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

CALIFORNIA COASTAL COMMISSION
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Staff Report:	6/22/00
Hearing Date:	7/13/00

STAFF REPORT: REVISED FINDINGS

APPLICATION: 4-98-334

APPLICANT: State of California, Santa Monica Mountains Conservancy

PROJECT LOCATION: Ramirez Canyon Park (formerly the Streisand Center for Conservancy Studies) at 5750, 5775, 5800, 5802, and 5810 Ramirez Canyon Road, Malibu, County of Los Angeles

DATE OF COMMISSION ACTION: April 12, 2000

COMMISSIONERS ON THE PREVAILING SIDE: Daniels, Desser, Dettloff, Estolano, Hart, Kruer, McClain-Hill, Nava, Potter, Reilly, Woolley, and Chair Wan.

PROJECT DESCRIPTION: Convert 5 existing single family residences (on 6 lots) to use for offices and appurtenant facilities for up to 14 staff and 2 maintenance workers, and use one of the residences to house a ranger and family; install two water tanks to supply a backup water source for fire fighting; provide on site parking in a variety of locations; permanently abandon specified existing septic system components; install new wastewater treatment facility, including treated effluent discharge plan; continuously maintain a minimum of three portable toilets on site for use by all groups of more than 40 participants and by participants in public outreach activities; conduct special events for groups of up to 200 guests (subject to a variety of daily, monthly, and seasonal restrictions), and small group gatherings (such as workshops, meetings, and retreats) and tours, for groups of up to 40 participants; establish satellite parking locations to serve van shuttles to the site; install and/or improve on-site trails and picnic facilities; conduct recreational and interpretive programs for physically-challenged park visitors; perform structural reinforcements to existing wooden bridge on Ramirez Canyon Road, perform fuel modification on site and along Ramirez Canyon Road, and undertake specified improvements to on site driveways and turnout areas for emergency vehicle access, all in accordance with the recommendations and requirements of state and county fire and life safety reviewers. The applicant has renamed the former Streisand Center for Conservancy Studies to Ramirez Canyon Park.

LOCAL APPROVALS RECEIVED: The proposed project is a State facility within the City of Malibu; however, the City does not have a certified Local Coastal Program and

thus lacks the land use regulatory authority over the project that would otherwise be conferred upon the City through the Coastal Act.

SUBSTANTIVE FILE DOCUMENTS: Certified Malibu/Santa Monica Mountains Land Use Plan (LUP) and associated certified maps; revised project description packet submitted by applicant dated December 8, 1999, further revised project description submitted by applicant dated March 6, 2000; Grading, Drainage, and BMP Improvements at Proposed Parking Areas, revised draft dated March 20, 2000, prepared by Penfield & Smith; Septic System Analysis prepared by Penfield & Smith, dated March 9, 2000; Ramirez Canyon Road Bridge Analysis, prepared by Penfield & Smith, dated March 22, 2000; California Department of Fish and Game determination that no streambed alteration agreement is required for proposed bridge reinforcements, dated March 16, 2000; Water Quality Analysis prepared by Penfield and Smith, dated March 9, 2000, Revenue/cost summary for site operations submitted by applicant on March 27, 2000, and previous substantive file documents cited in 1/13/00 staff report, herein incorporated by reference.

LIST of EXHIBITS: See Attachment A.

STAFF RECOMMENDATION: Staff recommends that the Commission adopt the following revised findings in support of the Commission's action on April 12, 2000 approving Coastal Development Permit 4-98-334 with 17 Special Conditions set forth below.

Staff notes that specific changes to the previous staff recommendation made by staff and by the Commission at the April 12, 2000 hearing include: the addition of a specific timeline for implementation of new septic system construction (a change to Special Condition 8), the revision of Special Condition 3 (Traffic Trip Restrictions) to allow a maximum of 80 trips per day (40 round trips), and the deletion of a special condition (previously numbered as 14) that would have required the provision of advance notice of events to the Ramirez Canyon Homeowners Association.

The change to 80 trips per day in Special Condition 3 is also reflected in minor changes to the associated findings set forth on page 36 of this report.

