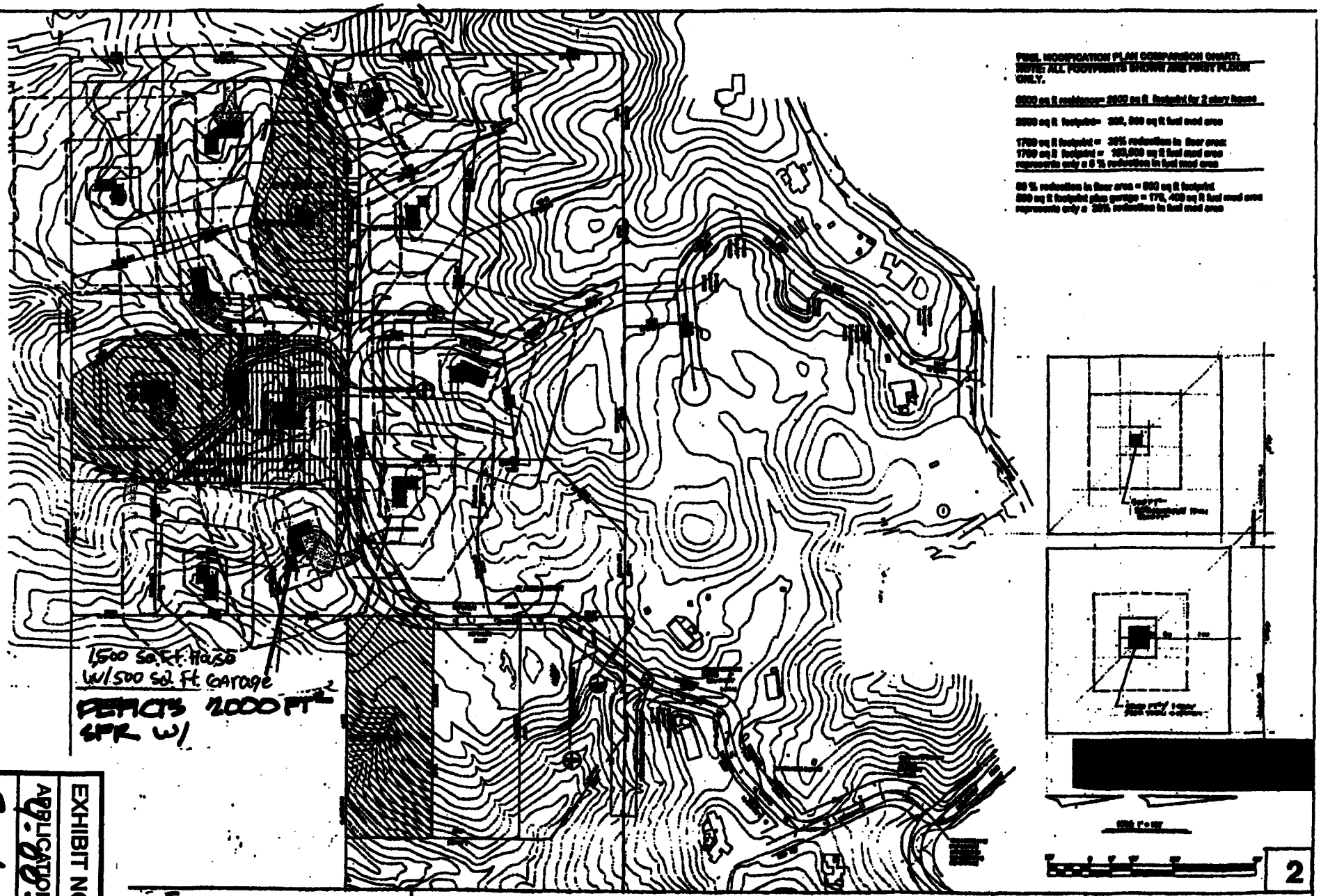


EXHIBIT NO. 14
APPLICATION NO. 4-08-173
Fuel Mod Comparison

2

Holmes Enterprises Inc.
H&E Inc.
Structural and Civil Engineering
200 Vista Rd. Ojai, CA. 93023
(805) 532-1571
fax: (805) 532-1596

EXHIBIT

THE EFFECT OF A LARGE HOUSE VS. TWO SMALLER RESIDENCES ON THE FUEL MODIFICATION AREA

HOUSE SIZE	GARAGE SIZE	TOTAL	TOTAL FOOTPRINT WITH STRUCTURE AND HARDSCAPE	AVG. FUEL MOD AREA/HOME SITE (NO OVERLAP)	FUEL MOD AREA FOR 12 HOUSES	FUEL MOD AREA PER HOUSE SITE
5,000	600	5,600	7,000-9,500	302,400	1,712,912	142,743
1,500	500	2,000	1,300-2,400	202,500	1,504,050	125,338

Conclusion: By reducing a house from 5,000 square feet to 2,000 square feet, the decrease of brush clearance Per house is 33% but when considering the overlap of the adjacent houses, the decrease is only 12%.

Note: Numbers in above table are in square feet.

EXHIBIT NO. 17
APPLICATION NO. 4-98-243
Fuel Mod. Comparison

HYDRO-MAX

Electronic Pool Water Treatment

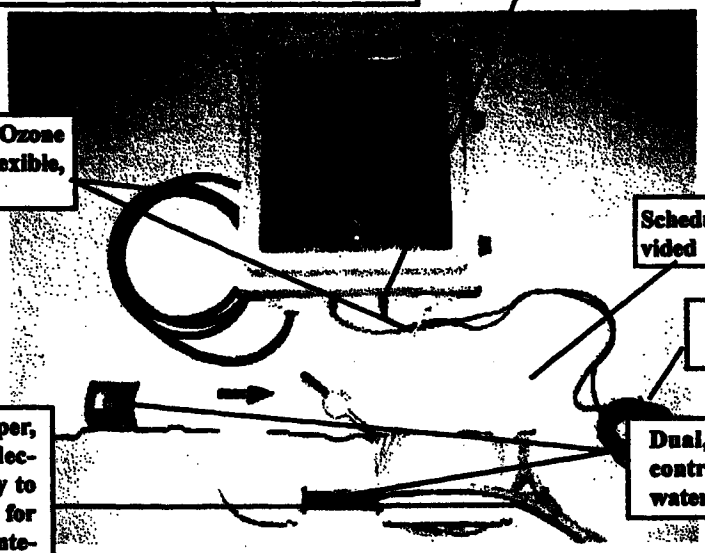
The Ultimate Alternative Pool Water Treatment System

As we approach the millenium, High-Tech Electronics are rapidly changing all aspects of our lives. We rely on Electronics to cook our food, control our cars and communications. The OXI-ION SYSTEM combines three high-tech electronic technologies into one synergistic system that can virtually replace the need for chemical swimming pool treatment. Break free from the hassle and hazards of chemical disinfection. Order Your Oxi-Ion Today!

Others Have Tried But Cannot Compare to Hydro-Max Power, Performance, and Reliability

Three electronic controls are built into 1 heavy duty (Nema 4X) (13" X 15") water-proof enclosure. Advanced microprocessor controls provide a reliable, controllable, copper/silver disinfection residual. High Grade Ultraviolet Lamps and controls generate an unprecedented level of Ozone oxidization (ORP). The addition of EIR (Electronic Induced Resonance) enhances the above mentioned technologies by drastically improving pool filter performance and controlling hard water minerals.

Military approved stainless steel locking connectors secure the most recent advancement in EIR Filtration Enhancement technology.



Ten foot power cords and Ozone supply tubing allow for flexible, convinient installation.

Schedule #40 PVC Unions provided for easy installation.

E.I.R. Signal Coil

Assay Certified, 95% Copper, 5% Silver, Disinfection Electrodes are housed in an easy to remove Flow-Cell Chamber for ease of inspection and maintenance scheduling.

Dual, replacable, check valves control Ozone supply and pool water circulation system prime.

The Hydro-Max Oxi-Ion System is the first "Electronic Pool Water Treatment System" to offer the residential pool consumer a viable alternative to conventional "Chemical pool water disinfection." Ionization technology has been proven for many years but fell short as a stand alone product. The addition of the liberal Ozone production and Hydro-Max OXI-ION System as the leader in "Alternative Pool Water Treatment Technology."

Authorized Dealer

R.S. GREEN INC.
196 Topanga Dr.
Bonita Springs FL 34134

(941)-992-4658
www.Oxi-Io

EXHIBIT NO. 1
APPLICATION NO. 4-00-143
Pool Treatment System Pg 1 of 5

HYDRO-MAX OXI-ION System

The Intelligent Choice for Swimming Pool Sanitizing

Proven Technology

Hydro-Max Technologies Inc., OXI-ION System combines three proven electronic technologies into 1 synergistic system that will virtually replace the need for chemical sanitizing of your swimming pool.

Copper / Silver Ionization (Disinfection)

Electronic water disinfection utilizing Ionization was first developed by "NASA" for drinking water purification aboard U.S. spacecraft. An "Ion Chamber" containing specially formulated Copper/Silver alloy electrodes is installed in the pools recirculation system. A safe, low voltage is applied to the electrodes by the Oxi-Ion Controller, producing "Ions" (positively charged atoms of copper & silver) which enter the water stream, where they can attack and kill algae, bacteria, viruses, fungus, yeast and mold. The dead organisms are then removed by the pools filtration system. The metal Ions provide a long term, stable disinfection residual that is not affected by heat, sunlight or evaporation.

Ozone - Oxidation

Ozone is natures natural purifier and unlike many chemicals used in water treatment, Ozone is very environmentally friendly. The Oxi-Ion System utilizes powerful Ultra-Violet lamps to generate unprecedented levels of Ozone gas. The Ozone is drawn into the pools circulation system by the Oxi-Ion treatment manifold which is plumbed into the system. Ozone provides an (ORP) Oxidation Reduction Potential that burns up organic wastes in the pool. This powerful oxidizing compound will help maintain crystal clear water without the need for regular shock treatments. Unlike Chlorine, when Ozone has finished oxidizing it returns back to Oxygen.

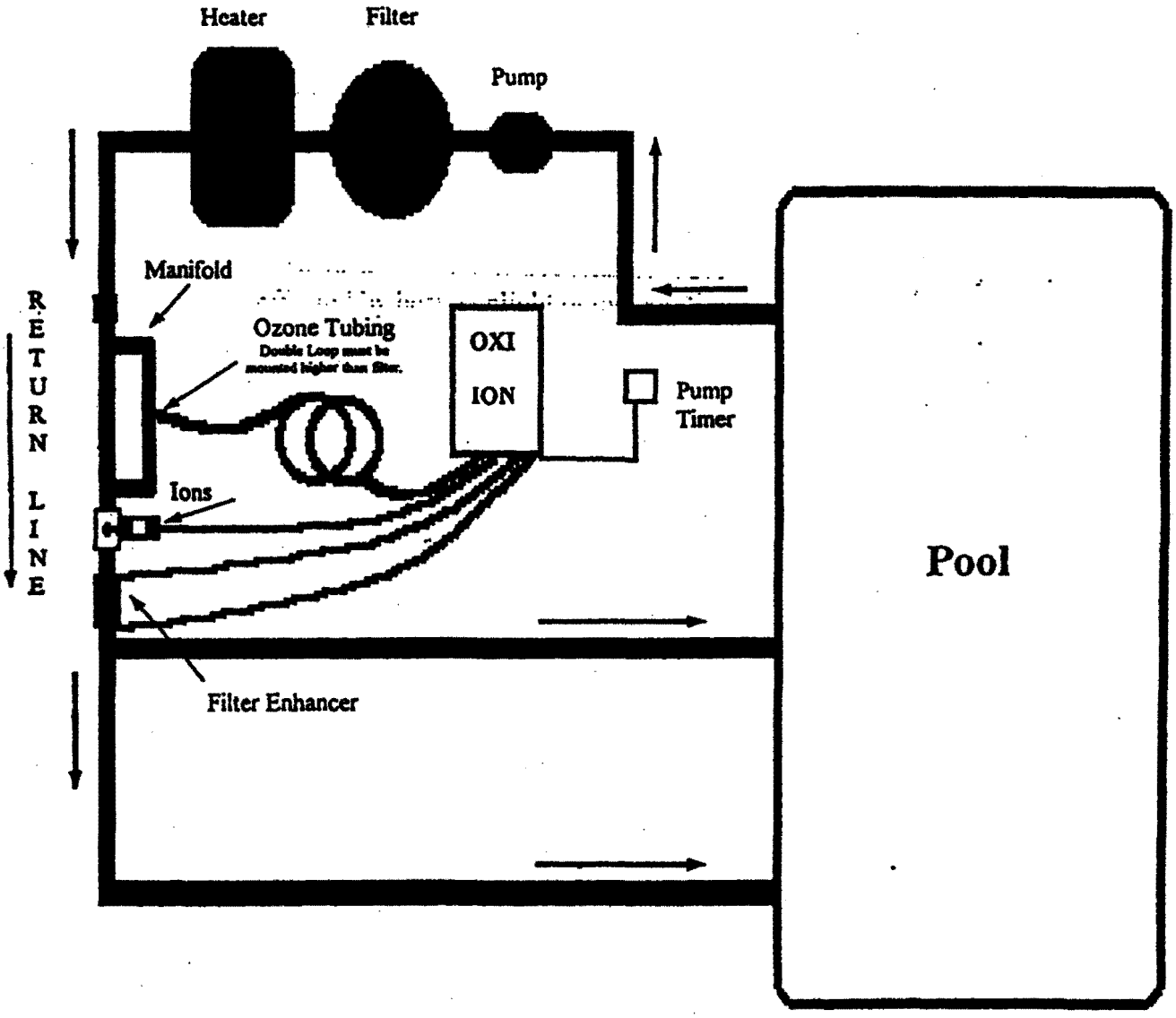
EIR (Electronic Induced Resonance)

The third technology that Hydro-Max has added to the Oxi-Ion System is an advanced process that generates a complex modulating waveform. The waveform or signal is transmitted through the pools circulation system, altering the normal behavior of water molecules, suspended solids and dissolved minerals. Suspended solids are forced to coagulate, forming larger particles that are more easily removed by the pools filter. Dissolved minerals are forced to remain suspended in the water. Scaling of pool tiles, electrodes and pool heater surfaces is stopped. Existing scale formations are gradually softened and removed. Free water molecules created by EIR give the pool water a silky feel.

COMPARE OXI-ION WITH CONVENTIONAL POOL WATER SANITIZING

PROBLEM	CHLORINE	OXI-ION
Harmful to the environment?	YES	NO
Negative effects on hair, skin, ear, nose & throat?	YES	NO
Constant monitoring & handling?	YES	NO
Releases toxic gases?	YES	NO
Damage to pool equipment and clothing?	YES	NO
Affected by sunlight, temperature & evaporation?	YES	NO
Need to shock pool to oxidize contaminants?	YES	NO
Suspected Carcinogen?	YES	NO
Corrosive?	YES	NO

WHERE DO I INSTALL MY OXI-ION SYSTEM ?



Ex 18
page 3 of 6

RS GREEN, INC.

196 TOPANGA DRIVE
BONITA SPRINGS, FLORIDA 34134

Phone 941-992-4658

April 09, 2001

Mr. Peter Weeger
447 San Vicente Apt #1
Santa Monica, Ca. 90402

Dear Peter,

The *Hydro-Max Oxi-Ion Pool Water Treatment System* is environmentally safe when used according to directions. We use *ozone* in low quanities that oxidize particals inside the pool plumbing and then returns to *oxygen* as it enters the swimming pool. We also use safe levels of copper and silver ionization. The recommended levels are .20 PPM of copper. This level is one fourth the E.P.A. standard for drinking water. Also copper is a basic element required in our bodies. We use silver at safe levels of approximately 10 to 15 PPB. The E.P.A. allows 100 PPB in drinking water. NASA has used silver to disinfect water in the space program for many years(see attached).

Our product has no warning labels or harmful chemicals and when used properly, will not contaminate the environment.

A swimming pool is made up of water which must be balanced, proper pH, calcium,and total alkalinity must be maintained. These areas require adjustments in order to provide safe water to swim.

This system is safe when used accourding to directions.

Sincerely,

Richard K. Green
President

Ex 18
page 4 of 6

NASA TECH BRIEF

NASA Tech Briefs are issued to summarize specific innovations derived from the U.S. space program, to encourage their commercial application. Copies are available to the public at 15 cents each from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Virginia 22151.

Electrolytic Silver Ion Cell Sterilizes Water Supply

An electrolytic water sterilizer has been developed for control of microbial contamination in manned spacecrafts. Individual sterilizer cells are self-contained and require no external power or control. The compactness and light weight of the units (measuring 2.5 inches in diameter × 4 inches in length and weighing 0.6 pound) and absence of external mechanisms make it possible to integrate such sterilizers with the potable water supply or waste water system in confined areas.

The sterilizer generates silver ions in concentrations of 50 ppb (parts per billion) to 100 ppb in the water flow system, the desired concentration being adjusted as a function of the average water flow rate. After installation of a unit, no maintenance is required. Operation of the unit is self-limiting, precluding damage to the system if water ceases to flow. A shunt is provided for on-off functions and monitoring of current flow. Unit life expectancy is 9000 hours without a change of the power supply batteries.

Laboratory tests of the sterilizer under simulated conditions have demonstrated essentially complete kill within 8 hours of *Staphylococcus aureus* and *Escherichia coli* bacteria present in initial concentrations of approximately 5×10^5 organisms per milliliter.

Silver ions in concentrations of 50 to 100 ppb, which are nontoxic when ingested, have been recognized for many years as an effective bactericide. Since a sterilization unit for spacecraft water systems must operate in zero gravity, consume little electrical power, and require no heat, elaborate controls, or material replacement, the use of silver ions in a spacecraft sterilizer has many advantages over other possible sterilization methods. Many of the advantages of the new sterilizer, including the advantage that the silver ions do not impart an unpleasant taste to the water, can be realized also in non-space applications. This water sterilizer should also be of value to biological laboratories, pharmaceutical companies, and underwater craft.

Note:

Design details and test results are contained in Report NASA-CR-65738 which is available from:

Clearinghouse for Federal Scientific and Technical Information
Springfield, Virginia 22151
Price $3.00
Reference: B68-10555

Patent status:

This invention is owned by NASA, and a patent application has been filed. Royalty-free, nonexclusive licenses for its commercial use will be granted by NASA. Inquiries concerning license rights should be made to NASA, Code GP, Washington, D.C. 20546.

Source: J.B. Gillerman and C.F. Albright
of The Garrett Corporation (AiResearch Mfg. Div.)
under contract to
Manned Spacecraft Center
(MSC-11827)

Category 01

Final Report

DEVELOPMENT OF AN ELECTROLYTIC SILVER-ION GENERATOR FOR WATER STERILIZATION IN APOLLO SPACECRAFT WATER SYSTEMS

Apollo Applications Program

67-2158
June, 1967

Prepared by

C. F. Albright
R. Nachum
M. D. Lechtman

Approved by

J. B. Gillerman

Prepared for

Manned Spacecraft Center
National Aeronautics and Space Administration
Houston, Texas

AIRESEARCH MANUFACTURING DIVISION
Los Angeles, California

Ex 18
page 6 of 6

Weeger Residence
2656 Fabuco Road
Topanga, California

Typical Daily Water Consumption For Weeger Residence Indoor Uses

2 Adults
1 Child
No Stables
Native Species Drought Resistant Landscaping
One Pool With Cover For Evaporation and Energy Conservation
Domestic Well Water System

House Fixtures	Model	Gallons	Unit	Mins/Flushes/ Cycles	Gal/Day
Master Toilet	American Standard #2264	1.6	gpf	6	9.6
Guest Toilet 1	American Standard #2264	1.6	gpf	0	0
Guest Toilet 2	American Standard #2264	1.6	gpf	0	0
Jack & Jill Toilet	American Standard #2264	1.6	gpf	3	4.8
Master Shower	Grohe Relexa Plus #2817	2.5	gpm	16	40
Guest Shower	Grohe Relexa Plus #2817	2.5	gpm	0	0
Jack & Jill Tub-Shower	Grohe Relexa Plus #2817	2.5	gpm	6	15
Master Tub	Sinfonia 25671IRO	2.2	gpm	0	0
Kitchen Sink	Grohe Eurodisc #33330L0	2.2	gpm	3	6.6
Laundry Sink	Grohe Wall Mount #31404	2.2	gpm	1	2.2
Master Sinks	Grohe Sinfonia 20655IRO	2.2	gpm	2	4.4
Guest Sink 1	Grohe Sinfonia 20655IRO	2.2	gpm	0	0
Guest Sink 2	Grohe Sinfonia 20655IRO	2.2	gpm	0	0
Jack & Jill Sinks	Grohe Sinfonia 20655IRO	2.2	gpm	1	2.2
Bar Sink	Grohe Classic #21299000	2.2	gpm	0	0
Washing Machine	Bosch WFK2401UC	15	gpc	1	15
Dishwasher	Bosch SHU6806UC	3.6	gpc	1	3.6

TOTAL FIXTURES = 19

Total Daily Indoor Usage	103.4
CONTINGENCY @ 15 %	118.9

TOTAL INDOOR & OUTDOOR USAGE	426.9
W/ CONTINGENCY @ 15 %	490.9

EXHIBIT NO. 19
APPLICATION NO. 4-08-143
Water Fixtures
page 1 of 2

Weeger Residence
2656 Fabuco Road
Topanga, California

Typical Daily Water Consumption For Weeger Residence Native Landscaping

IRRIGATION LEGEND

A-Day = Summer Watering Schedule
B-Day = Winter Watering Schedule

SYMBOL	TYPE	PATTERN	P.S.I.	GPH	CONVERSION GPM	TOTAL HEADS	MINS A-DAY	MINS B-DAY	RAD	MODEL #	MFGR.	REMARKS	GALS A-DAY	GALS. B-DAY
	LOW-FLOW SPRINKLERS	FULL CIRCLE	10	15	0.25	10	15	5	10	R183C	RAINDRIP	50% Less Water Then Conventional Sprinklers	37.50	12.50
	LOW-FLOW SPRINKLERS	1/2 CIRCLE	10	9	0.15	10	15	5	6	R186C	RAINDRIP	50% Less Water Then Conventional Sprinklers	22.50	7.50
	LOW-FLOW SPRINKLERS	1/4 CIRCLE	10	5	0.08	10	15	5	6	R190C	RAINDRIP	50% Less Water Then Conventional Sprinklers	12.50	4.17
	PRESSURE COMP. DRIPPER	DRIP	15	0.55	0.01	30	120	60	DRIP	R108C	RAINDRIP	Low Flow	33.00	16.50
	PRESSURE COMP. DRIPPER	DRIP	15	0.98	0.02	25	120	60	DRIP	R110C	RAINDRIP	Low Flow	49.00	24.50
	PRESSURE COMP. DRIPPER	DRIP	15	2.02	0.03	25	120	60	DRIP	R112C	RAINDRIP	Low Flow	101.00	50.50
	MINI IN-LINE DRIPPERS	DRIP	10	0.46	0.01	25	120	60	DRIP	R116C	RAINDRIP	Low Flow	23.00	11.50
	STREAM SPRAY BUBBLER	BUBBLER	15	9	0.15	20	15	5	1.2	R157C	RAINDRIP	Low Flow	45.00	15.00

TOTAL HEADS	155

TOTAL DAILY OUTDOOR USAGE	323.5	142.2
CONTINGENCY @ 15 %	372.0	163.5

	BACK FLOW UNIT	825Y-2"	FEBCO	REDUCED PRESSURE
	BALL VALVE	61500U	RAINDRIP	PLASTIC-200 PSI RATED
	ANTI-SIPHON VALVE	53285	TORO	PLASTIC 3/4"
	ELECTRONIC WATER TIMER	R672C	RAINDRIP	IN-LINE MOUNTED
	RAIN SHUT OFF DEVICE "RAIN GUARD"	R.G.	W.C.S.	INSTALL PER SPECS.
	3/4" ADJUSTABLE PRESSURE REGULATOR & GAUGE	R450C	RAINDRIP	PLASTIC & BRASS
	BUBBLER HYDRANT	R154D	RAINDRIP	PLASTIC
	DRIP HYDRANT	R151D	RAINDRIP	PLASTIC

EXHIBIT NO. 19
APPLICATION NO. 4-99-193
Landscape
Exhibits p1 of 2

~~MAY 19, 2000~~ June 15, 2000

PLOT PLAN 46571
2656 Fabuco Drive, Malibu
Tuna Canyon Significant Watershed

Approval for new 3,990 square foot two-story single family residence, 740 square foot barn, swimming pool, and septic tank, subject to the following conditions:

- Fuel modification plans should be developed to the satisfaction of the Fire Department;
- Use natural earth tone colors of local area for house exterior;
- Night lighting, if any, shall be directed downward, of low intensity, at low height, shielded, and for security purposes only; use motion detector for security lighting; and
- Use California Native Plant Society (CNPS) list for landscape plants.

Approval for mobile home to be used as a residence of the owner and his family during the construction by such owner of a permanent residence, but only while a building permit for the construction of such residence is in full force and effect and provided:

1) That the site plan submitted shall demonstrate a reasonable, practical and economically feasible means of removing the mobile home following completion of construction; and

2) That such mobile home shall contain not more than one dwelling unit not to exceed 12 feet in width and with no structural attachments; and

3) That such mobile home shall be removed from the site prior to the end of 12 months from the date of approval unless a conditional use permit has first been obtained

Environmental Review Board minutes of March 20, 2000 are attached.

EXHIBIT NO. 20
APPLICATION NO. 4-00-193
LA Co Approval
ERB Minutes

Los Angeles County
Department of Regional Planning
Director of Planning James E. Hartl, AICP

MINUTES OF THE ENVIRONMENTAL REVIEW BOARD (ERB)
MEETING OF MARCH 20, 2000
(Approved May 15, 2000)

PERSONS IN ATTENDANCE:

ERB MEMBERS	**REGIONAL PLANNING STAFF**
Noël Davis, PhD	Winnifred Wilson
Suzanne Goode	Daryl Koutnik, PhD
Travis Longcore, PhD	
Ron Ondrozeck	
Martha Witter, PhD	

Plot Plan 45735 Representatives

Pete Durham	(310) 455-3847
Glory Fioramonti	(310) 455-3847
Terry Valente	(310) 456-8990

Plot Plan 46571 Representatives

Cary W, Gepner	(818) 591-7172
Steve Nelson	(949) 753-7001
Peter J. Weeger	(310) 260-9118

Project 96-150 Representatives

Marny Randall	(310) 395-2615
Steve Yett	(310) 456-3625

EXHIBIT NO. 20
APPLICATION NO. 4-00-143
ERB Minutes
Pg 2 of 4

MINUTES
MARCH 20, 2000

AGENDA ITEMS

1. Witter moved and Goode seconded that the Minutes of the November 15, 1999 ERB meeting be approved as written.

   ERB recommended that the "ERB Recommendations" from the Minutes be included as a cover page for each approved plot plan.

NEW BUSINESS

2. **Plot Plan 45735** - See Attachment ERB Item 2.

3. **Plot Plan 46571** - See Attachment ERB Item 3.

4. **Project 96-150** - See Attachment Item 4.

****

NOTE:
ERB MEETINGS ARE INFORMAL WORKING SESSIONS. MEMBERS ARE APPOINTED AS VOLUNTEERS TO SERVE IN AN ADVISORY CAPACITY. MINUTES ARE PREPARED BY PLANNING STAFF PRIMARILY FROM NOTES. MEETINGS ARE ALSO RECORDED ON TAPE WHICH ARE USED PRIMARILY AS A BACK-UP FOR STAFF. VISITORS ARE ADVISED TO TAKE PROPER NOTES AND/OR RECORD THE MEETING. NEW OR CLARIFIED INFORMATION PRESENTED IN BIOTA REVISIONS MAY RAISE NEW ISSUES AND REQUIRE FURTHER ANALYSIS. MINUTES ARE GENERALLY APPROVED AT THE FOLLOWING MEETING. DRAFT MINUTES MAY BE REQUESTED BUT ARE SUBJECT TO REVISION.