Executive Summary
(from April 2000 staff report)

At the Commission's direction, Commission staff prepared a recommendation regarding the proposed project for Commission consideration at the January 13, 2000 Commission meeting (staff report dated December 21, 1999). At that hearing, the Commission noted that a number of studies commissioned by the applicant were in progress (for example, an evaluation of the condition and capacity of the aging septic systems, water quality tests, parking capacity analysis, and a structural analysis of the wooden access bridge on Ramirez Canyon Road). The Commission directed staff to prepare a subsequent recommendation for the April 2000 hearing, anticipating that the

pending analyses would be completed by that time, and the results available to better inform the Commission's ultimate decisions regarding the applicant's proposal.

In addition, the Commission directed staff to further address traffic impacts on Ramirez Canyon Road, fire safety, septic system capacity/design, and other planning concerns raised by the applicant's proposal in the subsequent staff report. The applicant consented to a 90-day extension of time to accommodate the Commission's proposed hearing schedule.

Since the January, 2000 meeting the applicant has submitted: a) the results of the septic system evaluation, b) the results of up- and downstream tests of Ramirez Canyon Creek, c) an engineering evaluation of the wooden bridge on Ramirez Canyon Road, d) a revised parking and fire/emergency access plan for the subject site, e) a traffic analysis, f) an amended project description to incorporate an event schedule, install a new, state-of-the-art wastewater treatment and recycled water disposal system, and to reinforce the wooden bridge south of the site entrance, and g) a summary of the operating costs/revenues associated with the park.

The revised project description seeks approval for:

- 32 special events per year (March through October only):
  (16 events for up to150 guests per event, March, and August through October)
  (16 events for up to 200 guests per event, April through July)
  No more than one special event per week,
- 8 tours per month, (40-person maximum per tour) (all year),
- 4 small gatherings per month (40-person maximum per gathering) (all year),
- 10 outreach programs per month (proposed as a maximum, for up to 40 participants) (all year).

The applicant's project description contains detailed plans for emergency response, event operating restrictions, etc. The revised project description includes the addition of a second ranger at events with more than 100 guests, adds the month of August to the defined peak fire season, sets forth the minimum number of 15-occupant vans that must be provided for non-fire season special event shuttles (a measure that will further minimize traffic on Ramirez Canyon Road), and provides measures to limit and track the number of vehicles at each event. The proposed uses for the five existing residences have not changed since the January 2000 hearing. The complete, revised project description is attached as Exhibit 1.

The Conservancy seeks authorization for up to 16 revenue-generating events and 10 non-revenue-generating events per month during the special event season (March through October), and for up to 12 revenue-generating events and 10 non-revenue-generating events per month during the remainder of the year. As shown on Exhibit 8, the Conservancy asserts that they need the proposed number of commercial events to provide funding for the operation, maintenance and landscaping costs for the site as well as for the proposed new outreach events.

The staff also notes that the applicant assured the Commission at the January meeting that a complete coastal development permit application for unpermitted streambed alteration performed within the Ramirez Canyon Creek corridor prior to the Conservancy's acquisition of the subject site would be submitted prior to the April, 2000 Commission meeting. The application had not been received prior to the publication of this report; however, the applicant's representatives have assured staff that the April deadline will be met.

Concerns raised at previous hearing. The Commission, Commission staff, and the public have raised a number of issues which can generally be placed in a few categories, as follows:

Safety, including emergency response to fires in the canyon, evacuation issues, shelter-in-place considerations, and alternative route: See Special Conditions 1, 6, 10, and 11 in particular, and Section B of findings, commencing on page 18.

Septic/Water Quality, including existing system capacity, adequacy of septic system components the applicant proposes to retain, stream contamination potential, environmental health department review, use of portable toilets: See Special Condition 8 and Section C of the findings, commencing on page 27.

Traffic/Transportation, including traffic management plan, traffic restrictions, site uses, van protocol on Ramirez Canyon Road, prohibition on honking, road maintenance dues: See Special Conditions 1, 3, 4, 5, 6, and 13 and findings in Sections A and B.

Site Operations and Neighborhood Character Issues, including noise, hours of operation and event breakdown, and provision of schedules in advance to homeowners: See Special Conditions 1, 2, 3, 14, and 15 and findings in Section E, commencing on page 35.

Staff Note (previous):

Preliminary Injunction obtained by the City of Malibu

The City of Malibu filed suit against the Conservancy in November 1999, alleging that the Conservancy was holding commercial events at its Ramirez Canyon property in violation of the Coastal Act. On March 23, 2000, the Superior Court issued a preliminary injunction prohibiting the Conservancy from holding commercial events at the property until a further order is issued by the Court.

Analysis of Appeal No. A-3-SLO-98-025 (Applicant: Scoggins)

At the Commission's previous hearing on this application (January 13, 2000), the Commission asked staff to review the Commission's decision in Appeal No. A-3-SLO-98-025 (Applicant: Scoggins). In that case, the Commission found substantial issue and ultimately denied a coastal development permit for a proposal to hold up to 12

"events" (such as weddings) per year on a 14-acre parcel zoned and used for agriculture, near Morro Bay, in San Luis Obispo County. The Commission found that the proposal was inconsistent with Local Coastal Program (LCP) policies limiting non-agricultural uses on land zoned for agriculture. The Commission found that the project would result in permanent loss of agricultural land; was not necessary to support continued agricultural use of the site; and was not one of the priority uses identified in the LCP when a supplemental use is needed to support continued agricultural use.

Because the County of San Luis Obispo has a certified LCP, the standard of review in Scoggins was whether the proposed project was consistent with the policies and provisions of the certified Land Use Plan and implementing measures. As noted above, the proposed project was not consistent with specific policies—particularly related to agricultural land uses—set forth in the County's certified LCP.

The project proposed by the Conservancy is located within the City of Malibu. Unlike the County of San Luis Obispo, the City of Malibu does not have a certified LCP. Therefore, the standard of review for the pending application is whether the proposed project is consistent with the applicable policies of the Coastal Act. As discussed below, the staff has determined that the proposed project, as conditioned, is consistent with the Coastal Act.

Further Staff Note: Since the preparation of the above executive summary for the April hearing, the applicant has submitted an application (4-00-084) for previously unauthorized streambed alteration and riparian corridor development. The application is presently incomplete, but the applicant has consulted with Commission staff and is refining the project description. Condition compliance for CDP 4-98-334 is progressing but has not been completed.

STAFF RECOMMENDATION:

Staff recommended, and the Commission adopted the resolution and findings set forth below on April 12, 2000.

RESOLUTION TO APPROVE THE PERMIT 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. Compliance. All development must occur in strict compliance with the proposal as set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.

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

5. Inspections. The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.

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

7. Terms and Conditions: See Special Condition 16.

III. Special Conditions

1. Approved Site Uses

The following uses of the subject site are approved pursuant to Coastal Development Permit 4-98-334, subject to the restrictions set forth in the applicable special conditions:

A. Park administrative offices for the Conservancy and Mountains Recreation and Conservation Authority (MRCA) (all of Barwood facility and upper story of Barn facility);
B. Ranger residence utilized by a ranger charged with security and public safety duties;
C. Public improvements for the proposed new trail and creekside picnic and recreation areas pursuant to Special Condition 7;
D. Use of the Peach House and Barn facility for small group gatherings and tours for up to 40 participants each, and to a limited extent the Art Deco facility may be used

to greet guests or as a component of site tours, but not as a primary site for group functions;

E. Special events, groups, workshops, tours, etc., may be held in accordance with the following standards:

(1) Small group gatherings and site tours: May be conducted year-round, seven days per week, 8:00 a.m. until 9:00 p.m. Sunday through Thursday, or until 10:00 p.m. on Friday or Saturday, for groups of up to 40 participants, and may not exceed 8 tours per month, total, and 4 small group gatherings per month, total. The tours and small group gatherings are not interchangeable, and shall not be recombined in different proportions. In accordance with the applicant's proposal, the premises are provided free for such gatherings to non-profit organizations, educational groups, and public agencies, and for a fee to for-profit groups. When small group gatherings and tours are conducted between August 1 and December 31 (peak fire season), all vehicles necessary to evacuate the guests immediately must remain on site throughout the event.

(2) Special events: Special events are defined as gatherings of guests numbering more than 40, and events of any size over 40 may only be held a maximum of one day per week during the special event season, as specified below, including weekends and holidays, and shall be restricted to the hours between 8:00 a.m. and 9:00 p.m. Sunday through Thursday, and 8:00 a.m. and 10:00 p.m. on Friday and Saturday. All guests and event support providers must leave the site no later than 10:00 p.m. on Sunday through Thursday and no later than 11:00 p.m. on Friday and Saturday. Special events for up to 200 guests may be conducted between April 1 and August 1, on one day per week only, including weekends and holidays. In addition, events up to 150 guests maximum may be held on one day per week only, from March 1 through April 1, and from August 1 through October 31 (peak fire season, which is defined as August 1 through December 31 annually for the purposes of this permit). In addition, special events during fire season must retain all guest van shuttles and drivers continuously on site during the subject event. Special events for groups of over 40 participants are held outdoors only. No special events are held between October 31 and March 1.