EXHIBIT NO. 20
APPLICATION NO. 4-00-143
ERB Minutes
pg 3 of 4

ENVIRONMENTAL REVIEW BOARD

Case No.	Plot Plan 46571
Location	2656 Fabuco Drive, Malibu
Applicant	Peter & Michelle Weeger
Request	Single family residence, swimming pool, barn & septic system
Resource Category	Tuna Canyon Significant Watershed

ERB Meeting Date: March 20, 2000

ERB Evaluation: ____ Consistent ____ Consistent after Modifications _X_ Inconsistent

Recommendations:

- Habitat disruption cannot be fully mitigated as required by Table 1 (parcels less than 20 acres & distant from services such as fire and sheriff protection).
- Proposed fuel modification plan is not likely to be approved by the County Fire Department (Zone A "Wet Zone" will most probably need to be greater than 20 feet); eliminate Zone B "Irrigated Zone" from plan and make vegetation thinning within Zone C specific to the existing vegetation; vegetation clearance will occur on soils having high erosion potential; implement an erosional control plan (including bunch grasses and mechanical features such as dry stack walls along contours); chip and keep on-site all vegetation removed from thinning.
- Relocate barn within the fuel modification area for the house or delete (too many structures per Table 1 standards).
- Use California Native Plant Society (CNPS) list for landscape plants; recommend that driveway/roads remain unpaved and planted with native bunch grass (*Stipa*).
- Night lighting to be directed downward, of low intensity, at low height, shielded and for security purposes only; use motion detector for security lighting.
- Use natural earth tone colors of local area for house exterior.

EXHIBIT NO. 20
APPLICATION NO. 4-00-143
ERB Minutes
Pg 4 of 4

Staff Recommendation: _X_ Consistent ____ Consistent after Modifications ____ Inconsistent

Suggested Modifications: _____

November 2, 2000 BYA Project No. 49.92096.0006

Pete and Michele Weeger
447 San Vincente Blvd. Apt #1
Santa Monica, California 90402

SUBJECT: Hydrogeologic Evaluation, 2656 N. Fabuco Road, Topanga Canyon Area, Los Angeles County, California

Dear Mr. and Mrs. Weeger,

In accordance with your request and authorization, Bing Yen & Associates, Inc. (BYA) evaluated the hydrogeologic conditions at the proposed homesite of Pete and Michelle Weeger at 2656 North Fabuco Road, Topanga Canyon Area, Los Angeles County, California. Our work included review of published and unpublished geologic and hydrogeologic data, evaluation of the available data, and preparation of this letter. The purpose of the work was to evaluate the potential hydrogeologic impacts on the site and surrounding environment of construction of a single-family home with associated domestic water well and septic disposal system.

BYA previously evaluated the hydrogeologic conditions on the neighboring (Jason) property to the south (see Figure 1 – attached). Based upon our review, the site geologic and hydrogeologic conditions, as well as anticipated well-water usage and groundwater recharge conditions at the Weeger property are anticipated to be essentially the same as described in the referenced reports for the adjoining Jason property. Furthermore, BYA's conclusions presented in the referenced reports regarding the potential hydrogeologic impacts of construction of the Jason home are equally applicable to the Weeger property. As described in the referenced Jason-property reports, conservative, worst-case hydrogeologic conditions were qualitatively modeled and found to pose no significant impact at the site or cumulative impacts to the area. The modeled conditions conservatively assume a "closed water system" and therefore the model described in the referenced reports already accounts for cumulative impacts from development of all surrounding properties.

In summary, BYA finds that:

- The findings and conclusions presented in the referenced Jason property reports are equally valid and applicable as applied to the Weeger property; and
- Construction of the Pete and Michele Weeger home will not pose a significant adverse cumulative or site-specific impact to the hydrogeologic conditions in the vicinity of the Weeger property.

EXHIBIT NO. 21
APPLICATION NO. 4-00-143
Bing Yen Report
Page 1 of 4

We appreciate the opportunity to assist you on this project. If you have any questions regarding this letter, please contact us at your convenience.

Sincerely,

BING YEN & ASSOCIATES, INC.

D. Scott Moors
Senior Project Geologist
CHG 607, exp. 9/30/2000
CEG 1901, exp 3/31/02

REGISTERED GEOLOGIST
D. SCOTT MOORS NO. 607 CERTIFIED HYDRO-GEOLOGIST
STATE OF CALIFORNIA

QA/QC:

Attachments: Figure 1 – Site Vicinity Map and Water Usage Map

draft letter 10-18-00

Ex 21
page 2 of 4

APPENDIX A

References

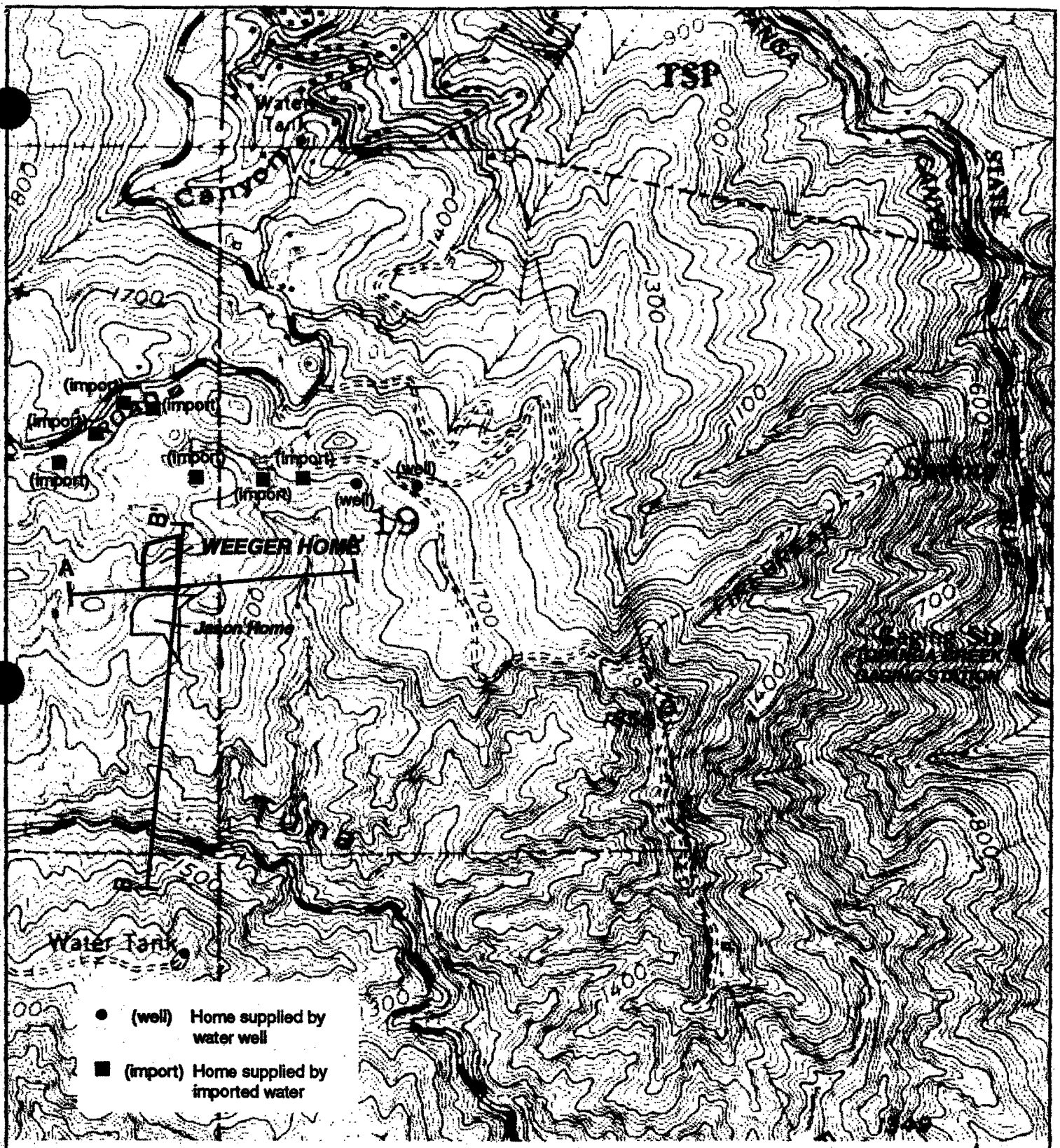
Bing Yen & Associates, Inc.: *Hydrogeologic Evaluation, 20556 Betton Drive, Topanga Canyon Area, Los Angeles County, California*, dated May 31, 2000

_____: *Response to Verbal Comments by California Coastal Commission, 20556 Betton Drive, Topanga Canyon Area, Los Angeles County, California*, dated August 3, 2000

_____: *Response to Verbal Comments by California Coastal Commission, 20556 Betton Drive, Topanga Canyon Area, Los Angeles County, California*, dated August 24, 2000

_____: *Response to Verbal Comments by California Coastal Commission, 20556 Betton Drive, Topanga Canyon Area, Los Angeles County, California*, dated September 21, 2000

Ex 21
page 3 of 4



0 1,000 2,000
scale (feet)

Base Map: U.S.G.S. 7.5 Minute Topanga, CA Quadrangle, 1991

BING YEN & ASSOCIATES, INC
Geotechnical & Environmental Consultants, Established 1979

Project Name: Pete Weeger Groundwater Study

Project No.: 49.92096.0006 | Date: November 2000

Site Vicinty and Water Usage Map

Ex 21

Figure 1

Pg 4 of 4

November 8, 2000

PCR

Mr. Pete Weeger
447 San Vicente Blvd., Apt #1
Santa Monica, CA 90402

Re: Responses to Comments by California Coastal Commission, Concerning Biological Issues 2656 Fabuco Road, Topanga Canyon Area, Los Angeles County, California (Coastal Permit Application No. 4-00-143, Weeger)

Dear Mr. Weeger:

PCR Services Corporation (PCR) in particular I, PCR's Director of Biological Services, have reviewed comments by the California Coastal Commission, dated September 28, 2000, concerning potential biological issues associated with a well installation on the subject property. The purpose of this letter is to provide a response to those comments.

As indicated in their comments the California Coastal Commission requested that potential impacts from the proposed onsite water well be addressed by the qualified geologist, regarding hydrogeology issues, and a qualified biologist. As to input from a qualified geologist, I am in receipt of and have reviewed documentation prepared by Bing & Yen Associates, Inc. (BYA) for an adjoining parcel (owned by Mark Jason). Assuming that groundwater conditions beneath the two properties are virtually identical (there is no reason not to since the wells would only be 200 to 500 feet apart), I have based my response on this documentation for purposes of addressing biological issues related to your property. The BYA documentation consists of:

- Report of Hydrogeologic Evaluation (Bing Yen & Associates, Inc., May 31, 2000);
- Response to Verbal Comments by California Coastal Commission (Bing Yen & Associates, Inc., August 3, 2000);
- Second Response to Comments by California Coastal Commission (Bing Yen & Associates, Inc., August 25, 2000); and,
- Additional Hydrogeologic Information (Bing Yen & Associates, Inc., September 21, 2000).

EXHIBIT NO. 2
APPLICATION NO. 4-00-143
PCR Report
Page 1 of 4

PCR

First, let me clarify that I am not a hydrologist, geologist or hydrogeologist; I am a consulting biologist with over 26 years of practicing experience. Early in my career I co-authored the 1976 Los Angeles County Significant Ecological Areas (SEA) Study, at which time Tuna Canyon was designated as a SEA. Since that time I have been responsible for numerous biological assessments in the Santa Monica Mountains, including the preparation of a cumulative impact analysis for the Tuna Mesa Property Owners Association in 1978 and, more recently, a cumulative impact assessment for your property in February 2000. In my present role as Director of Biological Services at PCR Services Corporation (PCR), my staff and I are engaged in preparing the Year 2000 Significant Ecological Areas Update Study for the County. I mention my background to advise you that my comments are based on my experience with ecosystems, and not technical expertise in groundwater transport systems and surface hydrology.

Bing Yen & Associates' (BYA) initial analysis (May 31, 2000) supports their finding that your project's effect on hydrogeologic water balance will be negligible, particularly considering the fact that your project is a single family residence on a 2.5-acre lot within the 1,524-acre Tuna Canyon watershed. BYA's determination did require certain assumptions for modeling purposes; however, the assumptions did not seem unreasonable given the project's extremely limited scope of potential effect. In fact, I wondered whether the net groundwater withdrawal estimated by BYA (80gallons/day), leading to a theoretical draw down in the groundwater table of one to four feet over a 50-year period, would be overshadowed and rendered moot by natural cycles in rainfall and groundwater replenishment.

Similarly, in its responses to comments by the California Coastal Commission (August 3, 2000, August 25, 2000 and September 21, 2000), BYA continued to support its findings in a logical, consistent manner. BYA provided a list of its reference sources, locations of nearby wells and an estimated time-frame for groundwater recharge via the project's proposed septic system. Most relevant to the issue, BYA's analysis of cumulative impacts did not find effects to be significant. I found it interesting that BYA eluded to the fact that the estimated 75-year, 15-foot cumulative groundwater draw down approximated the water-table line in the bottom of Tuna Canyon, based on a cross-section drawn at a scale, 1" = 400'. Again, it occurred to me that attempts to measure such a small potential effect in the context of the entire Tuna Canyon watershed may not be the most meaningful to the project's review. Moreover, I have not seen nor know of any factual evidence to contradict BYA's findings or to cause a non-hydrogeologist (such as myself) to question their veracity.

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page 2 of 4

PCR

With regard to the issue of groundwater balance in general, I have personally accumulated several basic understandings of the relationship between development, groundwater/surface water resources and riparian habitats. These understandings have come from anecdotal observations and working with trained experts in the field. First, it is my understanding that problems with over drawing groundwater resulting in the loss of riparian habitat in an area are typically associated with high demand uses particularly under arid conditions where evapotranspiration results in significant losses. As examples, desert golf courses require up to 2,000,000 gallons per day for irrigation in the summer; and the Tucson metropolitan area has seriously lowered its underlying groundwater table resulting in significant losses of mesquite bosques. Second, groundwater tables can be recharged and replenished, and even be caused to rise. I have heard this is the case in the Coachella Valley where imported water used for irrigation of agriculture and golf courses is causing the groundwater table to rise. Third, many historical intermittent streams in Southern California have become perennial as a result of development in their watersheds. This is due to added landscape irrigation and runoff from hardscape areas (e.g. roofs, driveways, and streets) that occur year-round. Fourth, and finally, except in areas of extremely limited groundwater, rural residential development alone is not associated with overdraft conditions and adverse effects on riparian habitats the overwhelming majority of the time.