F. Outreach events: These programs may be conducted year-round, seven days per week, from 8:00 a.m. to dusk, and are intended to provide access and recreation opportunities primarily for disadvantaged youths, physically-challenged visitors, and seniors. These programs are provided at no cost to the participants, and the Conservancy provides free or low-cost transportation for participants. These events are typically accompanied by two docents or rangers and require a limited number of vans or up to three small transit (RTP) buses to deliver the participants. A minimum of ten outreach events shall be conducted each month at Ramirez Canyon Park, or additional outreach programs as feasible, commencing March 1, 2001.

2. Minimum Outreach Program Requirements; Annual Monitoring Report

A. The applicant shall conduct the maximum number of outreach program events feasible between the date of issuance of Coastal Development Permit 4-98-334 and February 28, 2001. Commencing March 1, 2001 the applicant shall conduct a minimum of ten (10) outreach program events per month throughout the year at Ramirez Canyon Park.

B. The applicant shall submit an annual site use monitoring report to the Executive Director by November 15th of each year following permit approval. The report shall include a summary of the number and kind of events, tours, small gatherings, and outreach programs conducted at Ramirez Canyon Park during the previous twelve (12) months, shall distinguish between revenue-generating and non-revenue-generating events, activities, tours and outreach programs, and shall specify the dates, vehicle trip counts, and event sponsor or beneficiary as applicable, for each.

Final Transportation and Parking Management .

(Note: Traffic Trip Restrictions were revised to authorize up to 80 trips each way (40 round trips) per day maximum.)

3. Traffic Trip Restrictions:

Prior to the issuance of the coastal development permit, the applicant shall submit a final Transportation and Parking Management Plan for the review and approval of the Executive Director, which shall incorporate all provisions of the draft Plan dated March 6, 2000, in addition to the following:

(a) No off-site public coastal access parking, including but not limited to the Winding Way Trailhead public parking, shall be utilized to satisfy the off-site parking requirements associated with Ramirez Canyon Park at any time;

(b) Daily vehicle trips associated with all authorized uses of Ramirez Canyon Park set forth in Special Condition 1 shall be restricted to a maximum of 80 trips each way per day (40 round trips).

4. Off-site Van Shuttle/Carpool Parking:

The final Transportation and Parking Management Plan shall include evidence that offsite parking provisions for groups of up to 200 guests are available at private parking locations for visitors boarding van shuttles or consolidating carpools to Ramirez Canyon Park. The applicant shall submit evidence to the satisfaction of the Executive Director that a sufficient bank of such parking is generally available to accommodate the demands of the authorized uses of Ramirez Canyon Park, without displacing the current parking use of the designated locations. The necessary evidence to achieve compliance with this requirement shall consist of the following, at a minimum, and any additional evidence that the Executive Director deems reasonable, and shall be updated as needed and made available to the Executive Director upon request, throughout the term of Coastal Development Permit 4-98-334:

(a) A letter from the owner and operator of the designated private parking areas documenting the total supply of parking potentially available at each location, and the authority (unless written by the owner) and willingness to grant permission for use of the subject spaces during the typical hours/days of parking demand associated with the uses of Ramirez Canyon Park authorized pursuant to Special Condition 1;

(b) Prior to the issuance of any permit or contract for the use of Ramirez Canyon Park, the applicant shall require the presentation of evidence in the form of a written agreement between the applicable parking area owner and/or operator and the Ramirez Canyon Park special event (or other activity) sponsor that sufficient off site private parking has been secured. If such agreement cannot be obtained then the special event or other proposed activity cannot be held.

5. Protocol on Ramirez Canyon Road

(a) Prior to the issuance of the coastal development permit, the applicant shall place a clearly visible sign at the entrance gate to Ramirez Canyon Park forbidding honking except in cases of emergency;

(b) The final Transportation and Parking Management Plan shall incorporate the requirement that van shuttles minimize the total number of isolated trips on Ramirez Canyon Road by traveling fully loaded with passengers, and in convoys, to the maximum extent feasible.