Based on these understandings, I do not perceive that the subject project has the potential to present a problem. If you assume a typical house in the surrounding subdivision has a 2,500 square foot foundation, and the irrigated landscape area and Zone A fuel modification extends 50 feet out, the total maximum irrigation needs encompasses approximately 20,000 square feet. Subtract from this the area of driveway, patio, pool, and other non-irrigated landscape area (say 40 percent of the total yard area) and you are left with somewhere in the neighborhood of 12,000 square feet (about 0.28 acre) of irrigated area. Add this to normal residential water use (toilets, bathing, washing, etc.), and intuitively, I would not foresee a problem given that the majority of the entire Tuna Canyon watershed is undeveloped. The same case would apply to the cumulative analysis. Even if all 15 lots in the subdivision were developed, and the total landscape area for these lots became approximately 4.2 acres, I still would not foresee a problem. I have seen literally hundreds of examples of thriving riparian habitats including surface water flows downstream of far more dense development than is being proposed by you and in the surrounding subdivision. As you recall, this is the same conclusion I reached in my previous cumulative assessment for your project.

PCR

For the reasons discussed above, I would accept the BYA analysis and responses to Coastal Commission Staff comments as conclusive that the effects of your project, on both an incremental and cumulative basis, are not potentially significant in regards to downstream riparian habitats.

I hope this input is helpful. If you have any questions or comments, please contact me.

Sincerely,
PCR SERVICES CORPORATION

Steven G. Nelson
Director of Biological Services

Ex 22
page 4 of 4

STATE OF CALIFORNIA— THE RESOURCES AGENCY GRAY DAVIS, GOVERNOR

CALIFORNIA COASTAL COMMISSION

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

6 April 2001

MEMORANDUM

To: James Johnson, Coastal Program Analyst
From: Mark Johnsson, Senior Geologist
Re: Weeger water well

In response to your request for a list of information that we will require to fully evaluate the Weeger water well permit application, I have prepared the following list. Please feel free to share this with the applicant and/or his consultants:

1) In general, the hydrogeologic report should adhere to the guidelines put forth by the Board of Registration for Geologists and Geophysicists, available at:

http://www.dca.ca.gov/geology/publications/report_guidelines/groundwater_investigation.html

and appended to this memo.

2) In addition there are a number of specific questions that I have that should be raised.

a) I note that this is an application for an after-the-fact permit on an existing water well. Accordingly, I would like to see pumping tests on that well to measure:

1) Well yield (72-hour pumping test)
2) Type of aquifer (from shape of $h_0 - h$ versus t plot)
3) Transmissivity of the aquifer
4) Stoarativity of the aquifer

b) Lithologic and geophysical logs of the well.

c) Locations of all wells in area bounded by Dix Canyon on the north and tributaries to Tuna Canyon to the west, south, and east.

c) Owners of neighboring wells should be approached for the use of their wells to perform distance-drawdown tests to measure transmisivity and storativity on a larger scale

EXHIBIT NO. 23
APPLICATION NO. 4-00-143
Staff Geologist
Memo pg 1 of 2

d) Owners of neighboring wells should be approached for release of existing lithologic or geophysical logs

e) Locations and estimates of discharge (dated), of all springs and seeps on or draining into the tributaries of Tuna Creek above their confluence at approximately 1280 feet elevation

3) This information should be evaluated to reach a conclusion concerning the impacts that usage of the water well would have on discharge of ground water to ESHA in upper Tuna Canyon. In addition to whatever estimate of water usage is provided by the applicant, this analysis should also use an annually averaged usage of 1339 gallons per day, which represents actual usage of neighbors, per opponents to Jason project.

4) Finally, the applicant should comment on water quality issues:

a) What water treatment may be necessary to make ground water meet household requirements, and what effect that would have on the usage estimates used above.

b) Provide evidence that there will be no water quality impacts of the septic system (particularly nitrate loading)

Given what we have learned about the Tuna Canyon watershed in the months since the Jason project was approved, this information should be considered a necessary filing requirement. The application should not be considered complete until this information is obtained.

I hope that this request is useful, please do not hesitate to call with any questions.

Sincerely,

Original Signed by

Mark Johnsson
Senior Geologist

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pg 2 of 2

Cleath & Associates
Engineering Geologists
Ground Water
(805) 543-1413
1390 Oceanaire Drive
San Luis Obispo
California 93405

July 17, 2001

Pete & Michele Weeger
447 San Vicente Blvd., Apt #1
Santa Monica, CA 90402

Subject: **Hydrogeologic Analysis of Proposed Water Supply for Weeger Residence at 2656 Fabuco Road, Los Angeles County, California**

Dear Sir:

This investigation is in response to the concerns of Coastal Commission staff, per the memorandum of April 6, 2001 and the follow-up letter dated June 18, 2001 both prepared by Mark Johnsson, Senior Geologist. The two questions posed by Mr. Johnsson are: 1) What are the ground water contributions to the identified Environmentally Sensitive Habitat Area (ESHA) along the intermittent tributaries to Tuna Canyon west, south and east of the Weeger property ?; and 2) What would be the impact to ground water resources of the residential use of that existing well?

The information requested by Mr. Johnsson include 1) Results of a pumping test including well yield, type of aquifer, transmissivity and storativity; 2) lithologic and geophysical logs of the well; 3) locations of all wells in area bounded by Dix Canyon on the north and tributaries to Tuna Canyon to the west, south and east; 3) Locations and estimates of discharge (dated), of all springs and seeps on or draining into the tributaries of Tuna Creek above their confluence at approximately 1280 feet elevation. With this information, Mr. Johnsson requested an analysis of the impacts of the usage of the water well on discharge of ground water to the ESHA in upper Tuna Canyon. Mr. Johnsson also requested that the quality of water from the well be discussed with respect to water treatment for household requirements and what effect that would have on the usage estimates; and how the percolated wastewater quality could effect other users of the ground water, both environmental and anthropogenic (particularly nitrate loading).

In order to respond appropriately to Mr. Johnsson's concerns, Cleath and Associates has compiled the available information requested, supervised a pumping test of the existing well on the property, performed a field reconnaissance of springs in the drainages adjacent to the property, reviewed published geologic maps of the area, noted nearby wells, and interpreted quality characteristics of the water produced from the subject well. This letter report summarizes the findings of this investigation. A description of the study area, geology and wells and springs is provided as foundation to the response to the questions posed by Mr. Johnsson following thereafter. The well log is included in the Appendix. The water quality of the well water is also included in the appendix.

STUDY AREA

The study area includes the upper watershed area of Tuna Canyon above an elevation of 1350 feet. A photograph of the area is shown on Figure 1. Five small tributaries drain the northern part of this watershed. Of these four tributaries, the western four tributaries drain areas predominantly underlain by Sespe Formation. The eastern tributary drains a tributary watershed underlain predominantly by Coal Canyon Formation. The Weeger property is located at an elevation of about 1700 feet, less than 200 feet below the watershed divide of the eastern middle tributary. The property covers an area of about 2.5 acres and slopes to the south. The property is currently covered by non-riparian brush vegetation. There are no springs on the property. The location of the existing water well serving this parcel is shown on Figure 1.

While Mr. Johnsson had identified the study area as including the area bounded by Dix Canyon and the tributaries to Tuna Canyon to the west, south and east, Cleath & Associates has slightly modified this study area to include the area within Tuna Canyon watershed underlain by the geologic formation which yields water to the Weeger well (Figure 2). This geologic formation is the Sespe Formation (magenta in color on the map).

GEOLOGY

This area is appropriate for this investigation because the existing well proposed for use by The Weeger Family taps fractured sandstone aquifers within the Sespe Formation and the ground water within this formation is distinct and separate from the ground water in the adjacent geologic units. This observation is based on the difference in the rock types (stratigraphy) and the existence of faulting and folding (structure). A major fault follows the southern and eastern boundaries of the Sespe Formation (the Zuma fault). Within the Sespe Formation beds, geologic structures and intrusive igneous dikes have disrupted bedding which further reduce the area extent of the aquifers tapped by the project well.

Stratigraphy

The Sespe Formation is comprised of non-marine sandstone and shale beds ranging in age from upper Eocene to lower Miocene. The buff colored sandstone beds are the more permeable units within the Sespe Formation. The shale beds within the Sespe Formation are less permeable but still yield adequate quantities of water to wells for residential purposes.

South and east of the Sespe Formation and underlying the Sespe Formation is the Coal Canyon Formation. The Sespe Formation is in fault contact with, and overlies, the Coal Canyon Formation.

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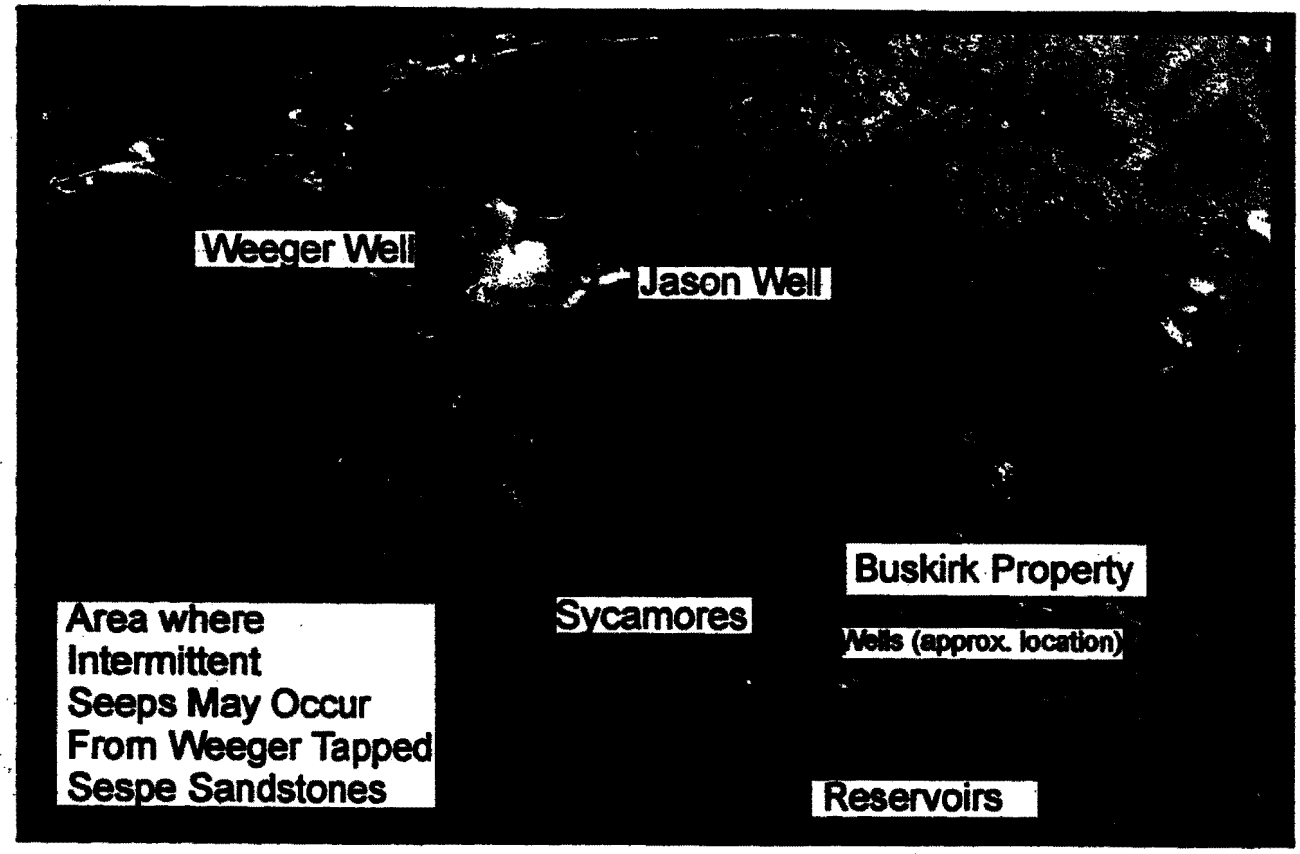

Photo Taken June 26, 2001

Figure 1
Photographic Features
Tuna Canyon Area
Los Angeles County, California

Cleath & Associates

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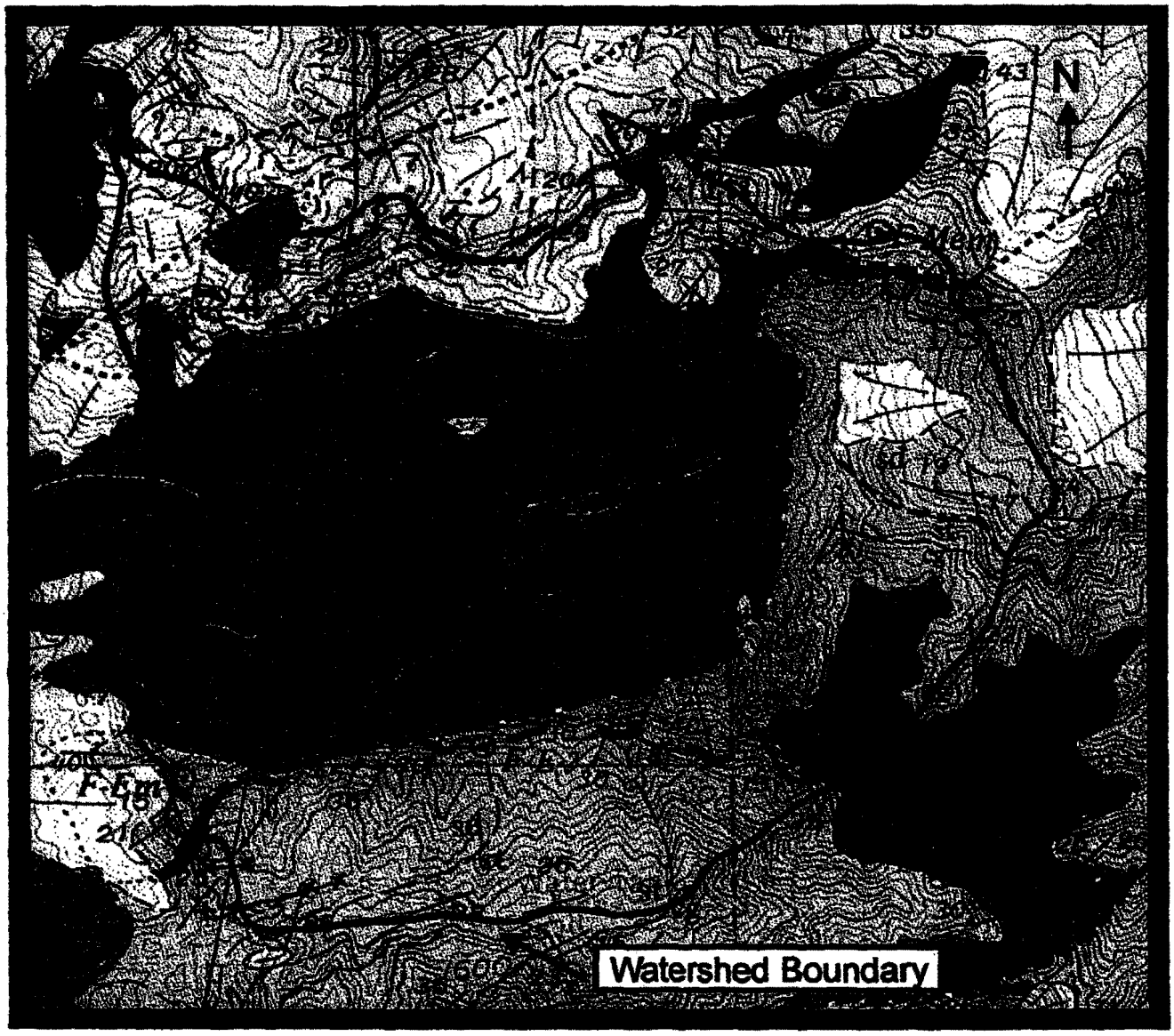

Map Source: USGS Map I-1146
Geologic Map of East-Central Santa Monica Mountains,
Los Angeles County, California

Map Scale: 1 inch : 1000 feet

Explanation

Qls Landslide
Ttf Fernwood Member of Topanga Formation
Tts Saddle Peak Member of Topanga Formation
Ti Igneous Intrusives
Ts Sespe Formation
Tcc Coal Canyon Formation
sd:sand; st:siltstone; cg:conglomerate
Kt Tuna Canyon Formation

Weeger Well Existing Well

Figure 2

Geologic Map
Tuna Canyon Area

Cleath & Associates

The lower Paleocene and Eocene age Coal Canyon Formation is comprised of marine sandstone, siltstone, pebbly sandstone and conglomerate beds. Lesser well yields are typically encountered in the Coal Canyon Formation (i.e., Scipioni, Jobbins and Zanini wells).

North and west of the Sespe Formation outcrop, the Fernwood and Saddle Peak members of the Topanga Formation crop out. These geologic units are stratigraphically higher than the Sespe Formation and are typically separated from the Sespe Formation by igneous intrusive layers. The Fernwood member outcrops are covered by landslides in many areas due to the weak mudstone and tuff layers within the member.

Structure

Ground water flow within fractured consolidated sedimentary beds in areas of high topographic relief generally occurs within permeable sandstone layers that are bounded by structural features such as faults and folds. Increased permeability occurs where structural deformation is greatest. The Sespe Formation regionally dips to the north, but there is a small fold in the northeast portion of the outcrop area that is where the Weeger well is located and perhaps contributes to the transmissivity of the sandstone beds. This fold plunges to the west with the result that the lowest elevation outcrops of the Sespe sandstone beds tapped by the Weeger well is in the watershed west of the Weeger watershed. This western watershed is where flow issuing from the fractured sandstone should discharge (see Figure 1).

PROJECT WATER USE

The proposed project is a single family residence. The water uses for this proposed project include both indoor and outdoor water uses. The amount of water used for indoor and outdoor purposes on this project are likely to be similar to other nearby single family residences with no horse facilities and limited non-native vegetation. The Weegers have submitted a water demand calculation for their proposed residence of 490.9 gallons per day. Mr. Johnsson recommended that 1339 gallons per day be used for the neighboring properties.

The water uses on properties in the vicinity of the Weeger property have been documented in Appendix L submitted by the Weegers. This information leads to the conclusion that water uses are significantly lower when native vegetation landscaping is used. Since the Weegers propose using native landscaping and irrigation with low flow heads, it is most appropriate to assume that a comparison of the Weeger water use with the water use figures for adjacent properties should be limited to those with native vegetation. The four properties with native landscaping range in water use from 71 gallons per day to 463 gallons per day from mid-May to mid-June. The higher water use of

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463 gallons per day is less than is proposed by The Weegers. Therefore, the water use estimate for the Weeger property is reasonable. The water estimate recommended by Mr. Johnsson is appropriate for developments with non-native landscape irrigation.

This water would be supplied by the existing well on the Weeger property. The existing well has been inspected and approved by the LA County Health Department. The well has been tested at 47 gallons per minute. The Weeger well would need to be pumped at a rate of 47 gallons per minute for less than eleven minutes per day to meet their daily demand.

IMPACTS ON WELLS

In order to assess the impacts of operating the Weeger well on ground water production and water levels in adjacent wells, it is important to determine first if the adjacent wells produce water from the same ground water reservoir. This determination involves a review of the geology where the wells are located and where available, the well logs. Generally, wells that produce from different geologic formations or from different rock types are in different ground water storage units and should be excluded from this analysis. For wells that produce from the same formation and rock type, the assessment should exclude those wells which are structurally separated from the subject well. These structurally separated wells often have significantly different ground water surface elevations than in the subject well.

The Weeger well produces water from the Sespe Formation sandstones. The ground water surface elevation in the Weeger well is about 1560 feet above mean sea level based on a depth to water of 116 feet and a reference point elevation at the top of casing of 1676 feet above MSL (elevations taken off of the USGS topographic map).

To the northeast of the Weeger well, there are a few wells which provide water to residences (Figure 2). The Zanini well has a water level elevation of approximately 1610 feet and produces from hard gray rock that we would interpret to be intrusive igneous rock. The Jobbins well is at a ground surface elevation of about 1680 feet and had a depth to water of about 110 feet when drilled, for a ground water surface elevation of 1570 feet, similar to the Weeger well but produces from a different type of rock, gray shale, which is likely to be the Coal Canyon Formation. The Scipioni well is reported to be producing from 90 feet of shale (per Chandler letter). Therefore, none of these wells are within the same fractured sandstone reservoir as the Weeger well. The Jason well, located about 600 feet from the Weeger well, produces water from grey and red sandstone beds within the Sespe Formation and has a similar water level to that observed in the Weeger well.

The other wells noted in the area which tap the Sespe Formation are located north of Tuna Canyon Road on the Von Buskirk property in the southeastern portion of the outcrop area. These wells were

reported by Walter Von Buskirk to be very productive wells, but no public records were available. One well, located north of Tuna Canyon Road is at a much lower ground surface elevation (roughly at an elevation of 1420 feet. A second well, located to the east of the furthest downstream reservoir on this property, also has a much lower water level elevation than the Weeger well. Therefore, these wells tap a different ground water reservoir within the Sespe Formation.

Based on available well information, the only well whose water level could be influenced by the operation of the Weeger well is the Jason well. The Jason well was monitored during the pump test.

Pumping Test Results

The Weeger well was pump tested on June 24 and 25, 2001. The duration of the test was chosen at 24 hours due to the high capacity of this well. The pump installed in the well had a capacity of about 47 gallons per minute. The total amount of water pumped during this test was 67,680 gallons, approximately equivalent to six months of consumptive water use for the Weeger home (assuming consumptive use is roughly equivalent to outdoor usage).

The total amount of water level drawdown in the pumped well was 4.2 feet, falling from a static water level of 116 feet to a pumping water level of 120.2 feet after 24 hours of pumping. The rate of decline of the water level per log cycle of time, used for determining the transmissivity, was about 1.7 feet of drawdown per log cycle of time (Figure 3). Using the Cooper-Jacobs equation, the transmissivity of the formation was 7300 gallons per day per foot. This was verified by the recovery test results (Figure 4).

The Jason well was monitored for purposes of determining the storativity of the aquifer. While the conditions which would make this test suitable for monitoring were not truly met (the Jason well only taps one of the productive zones tapped by the Weeger well), it is the only well which could be expected to be impacted by the Weeger well. A decline in the water level in the Jason well was first noted after four hours of pumping and a total decline of 8 inches was measured at the end of the test (Figure 5). The storativity value resulting from a transmissivity of 7300 gpd/ft, an initial water level change noted after 300 minutes, and a distance of the monitoring well from the production well of 600 feet, is 0.0016.

Using the transmissivity value of 7300 gallons per day per foot and a storativity of 0.0016, and assuming a pumping rate of 490.9 gallons per day or 0.34 gallons per minute, the drawdown at the Jason well when the Weeger well is pumping should not be discernable as determined using the USGS Water Supply Paper 1545-C, Plate 1 Diagram Showing Drawdowns Caused by the Discharge of a Well from an Areally Extensive Aquifer.

Figure 3
Pumping Test - Weeger Well
June 24-25, 2001

Static Water Level: 117 feet

Pumping Rate: 47 gpm

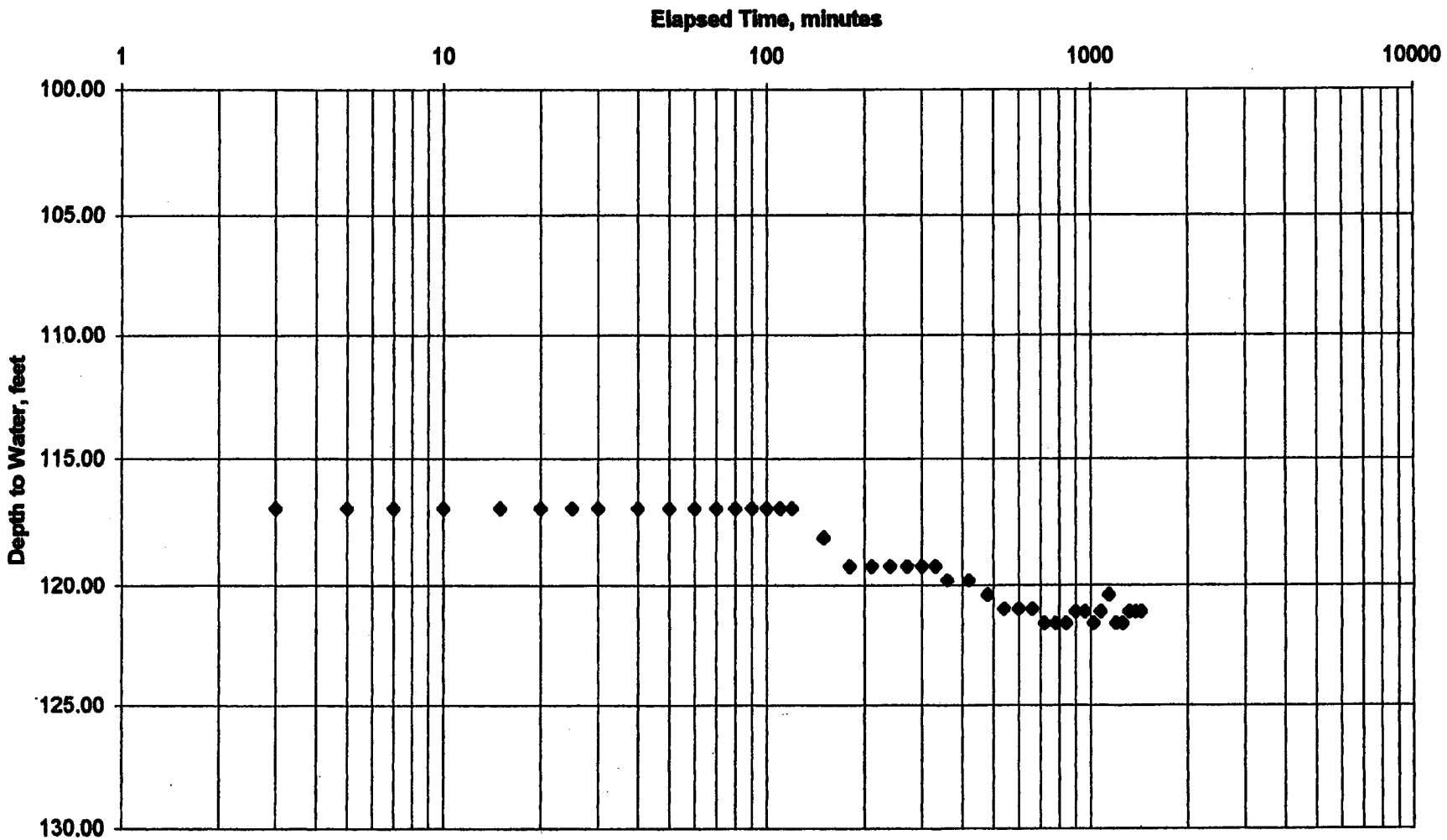

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Figure 4
Recovery Test - Weeger Well
June 25, 2001