6. Final Emergency Access and On-Site Parking Plan:

A. Prior to the issuance of Coastal Development Permit 4-98-334 the applicant shall submit for the review and approval of the Executive Director a revised On-Site Emergency Access, Parking and Best Management Practices Plan prepared by a licensed civil engineer and approved by the Los Angeles County Fire Department as adequate to comply with applicable state and county fire and life safety regulations.

B. All vehicles at Ramirez Canyon Park must use the appropriate designated parking areas identified in the approved Plan.

C. All improvement to accessways, roads, parking, placement of signage, or other requirements contained in the Plan required herein must be completed within thirty (30) days of the issuance of Coastal Development Permit 4-98-334, or within such additional time as the Executive Director may allow for good cause.

D. Measures to prevent pollution of Ramirez Canyon Creek by vehicle use of the site shall be addressed pursuant to Special Condition 17 herein.

E. Any substantial changes to the Emergency Access and On Site Parking Plan, other than what is specifically outlined in this special condition, or required elsewhere within these Special Conditions, shall require an amendment to the permit. The Executive Director shall determine whether proposed changes are substantial.

7. Assumption of Risk

A. By acceptance of this permit, the applicant acknowledges and agrees (1) that the site may be subject to hazards from flooding, erosion or wildfire; (ii) to assume the risks to the applicant and the property that is the subject of this permit or injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards. The Commission understands that a legislative appropriation would be required to enable the Conservancy to make the payments referred to in Section (iv) above.

B. Prior to the issuance of the Coastal Development Permit 4-98-334, the applicant shall submit a written agreement, in a form and content acceptable to the Executive Director, incorporating all of the above terms of this condition.

8. Final Septic Disposal System Abandonment and New Wastewater Treatment and Recycled Water System Installation Plan

Prior to the issuance of Coastal Development Permit 4-98-334, the applicant shall submit a final Plan that shall include the components set forth below, for the review and approval of the Executive Director. The Executive Director shall review the final Plan in consultation with the City of Malibu Environmental Health Department, the County of Los Angeles Environmental Health Department, or a qualified registered environmental sanitarian of the Executive Director's choice. The work identified in (a) (b) (c) and (d) shall be done within sixty (60) days of permit issuance. The final Plan shall:

(a) Incorporate all recommendations set forth in the Septic System Analysis prepared by Penfield & Smith, dated March 9, 2000;

(b) Provide for the permanent abandonment of the idle septic system and leachfields located beneath the tennis court, of the leachfield presently serving Barwood, and of the leachfields and/or pits and septic tanks presently serving Barn and Peach buildings. All abandonment plans shall conform with the standards of the Uniform Plumbing Code;

(c) Provide for the installation of a new, on site wastewater treatment system and recycled water reuse program, including a landscape/orchard planting and

management plan designed to maintain sufficient evapotranspiration capacity to provide for the maximum effluent production of the site during all potential seasonal conditions, as proposed in the Septic System Analysis and Recommendations prepared by Penfield and Smith and dated March 9, 2000;

(d) Provide for the installation and maintenance on site of such emergency power generators and fuel supply necessary to maintain the wastewater treatment system (in addition to emergency lighting) continuously for at least twelve (12) hours during an interruption of conventional power supplies;

(e) Provide for the quarterly analysis of water samples drawn immediately up- and down-stream of the subject site for a minimum of four quarters of available streamflow (streamflow in Ramirez Canyon Creek is intermittent). The testing schedule shall commence with the first quarter of available streamflow following the installation of the new wastewater treatment system. The samples shall be analyzed to determine fecal coliform concentration, and the results shall be submitted quarterly to the Executive Director. If the results of the one year analysis are adverse or inconclusive, the Executive Director shall require that additional water quality analyses be performed and that the following measures be implemented:

(1) Within thirty (30) days following a second water test that shows downgradient bacterial counts to be elevated above the upgradient baseline samples tested, the applicant shall submit a plan, including a timeline for implementation, for the further evaluation of the performance of the septic disposal systems associated with the ranger residence and the Art Deco building, for the review and approval of the Executive Director;

(2) If the results of the approved septic review plan fail to rule out the subject septic systems as a potential source of elevated fecal coliform counts downstream of Ramirez Canyon Park, the applicant shall within thirty (30) days following the completion of the review according to the approved timeline, submit a complete permit application to abandon these systems and further upgrade the new wastewater treatment system to accept and treat the effluent from the ranger residence and/or the Art Deco building, as indicated.

9. Future Development

This permit is only for the development described in Coastal Development Permit 4-98-334. Pursuant to Title 14 California Code of Regulations sections 13250(b)(6) and 13253(b)(6), the exemptions otherwise provided in Public Resources Code section 30610(a) and (b) shall not apply to the entire parcel. Accordingly, any future improvements to the subject structures or lands, or changes in the kinds or intensities of the uses of the subject site permitted by Permit No. 4-98-334, including but not limited to clearing of vegetation and grading, which might otherwise be exempt from coastal permitting requirements, shall require an amendment to Permit No. 4-98-334

from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.

10. Final Fire Management and Evacuation Plan

Prior to the issuance of Coastal Development Permit 4-98-334, the applicant shall submit a final Fire Management and Evacuation Plan, subject to the review and approval of the Executive Director, that shall incorporate the components set forth below. All development and activities at the site shall be conducted in compliance with the approved plan.

A. Fire/Safety Review: Prior to the issuance of Coastal Development Permit 4-98-334, the applicant shall submit evidence to the satisfaction of the Executive Director that the State Fire Marshal and the Los Angeles County Fire Department, Division of Fire and Life Safety, have evaluated the Final Fire Management and Evacuation Plan and have determined that implementation of the Plan will achieve compliance with all applicable fire and life safety regulations, requirements, and recommendations.

B. Annual Fuel Modification: The final Plan shall incorporate the requirement that the applicant shall annually submit evidence to the Los Angeles County Fire Department, Forestry Division, that all applicable fuel modifications requirements on site, and the maintenance of the required 13 ft. 6 inches of vertical vegetation clearance along Ramirez Canyon Road, Delaplane Road, and Winding Way, have been implemented prior to the impending fire season. Such evidence shall in no case be submitted later than June 15 of the pertinent year.

C. Emergency Power Generation: The plan shall provide for sufficient emergency generator(s) and fuel to be placed on site and maintained in good working order at all times to supply emergency power to Ramirez Canyon Park for a minimum of twelve (12) hours.

D. Cancellations Due to Hazardous Conditions: The plan shall include the requirement that all events or activities at Ramirez Canyon Park, whether revenue- or non-revenue generating, will be cancelled if the National Weather Service (a division of the National Oceanic and Atmospheric Administration – NOAA), or other state or federal hazard monitoring authority issues a "red flag" or other similar warning for fire, storm, or flood hazard for the area where Ramirez Canyon Park is located. It shall be the applicant's daily responsibility to monitor and obtain the applicable advisories and to immediately cancel any activity at Ramirez Canyon Park scheduled for a day affected by an adverse hazard warning. In addition, the applicant shall provide written notice to all potential event or activity sponsors that reservations for Ramirez Canyon Park use are made subject to cancellation when hazard alerts or weather warnings are issued, up to and including on the scheduled day, and potentially without prior notice. The written notice must be provided to the event or activity sponsor prior to issuance of any written approval, contract or permit, as applicable, authorizing the use of Ramirez Canyon Park.

11. Wooden Bridge Reinforcement Plan

A. Prior to the issuance of Coastal Development Permit 4-98-334, the applicant shall submit a construction plan to undertake the wooden bridge reinforcement measures identified by Penfield & Smith in the bridge deck analysis dated February 22, 2000. The plan shall prohibit construction if water is flowing in the creek, that a staging area outside of the riparian canopy is identified and flagged for construction workers and to store materials, that the zone of impact to riparian vegetation surrounding the bridge and bridge footings is strictly limited to that area necessary for access by no more than three workers who shall use only hand tools. The plan shall provide for the monitoring of construction activities by a qualified botanist approved by the Executive Director, and the botanist shall brief construction workers on resource damage avoidance prior to the commencement of any on site activities.