Depth to Static Water Level: 117 feet **Pumping Rate: approx. 47 gpm**

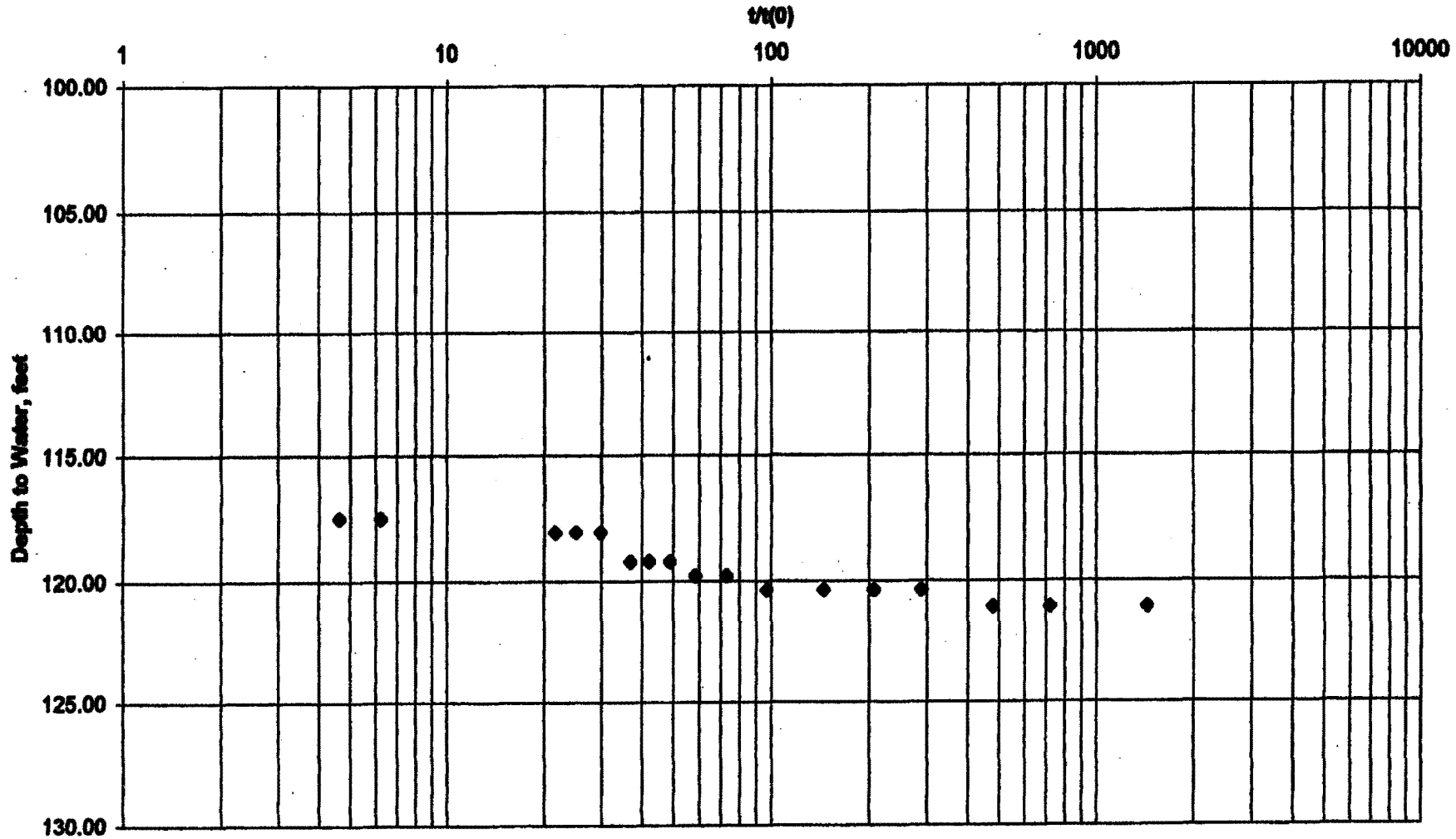

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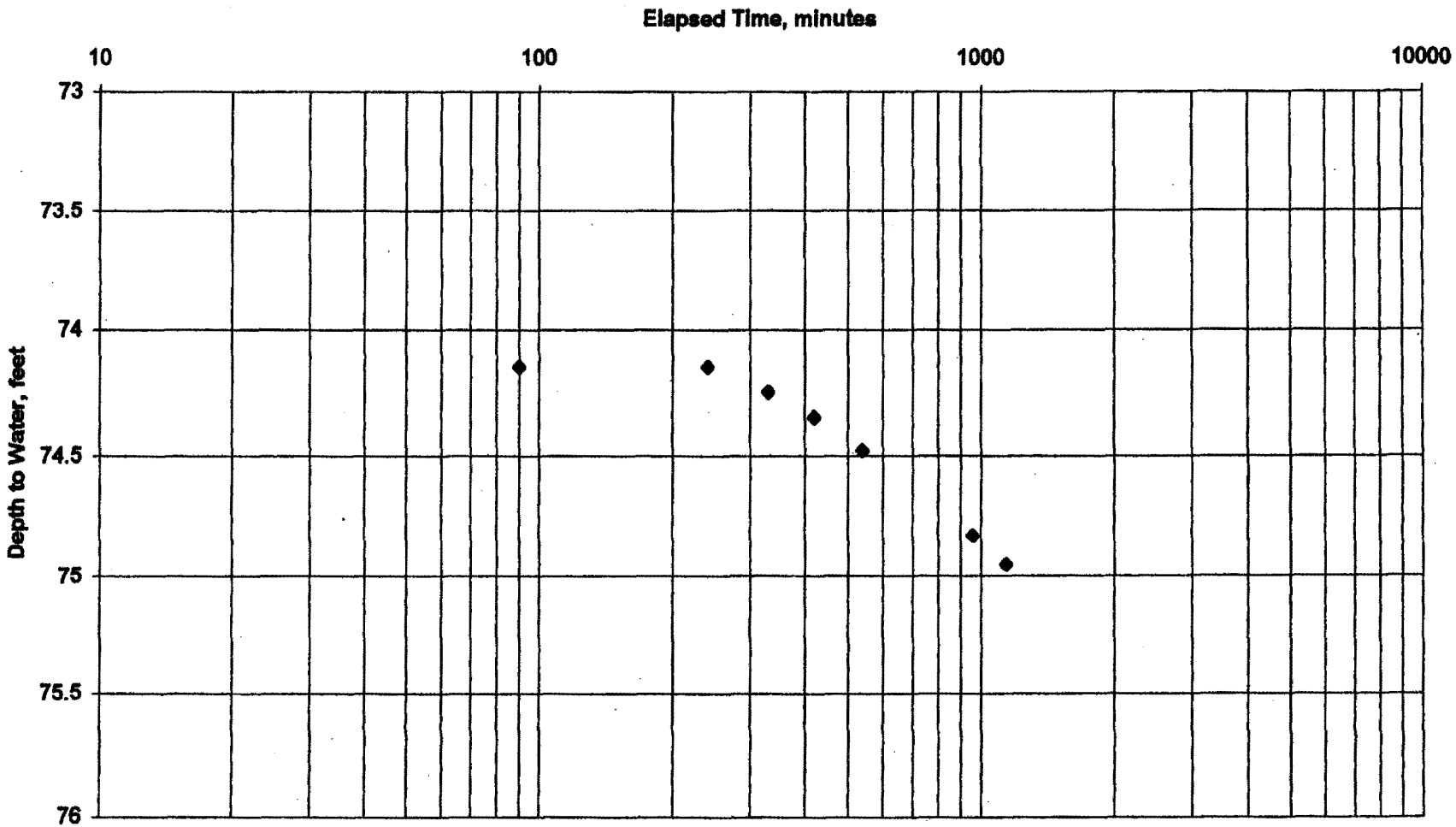
Figure 5
Pumping Test - Weeger Well
Jason Observation Well
June 24-25, 2001

Static Water Level: 74.15 feet **Distance: 600 feet**



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This conclusion is evident based on the pumping test and the amount of water demand. In order to meet the daily water demand, the well could be pumped at the tested rate (47 gallons per minute) for only 11 minutes. No drawdown in the Jason water well was noted during the Weeger pump test at that point in the test.

IMPACTS ON SPRINGS

Springs which should be considered for the impact analysis are those which issue out of the Sespe Formation fractured sandstones tapped by the Weeger well. Such springs should have a similar water surface elevation to that in the Weeger well. There are many other springs issuing from the Sespe Formation, particularly visible along Tuna Canyon Creek which are at elevations less than 1550 feet. These springs flow from portions of the Sespe Formation not tapped by the Weeger well. Therefore, it is not appropriate to identify all springs above an elevation of 1285 feet as suggested by Mr. Johnsson for purposes of this impact analysis.

The only area where springs issuing from the Sespe grey sandstone above an elevation of 1550 feet could occur is within the tributary watersheds to Tuna Canyon Creek where the Weeger well is located and those watersheds immediately adjacent and to the west of the Weeger well watershed. The sandstone layers encountered within the Weeger well generally trend southwest/northeast. Where a spring associated with these layers would most likely occur is in the upper reaches of the watershed west of the Weeger watershed. During our reconnaissance of the area, we looked at this area and observed that there may be some flow issuing out of this tributary watershed during the wet portions of the year, but that there was no flowing or standing water in this portion of the western tributary at the time of our reconnaissance (June 2001). Spring flow is evident in lower reaches of the nearby tributaries judging by the presence of sycamore trees (Figure 1).

In addition to the fact that no spring was flowing at the elevation of the ground water surface, we noted that there are three man-made earth dams on this tributary which prevent flow in this watershed from reaching Tuna Canyon Creek. The only reservoir storing water during our reconnaissance was the lowest reservoir.

Based on the observation that only this one area may have ephemeral seeps associated with the sandstone reservoir tapped by the Weeger well, any reduction of flow in this area is limited to the wet season and should not have any impact on base flow of Tuna Canyon Creek nor should it have any impact on riparian vegetation in Tuna Canyon.

Since the intermittent seeps are more distant from the Weeger well than the Jason well, and since no measureable impact should be expected in the Jason well from the Weeger well, the water level decline at the seep area should be insignificant and therefore the operation of the Weeger well would have no

impact on seep flows.

WATER QUALITY

The ground water produced by the Weeger well was tested recently and the results are summarized in the Appendix. The ground water in general is slightly brackish and very hard with high concentrations of sulfate and iron and manganese. Both color and turbidity due to flocculation of iron were observed and the electrical conductivity was measured. These physical parameters of the untreated well water exceeded the maximum contaminant levels.

Water quality in the Jason well is similar to the quality of the water from the Weeger well. In contrast, the water in the Scipioni well is reported to have noteable hydrogen sulfide odor (none in the Weeger well based on personal observation) and 30 ppm of iron (1.73 ppm of iron in the Weeger well).

While none of these constituent concentrations pose health hazards, some water treatment to reduce iron and manganese and hardness would be desirable prior to its use for drinking water purposes. Treatment of this water for non-drinking water purposes is not critical for the use of this water, although reducing hardness and iron and manganese results in less discoloration and deposits on water fixtures and surfaces.

A "Vortex Systems" water treatment system planned for use on the Weeger well water was tested and it removed most of the color and turbidity and about half of the iron and one third of the manganese in the water. (see the water quality results in the appendix)

The use of an under-the-counter reverse osmosis system is one method of removing salt content prior to drinking water use in the kitchen. Bottled water is also an alternative source for drinking water and is quite common even in areas with domestic water. The treatment of the drinking water stream would result in very little wastewater and that effluent could be disposed to the on-site wastewater treatment and disposal system, which would be percolated back into the ground.

No nitrates were detected in this water indicating that there is no impact on the local ground water due to the on-site wastewater disposal systems up hill from the Weeger property.

As a result of using this water, additional salt content would be returned to the ground water, through the wastewater disposal field. Typically, water use results in 300 to 500 milligrams per litre pickup of salts from residential uses. Once this water has returned to the ground water, dilution would occur both from mixing with ground water and with percolated rain water. Nitrate increases will not be significant because the existing nitrate concentrations are not detectable. As a result, the wastewater return-flow should not alter the quality of the ground water within the Sespe Formation to the point that the water would be deleterious to the native vegetation or to the point that adjacent domestic uses

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will require a change in water treatment requirements prior to use.

CUMULATIVE DEVELOPMENT OF ADJACENT PARCELS

The development of adjacent parcels could potentially result in additional ground water pumpage. Within the immediate vicinity of the Weeger parcel, there are 17 other parcels. Of these parcels, one has an existing well and there are 6 that would be allowed to connect to an approved private waterline. One parcel is now part of a lot with a house that has imported water. One parcel is owned by the State of California and will not be developed. The remaining 8 parcels do not have any form of water service for future development. These parcels are zoned for single family residences. These remaining 8 parcels could obtain water from on-site wells or from the owners of the private waterline if allowed.

Prior to constructing a well on any parcel, a permit will need to be obtained from appropriate regulatory agencies. Prior to constructing a residence and the use of the well to provide water for domestic and landscape purposes, additional permitting is required which will review the adequacy of the water supply and the potential impacts of each proposed development. Approval of the Weeger project by the Coastal Commission does not imply that nearby lots will meet the permitting requirements of these regulatory agencies.

Based on the constraints of the land use permits generally issued in this area, native landscaping and fuel modification in the proximity of any home will be required. The water use for each parcel can be expected to be similar those other parcels in Tuna Canyon area that have been developed with low water use native vegetation. The Weeger water use estimate is a reasonable figure for this type of native landscaped home.

The water related impacts due to the build-out of all of these parcels will depend on the source of water used by each parcel. Each parcel that obtains imported water will, when developed, result in the percolation of about 100 gallons per day of water to the ground water. Each parcel that uses on-site wells for water supply will extract a net amount of ground water of about 400 gallons per day. As ground water levels respond to the increase in recharge or extractions, a new equilibrium will be reached which may include lessened winter outflow from the intermittent seeps noted in this report and a greater fluctuation in seasonal water levels. As noted previously, the impact to riparian vegetation and flow in the streams will not be significant because the ephemeral seep area only flows during high rainfall periods when excess water is available. Ground water level interference between pumping wells should be minimal if wells produce at similar rates and similar drawdown as the Weeger well.

Although there is no long term record of water level fluctuations within the Sespe Formation sandstones, we expect that the range of annual water level fluctuations has been less than 10 feet because of minimal historic extractions. The annual water level fluctuations resulting from increased ground water extractions are difficult to project because of the limited availability of information on

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aquifer characteristics (only two wells exist which tap the Sespe Formation sandstones in this area). As the properties are reviewed for each of the permits discussed above, a longer period of record for water levels in existing wells will have elapsed. Additional wells may be constructed that can be used to detail aquifer characteristics in other portions of the Sespe Formation outcrop area. These records and potential new wells will provide information that will result in an improved assessment of the reliability of the ground water source with increased extractions as the new developments are reviewed.

CONCLUSION

The information presented and the analysis performed in this study has been in response to the request by the Coastal Commission staff. The water demand figures were reviewed by Cleath & Associates and were found to be consistent with adjacent properties developed with native vegetation landscaping. The investigation has included a field survey of wells and springs and hydrogeologic features within the Tuna Canyon upper watershed and these features have been noted on the aerial photograph taken of the study area. The pumping test of the Weeger well was supervised and the data was interpreted by Cleath & Associates.

We are pleased to submit this report summarizing the findings of these studies.

Very truly yours,

Timothy S. Cleath
Certified Hydrogeologist #81
Certified Engineering Geologist #1102
Registered Geologist #3675

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Cleath & Associates
Engineering Geologists
Ground Water
(805) 543-1413
1390 Oceanaire Drive
San Luis Obispo
California 93405

APPPENDIX

WELL DATA

WEEGER PROPERTY

2656 FABUCO

TUNA CANYON

LOS ANGELES COUNTY, CALIFORNIA

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Driller's Copy

Page 1 of 1

WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 765397

STATE WELL NO./STATION NO.

LATITUDE / LONGITUDE

APN/TRS/OTHER

Owner's Well No. #1

Date Work Began 6-18-01, Ended 6-22-01

Local Permit Agency County of Los Angeles

Permit No. Permit Date 2-17-00

GEOLOGIC LOG

ORIENTATION (✓) X VERTICAL ___ HORIZONTAL ___ ANGLE ___ (SPECIFY)

DRILLING METHOD Rotary FLUID Mud

DEPTH FROM SURFACE ft. to ft.	DESCRIPTION *Describe material, grain size, color, etc.*
0 : 50	Tan sandstone.
50 : 370	Grey sandstone.

TOTAL DEPTH OF BORING 370 (Feet)

TOTAL DEPTH OF COMPLETED WELL 368 (Feet)

WELL OWNER

Name Pete & Michele Weegar

Mailing Address 447 San Vicente Blvd., #1

City Santa Monica, CA 90[illegible]2 STATE ZIP

WELL LOCATION

Address 2656 Fabnco. Rd.

City

County Los Angeles

APN Book 4448 Page 007 Parcel 068

Township 015 Range 17W Section 24

Latitude ° ' " NORTH Longitude ° ' " WEST

DEG. MIN. SEC. DEG. MIN. SEC.

LOCATION SKETCH

NORTH

...See Attached

WEST EAST

SOUTH

Illustrate or Describe Distance of Well from Roads, Buildings, Fences, Rivers, etc. and attach a map. Use additional paper if necessary. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (✓)

___ NEW WELL

___ MODIFICATION/REPAIR

___ Deepen

X Other (Specify) Rehabilitatio

___ DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USES (✓)

WATER SUPPLY

X Domestic ___ Public

___ Irrigation ___ Industrial

___ MONITORING

___ TEST WELL

___ CATHODIC PROTECTION

___ HEAT EXCHANGE

___ DIRECT PUSH

___ INJECTION

___ VAPOR EXTRACTION

___ SPARGING

___ REMEDIATION

___ OTHER (SPECIFY)

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH TO FIRST WATER ___ (Ft.) BELOW SURFACE

DEPTH OF STATIC WATER LEVEL ___ (Ft.) & DATE MEASURED

ESTIMATED YIELD * ___ (GPM) & TEST TYPE

TEST LENGTH ___ (Hrs.) TOTAL DRAWDOWN ___ (Ft.)

** May not be representative of a well's long-term yield.*

CASING (S)

DEPTH - FROM SURFACE ft. to ft.	BORE-HOLE DIA. (Inches)	TYPE (✓) BLANK	BORE-HOLE	CASING	FILL PIPE	MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (inches)
0 : 128	12 1/4	X				F480	6		
128 : 368	12 1/4		X			F480	6		.040

ANNULAR MATERIAL

DEPTH FROM SURFACE ft. to ft.	TYPE CEMENT (✓)	BENTONITE (✓)	FILL (✓)	FILTER PACK (TYPE/SIZE)
0 : 54	X			
54 : 368				Lapis 3

ATTACHMENTS (✓)

___ Geologic Log

___ Well Construction Diagram

___ Geophysical Log(s)

___ Soil/Water Chemical Analyses

___ Other

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Cascade Well & Pump Company
PERSON, FIRM, OR CORPORATION (TYPED OR PRINTED)

ADDRESS 1200 Via Regina, Santa Barbara, CA 9311[illegible]
CITY STATE ZIP

SIGNATURE [signature] 7-4-01
SIGNATURE OF DECLARANT(S) DATE SIGNED

496704
C-57 LICENSE NUMBER

DWR 188 REV. 11-97

IF ADDITIONAL SPACE IS NEEDED, USE NEXT CONSECUTIVELY NUMBERED FORM

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PAT-CHEM LABORATORIES

Customer: Mr.Pete & Michele Weeger
447 San Vicente Blvd. Apt. #1
Santa Monica, Ca., CA 90402

Attention: Tim Cleath

Sample I.D.#: 61708 P.O.#:

Report Date: 6/28/01

Subject: Well Water Sample

Sample Information:
Sample Date: 6-25-01
Sampled by: P. Weeger
Location: 2856 Fabuco Road

Results:

Parameter	EPA Method	Detection Limit		Analysis
pH	150.1	0.1 units		6.9 units
Conductivity	120.1	0.1 umho/cm		1,753 umho/cm
T. Dissolved Solids	160.1	5 mg/L		1,544 mg/L
TDS (summation)	---	--- mg/L		1,697 mg/L
Color (*)	110.1	0.5 units		24 units
Odor	140.1	1.0 TON	<	1.0 TON
Turbidity (*)	180.1	0.5 NTU		8.2 NTU
Hardness	130.2	0.5 mg/L		1,086 mg/L
Calcium	200.7	0.02 mg/L		300 mg/L
Magnesium	200.7	0.1 mg/L		87.7 mg/L
Sodium	200.7	0.1 mg/L		61.7 mg/L
Potassium	200.7	0.02 mg/L		2.94 mg/L
Cations		meq/L		25.0 meq/L

Comments: Sample was analyzed per EPA Methods for Chemical Analysis of Wate and Waste (EPA-600/4-79-020).

(*) Exceeds California Title 22 Maximum Contamination Limits. Reprinted 7-9-01; Received letter from Mr. Weeger requesting customer name change.

Respectfully Submitted,

Pat Truechner
Laboratory Director

Ex 24
page 16 of 20

PAT-CHEM LABORATORIES

Customer: **Pete J. Weeger**
447 San Vicente Blvd. Apt. # 1
Santa Monica, CA 90404

Attention: Tim Cleath

Sample I.D.#: 61708 P.O.#:

Report Date: 6/28/01

Subject: Well Water Sample

Sample Information:

Sample Date: 6-25-01
Sampled by: P. Weeger
Location: 2656 Fabuco Road

Results:

Parameter	EPA Method	Detection Limit		Analysis
Iron (*)	200.7	0.03 mg/L		1.73 mg/L
Manganese (*)	200.8	0.01 mg/L		1.20 mg/L
Total Alkalinity	310.1	1.0 mg/L		337 mg/L
Bicarbonate	310.1	1.0 mg/L		337 mg/L
Carbonate	310.1	1.0 mg/L	<	1.0 mg/L
Sulfate (*)	300	1 mg/L		790 mg/L
Chloride	300	1 mg/L		67 mg/L
Nitrate	300	0.1 mg/L	<	0.1 mg/L
Nitrite	300	0.1 mg/L	<	0.1 mg/L
Fluoride	340.2	0.02 mg/L		0.47 mg/L
Anion		meq/L		24.7 meq/L
Ammonia	350.2	0.05 mg/L		0.09 mg/L
Arsenic	200.8	1 ug/L		3.8 ug/L
Selenium	200.8	5 ug/L	<	5 ug/L
Boron	200.7	0.02 mg/L		0.07 mg/L

Comments: Sample was analyzed per EPA Methods for Chemical Analysis of Water and Waste (EPA-600/4-79-020).

(*) Exceeds California Title 22 Maximum Contamination Limits.

Respectfully Submitted,

Pat Brueckner
Laboratory Director

Ex 24
page 17 of 20

PAT-CHEM LABORATORIES

Customer: Mr.Pete & Michele Weeger
447 San Vicente Blvd. Apt. #1
Santa Monica, Ca, CA 90402

Attention: Tim Cleath

Sample I.D.#: 617738 P.O.#:

Report Date: 7/3/01

Subject: Water Sample

Sample Information:

Sample Date: 6-28-01
Sampled by: Customer
Location: 2658 Fabuco Road - hose from well

Results:

Parameter	EPA Method	Detection Limit	Analysis
Total Coliform (MO-MUG)	9223B	-----	absent
Fecal Coliform (MO-MUG)	9223B	-----	absent

Comments: Sample was analyzed per EPA Methods for Chemical Analysis of Water and Waste (EPA-600/4-79-020).

For the parameters tested, sample as submitted, meets the requirements of the California Health and Safety Code, Title 22 for drinking water.
Reprinted 7-9-01; Received letter from Mr. Weeger requesting customer name change.

Respectfully Submitted,

Patricia Gardner
Laboratory Director

Ex 2Y
page 18 of 20

PAT-CHEM LABORATORIES

Customer: Mr.Pete & Michele Weeger
447 San Vicente Blvd. Apt. #1
Santa Monica, Ca , CA 90402

Attention: Tim Cleath

Sample I.D.#: 81842 P.O.#:

Report Date: 7/11/01

Subject: Well Water Sample

Sample Information:
Sample Date: 7-6-01
Sampled by: Customer
Location: 2656 Fabuco Road - Filtered with Vortex Systems

Results:

Parameter	EPA Method	Detection Limit		Analysis
pH	150.1	0.1 units		7.9 units
Conductivity (*)	120.1	0.1 umho/c		1739 umho/cm
T. Dissolved Solids (*)	160.1	5 mg/L		1714 mg/L
TDS (summation)	—	— mg/L		1863 mg/L
MBAS	425.1	0.05 mg/L	<	0.05 mg/L
Color	110.1	0.5 units	<	0.5 units
Odor	140.1	1.0 TON	<	1.0 TON
Turbidity	180.1	0.5 NTU		0.2 NTU
Hardness	130.2	0.5 mg/L		1116 mg/L
Calcium	200.7	0.02 mg/L		286 mg/L
Magnesium	200.7	0.1 mg/L		91.4 mg/L
Sodium	200.7	0.1 mg/L		61.9 mg/L
Potassium	200.7	0.02 mg/L		3.5 mg/L
Cations		meq/L		24.6 meq/L
Copper	200.8	0.01 mg/L	<	0.01 mg/L
Iron (*)	200.7	0.03 mg/L		0.85 mg/L
Manganese (*)	200.8	0.01 mg/L		0.83 mg/L

Comments: Sample was analyzed per EPA Methods for Chemical Analysis of Water and Waste (EPA-600/4-79-020).

(*) Exceeds California Title 22 Maximum Contamination Limits

Respectfully Submitted,

Pat Brueckner
Laboratory Director

Ex 24
page 19 of 20

PAT-CHEM LABORATORIES

Customer: Mr.Pete & Michele Weeger
447 San Vicente Blvd. Apt. #1
Santa Monica, Ca , CA 90402

Attention: Tim Cleath

Sample I.D.#: 61842 P.O.#:

Report Date: 7/11/01

Subject: Well Water Sample

Sample Information:
Sample Date: 7-5-01
Sampled by: Customer
Location: 2656 Fabuco Road - Filtered with Vortex Systems

Results:

Parameter	EPA Method	Detection Limit		Analysis
Total Alkalinity	310.1	1.0 mg/L		333 mg/L
Hydroxide	310.1	1.0 mg/L	<	1.0 mg/L
Carbonate	310.1	1.0 mg/L	<	1.0 mg/L
Bicarbonate	310.1	1.0 mg/L		333 mg/L
Sulfate (*)	300	1 mg/L		776 mg/L
Chloride	300	1 mg/L		111 mg/L
Nitrate	300	0.1 mg/L	<	0.1 mg/L
Fluoride	340.2	0.02 mg/L		0.61 mg/L
Anions		meq/L		24.8 meq/L
Zinc	200.8	0.01 mg/L		2.32 mg/L
Arsenic	200.8	1 ug/L		3.7 ug/L
Aluminum	200.8	25 ug/L		28 ug/L
Barium	200.8	10 ug/L		32 ug/L
Cadmium	200.8	1 ug/L	<	1 ug/L
Lead	200.8	1 ug/L	<	1 ug/L
Chromium	200.8	1 ug/L	<	1 ug/L
Selenium	200.8	5 ug/L	<	5 ug/L
Silver	200.8	1 ug/L	<	1 ug/L
Mercury	245.1	1 ug/L	<	1 ug/L

Comments: Sample was analyzed per EPA Methods for Chemical Analysis of Water and Waste (EPA-600/4-79-020).

(*) Exceeds California Title 22 Maximum Contamination Limits

Respectfully Submitted,

Pat Bruecknor
Laboratory Director

CORPORATE OFFICE: 11960 Discovery Ct. • Moorpark, CA 93021 • (805) 532-0012 • FAX (805) 532-0016

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page 20 of 20

STATE OF CALIFORNIA— THE RESOURCES AGENCY GRAY DAVIS, GOVERNOR

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
AN FRANCISCO, CA 94105- 2219
OICE AND TDD (415) 904- 5200
FAX (415) 904- 5400

23 July 2001

GEOLOGIC REVIEW MEMORANDUM

To: James Johnson, Coastal Program Analyst
From: Mark Johnsson, Senior Geologist
Re: Weeger CDP application (4-00-143)

In reference to the above after-the-fact permit application for a residential water well, I have reviewed the following documents:

1) Bing Yen and Associates 2000, "Hydrogeologic evaluation, 2656 N. Fabuco Road, Topanga Canyon Area, Los Angeles County, California", 2 p. hydrogeologic letter report dated 2 November 2000 and signed by D. S. Moors (CEG 1901 CHG 607).

2) Cleath and Associates 2001, "Hydrogeologic analysis of proposed water supply for Weeger residence at 2656 Fabuco Road, Los Angeles County, California", 9 p. hydrogeologic report dated 17 July 2001 and signed by T. S. Cleath (CHG 81 CEG 1102).

3) Weeger 2001, "Coastal Permit Application No. 4-00-143, Weeger", 2 p. letter dated 24 January 2001 and signed by P. a. M. Weeger.

4) Weeger 2001, "Coastal Permit Application No. 4-00-143, Weeger", 1 p. letter dated 30 June 2001 and signed by P. a. M. Weeger.

In addition, I have had numerous conversations with the applicant and with his hydrogeologic consultant, Mr. Tim Cleath. I have visited upper Tuna Canyon, and am generally familiar with this part of the Santa Monica Mountains.

The principal concern regarding the proposed approval of the existing well is whether its use as a residential water supply could have an adverse impact on environmentally sensitive habitat areas (ESHA) in upper Tuna Canyon, which has been designated a Los Angeles County Significant Ecological Area. Tuna Canyon contains a year-round stream with well-developed riparian vegetation.

This development is very similar to a project approved by the Commission in November 2000, CDP 4-96-025-A3 (Jason). At that time, several hydrogeologic reports were prepared by the applicant's technical consultant to address this principal concern. Hydrogeologic information was sketchy, however, as the consultant had no well pumping test data available, and information concerning the aquifer(s) in the area was very general. Nevertheless, sufficient information was available for me to conclude that it was unlikely that the proposed residential water use would adversely affect the

ESHA. Further, even if full build-out of the other 15 lots in the subdivision were to occur, I still concluded that significant impacts to the ESHA were unlikely. The Commission adopted these conclusions into their findings by approving, with conditions, the proposed water well.

The application for the Weeger well was accompanied by a hydrogeologic report by Bing Yin and Associates (reference 1) that concluded that hydrogeologic conditions beneath the Weeger property were identical to those under the adjacent Jason property, and that the conclusions of the previous hydrogeologic studies could be applied to the Weeger well. Because the application under consideration is for an existing well, however, there is potential for learning far more about the aquifer than was possible during the previous permitting process. The Weeger well lies approximately 600 feet from the Jason well (which has now been constructed). By conducting pump tests on the Weeger well and, especially, by using the Jason well as an observation well, valuable information concerning the nature of the aquifer underlying the site can be obtained. I requested that the applicants perform such tests, and that they comment on the nature of the aquifer, document the expected water usage, estimate the effects of this water usage (including the cumulative effects of full build-out of all lots in the subdivision), and estimate the impacts to the ground water contributions to the ESHA in upper Tuna Canyon.

The results of the pump test (reported on in reference 2) demonstrate conclusively that the aquifer underlying the site is a confined aquifer, not the simple unconfined aquifer hypothesized by the consultant for the Jason well. This is demonstrated by the very low storativity value (0.0016) calculated from the pump test. This result is consistent with the steeply dipping beds of the Sespe Formation, which consists of alternately more and less permeable layers of fractured sandstone and shale.

In response to my request for an estimate of water usage, the applicants prepared reference (4), which contains several exhibits demonstrating to my satisfaction that the proposed home will use about 500 gallons of water per day on an annually averaged basis. This is far below the estimates provided by the opponents to the Jason project, who provided water bills and other evidence that some homes in the immediate area use as much as 2400 gallons per day, at least in the dry season. The evidence that the applicants provide to support their lower figure is:

1) The results of a nationwide study by the American Water Works Association, which chose the Las Virgenes Municipal Water District, located in the Santa Monica Mountains, as one of its twelve study sites. This study provides an average usage figure of 630 gallons/day.

2) A letter from Peter Spandau, Supervising Engineer for District 29 waterworks, which supplies water to homes in Tuna Canyon that are on imported water.

From November 1999 through October 2000, 22 customers used 5,422,252 gallons, for a seasonally averaged mean usage of 675 gallons/day.

3) The applicants' own research that indicates that the above values incorporate users who irrigate non-native vegetation extensively and/or own stables, both of which tend to increase water usage. The applicants propose no stables and state that they will plant largely in native vegetation.

4) A detailed inventory of the fixtures to be incorporated in the planned residence and its irrigation systems. The applicant arrives at a water usage figure for their particular residence of 426.9 gallons/day, to which they add a 15% contingency, for a total of 490.9 gallons/day.

I find these arguments compelling, and concur that the average daily water usage of the proposed residence, annually averaged, will likely be approximately 500 gallons per day. The desirability for some type of water treatment was acknowledged in reference (2); the water tapped by the Weeger well is relatively high in dissolved solids, iron, sulfate, and manganese. The use of a reverse osmosis water system may be necessary for drinking water; use of such a system might increase slightly the usage estimate provided above.

The potential recharge area for the confined aquifer drawn by the well is relatively small, as the area lies near the crest of the Santa Monica Mountains and is hydrologically isolated from higher regions by deep canyons. Some concern exists that such a confined aquifer with such a small watershed could be impacted by even rather modest ground water withdrawals. Two conditions lead me to conclude that this is not likely. First, the 24-hour pumping test removed approximately 47 gallons per minute for a total of approximately 67,680 gallons. This very heavy withdrawal resulted in less than one foot of drawdown in the Jason well, located only 600 feet away. The fact that there was a response at all indicates that the wells are hydrologically connected. Although the test did not continue sufficiently long to allow the Jason well to come to equilibrium, the very high removal rates, the demonstrated hydrologic connection, and the limited response of the well suggest to me that any impact on seeps or springs in upper Tuna Canyon would not be significant. I feel that this statement holds for full build-out as well as for the single well. The second condition that suggests to me that the aquifer will not be significantly impacted is the fact that much of the water extracted will be recharged to the aquifer through the septic system proposed for the house. Of the water removed for household and irrigation use, only that amount lost to evapotranspiration or actually consumed and removed from the site will truly be lost from the aquifer. Opponents to the Jason project raised the issue that the recharge of ground water through septic systems may lead to water quality concerns. This is generally not the case; a properly operating septic system will remove essentially all of the bacterial contamination within a few tens of feet of the leachfield. Nitrate loading could occur if rapid percolation conditions exist, but nitrate levels in the tested water

were below the detection limits (reference 2), despite the proximity of existing septic systems upgradient of the site.

Finally, the hydrogeology report (reference 2) acknowledges that springs issue from the aquifer tapped by the Weeger well west of the well, but the best evidence points to the conclusion that these are wet-season springs only. During the dry season, the uppermost reaches of the canyon, where these springs are located, is dry. I concur with the conclusion that springs lower in the canyon than the level of the water in the Weeger well would not likely be affected appreciably by withdrawal of water from the well. Reference (2) argues that ground water would only be reduced to the springs in the upper part of the canyon during the rainy season, at which time that water is in excess due to surface contributions. While this may be true, the transition from dry to rainy season, and from rainy season to dry, would likely be shifted in time and in duration if there were a significant change in the ground water budget, making this argument somewhat specious. Nevertheless, it is my opinion that the results of the pumping test (which showed very limited drawdown at the Jason well despite very heavy pumping) and the fact that much of the water extracted would be returned to the aquifer suggests that impacts to the ground water supply of the ESHA would not be significant. As the Commission found for similar reasons during permitting of the Jason well, cumulative impacts of full build-out would also likely not be significant.

Accordingly, it is my opinion that the applicant has demonstrated that the proposed permitting of the existing water well, to serve the development as proposed, would have no significant impact, taken singularly or cumulatively. In order to ensure that this is the case, I recommend that the permit be conditioned to require landscaping by native plants, the prohibition of stables on the property, the use of restricted flow plumbing fixtures, and the use of an on-site wastewater disposal system.

I hope that this review is helpful. Please feel free to contact me with any questions.

Sincerely,

Mark Johnsson, PhD, CEG
Senior Geologist

Ex 25
pg 4 of 4

RCDSMM proposal

Mr. Johnson : FKI : 2000 report from Joey Austen

Tuna Canyon Significant Ecological Area

The Tuna/Pena Canyon SEA was originally designated because it represents a lingering example of coastal canyon environments that used to border the entire Santa Monica Bay. Few such undisturbed areas remain. Today, despite building of numerous homes along the upper perimeter of the watershed, it still retains much of its pristine character. Rock outcrops, waterfalls lined with ferns, and a complex mosaic of coastal sage scrub and chaparral, dissected by oak-sycamore-alder riparian drainages define the area. Biologically, the area is a critical portion of a wildlife linkage that connects Topanga State Park and the Cold Creek Preserve, leading then to Malibu Creek State Park. Numerous sightings of mountain lions and bobcats indicate that it is still quite actively used. The addition of Little Las Flores Canyon into the SEA will protect this valuable open space linkage, and preserve an important example of the upper watershed reaches of a coastal creek with its associated biotic community. Since the original designation of this SEA, several rare, threatened or endangered species have been found in the area.

Documented Resources found in the Tuna SEA and surrounding undeveloped areas extending into Little Las Flores Canyon as of November 1999

References: California Natural Diversity Database, Santa Monica Mountains National Recreation Area database

Flora:

Southern Sycamore Alder riparian Woodland*	
Southern Coast Live Oak woodland*	
Coastal Sage Scrub*	
Black Cottonwood	Populus trichocarpa
Giant Chain Fern	Woodwardia fimbriata
Western Dichondra*	Dichondra occidentalis
CA Walnut*	Juglans californicum

Fauna:

Insects:

Sandy Beach Tiger Beetle	Cincindela hirticollis gravida
Santa Monica Shieldback Katydid*	Neduba longipennis
Globenose Dune Beetle	Coelus globosus

Amphibians:

CA Newt*	Taricha torosa torosa
CA Slender Salamander	Batrachoseps nigriventris
Monterey Ensatina*	Ensatina ershscholtzi ershscholtzi
CA Treefrog	Hyla cadaverina

EXHIBIT NO. 26
APPLICATION NO. 4-00-143
Document from Public

page 1 of 2

RECEIVED
JUL 10 2001
CALIFORNIA
COASTAL COMMISSION
SOUTH CENTRAL COAST DISTRICT

Tuna Canyon Significant Ecological Area

Pacific Treefrog	Hyla regilla
Reptiles:	
CA Horned Lizard*	Phrynosoma coronatum frontale
Great Basin Fence Lizard	Scetoporus occidentalis bisoriatus
CA Side-blotched Lizard	Uta stanshuriano elegans
San Diego Alligator Lizard	Elgaria multicarinata welli
Two striped Garter snake*	Thumnophis hammondi hammondi
CA Kingsnake*	Lampropeltis getulus californiae
Southern Pacific Rattlesnake	Crotulus viridis helleri
Birds:	
Cooper's Hawk*	Accipiter cooperii
Northern Harrier*	Circus cyaneus
Yellow Warbler*	Dendroica petechia
Yellow breasted chat	Icteria virens
Loggerhead Shrike*	Lanius ludovicianus
Mountain Quail*	Oreortyx pictus
Western Bluebird	Sialia mexicana
Barn Owl	Tyto alba
Mammals:	
Ringtail	Bassariscus astutus
Western Mastiff Bat*	Eumops perotis
Bobcat	Felis rufus escuinapae
Mountain Lion	Felis concolor
Long-tailed Weasel	Mustela frenata
Ornate Shrew*	Sorex ornatus salicornicus
Badger*	Taxidea taxus

* = appears on state or federal sensitive, rare, threatened or endangered lists

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pg 20 of 2

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

John & Helen Lyons
36443 165th Street East
Llano, CA 93544

July 25, 2001

RE: Coastal Development Permit Application No. 4-00-143, Pete and Michele Weeger, 2656 No. Fabuco Road, Malibu, CA

Dear John & Helen Lyons;

This office has received an request to process Coastal Permit Application Number 4-00-143 from Pete and Michele Weeger to construct a:

two story 13 ft. to 33 ft. high, split level, 4,591 sq. ft. single family residence, attached two car 867 sq. ft. garage/workshop, pool & jacuzzi with non-chemical filtration system and pool cover for evaporation and energy conservation, after the fact development of a water well, a 5,150 gallon domestic water tank, rainwater harvesting system with buried 8,500 gallon storage tank, 120 ft. paved driveway with fire department turnaround constructed with turf block and planted with native needle grass, driveway restoration w/turf block & native needle grass for existing northern access driveway, restore existing dirt driveway on southeast portion of property with needle grass and sandstone cobble, pave 260 ft. length of No. Fabuco, grade 2,300 cu/yds of cut, 200 cu/yds of fill, export 2,100 cu/yds of material to disposal site located outside the coastal zone or a location with a coastal permit for disposal, drought resistant native landscaping, temporary living trailer, onsite drainage with catch basin and filter, entry gates, fencing, and septic system.

The project site is located at 2656 No. Fabuco Road, Topanga near Malibu, CA. The application is filed and scheduled for a public hearing at the Coastal Commission's August 7 - 10, 2001 meeting in Redondo Beach.

Coastal Act Section 30601.5 states as follows:

> All holders or owners of any interests of record in the affected property shall be notified in writing of the permit application and invited to join as co-applicant.

Because our records in the application file indicate that you are the owner of a fee interest in the property across which a portion of the road grading and paving improvements are proposed, the Commission is notifying you of this application pursuant to Section 30601.5. With this letter, staff are inviting you to join this application as a co-applicant if you so choose. If you wish to join as a co-applicant, you may indicate your agreement by signing and returning a copy of this letter. If you have any questions or need further information about this application or the proposed project before you sign and return this letter, please call me or Jack Ainsworth at the number above or call the applicant, Pete Weeger at 310-850-9800.

Sincerely,

James Johnson
Coastal Program Analyst

AGREED:

_____
Names (Print)

_____
Signatures

_____
Property Address

cc: Pete Weeger
400143weegercoappletter

EXHIBIT NO. 27
APPLICATION NO. 4-00-143
Co-applicant letter