B. Bridge reinforcement shall be completed no later than thirty (30) days after issuance of this coastal development permit. Within ten (10) working days after the completion of the bridge reinforcements the applicant shall provide written evidence, to the satisfaction of the Executive Director, that the consulting licensed civil engineer and the Los Angeles County Fire Department, Division of Fire and Life Safety, have approved the final bridge reinforcements and concluded that the bridge will safely support a 25-ton fire truck for the length of time necessary for such a truck to cross the bridge. The Executive Director may extend the applicable time lines for good cause.

12. Ramirez Canyon Park barrier-free trail and recreation facility.

In accordance with the applicant's proposal, prior to the issuance of Coastal Development Permit 4-98-334, the applicant shall submit for the review and approval of the Executive Director, a plan prepared by a licensed civil engineer, and in consultation with National Park Service, to provide a barrier-free natural area interpretive trail and creekside picnic and recreational facility within the newly designated Ramirez Canyon Park and adjacent National Park Service lands. All facilities and amenities contained in the plan or required for the safe use of the facility by physically-challenged visitors shall be incorporated into the plan and shall comply with Americans With Disabilities Act (ADA) requirements, including trails, picnic facilities, drinking fountains, restrooms, and parking areas. The applicant shall additionally submit evidence that the plan has been approved by the State Architect as ADA-compliant, unless the Office of the State Architect indicates that it has no applicable standards, in which case the applicant shall submit evidence that the National Park Service has approved the plan as ADA-compliant.

The Plan shall not incorporate grading (other than minor trail grooming) or vegetation removal within 100 feet of the outer riparian canopy or the top of streambank where no canopy exists, of Ramirez Canyon Creek. If the plan requires significant grading for the trail or trail-related facilities, or construction within the setback areas, removal of native vegetation, or the construction of new restrooms or new parking areas not existing or

approved in this permit, the applicant must obtain either an amendment to Coastal Development Permit 4-98-334 or a new coastal development permit.

The applicant shall implement the construction and opening of the barrier-free trail and recreation facility within sixty (60) days of issuance of Coastal Development Permit 4-98-334 or within such additional time as the Executive Director may deem warranted.

13. Payment of Road Maintenance Dues to Ramirez Canyon Homeowners Association.

The applicant shall annually pay its share of dues assessed to members of the Ramirez Canyon Homeowners Association, calculated on the basis of six lots, for the purpose of maintaining Ramirez Canyon Road, which is a privately owned and maintained road.

(Note: Previous condition 14, "Notice of Event Schedule to Homeowners" is deleted)

14. Amplified Music/Noise Restriction

A. Amplified music shall only be provided in the special event meadow located immediately in front of the Barn facility and at no time shall amplified music be audible beyond the property boundaries adjacent to residential development. In addition, MRCA rangers on duty during such events shall check sound levels hourly at the site boundaries nearest adjacent residential development and shall immediately ensure volume reduction to achieve this standard should it be exceeded.

B. Amplified music shall not be allowed anywhere on the subject site after 8:00 p.m. Sunday through Thursday evenings or after 10:00 p.m. on Friday or Saturday evenings.

C. Special event sponsors shall be provided written notice of these amplified music restrictions prior to entering into a contract for rental of the facility.

15. Condition Compliance (after-the-fact development)

Within 120 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, except for such additional time as may otherwise be specified within applicable special conditions.

16. Termination of Uses

The authorization in Coastal Development Permit No. 4-98-334 for the use of the site as Conservancy administrative headquarters and offices, and for use of the site for workshops, conferences, meetings, tours, and special events shall terminate if the site is no longer owned by the Conservancy or successor State agency. If the site is no longer owned by the Conservancy or successor State agency, the new owner may only

use the site for residential purposes, and may not undertake any of the uses listed above on the site, unless a new coastal development permit is applied for and obtained that authorizes such additional use(s).

17. Drainage and Polluted Runoff Control Plan

Prior to the issuance of Coastal Development Permit 4-98-334, the applicant shall submit for the review and approval of the Executive Director, a drainage and polluted runoff control plan for the on site roadways, turnouts, and parking areas. The plan shall be prepared by a licensed civil engineer and shall employee all feasible, best management practices to minimize the volume, velocity and pollutant load of stormwater leaving the developed areas of the site. The plan shall include but not be limited to the following criteria:

(a) Post-development peak runoff rates and average volumes shall not exceed pre-development conditions.

(b) Runoff from all parking areas, turnouts, and driveways shall be collected and directed through a system of vegetated and/or gravel filter strips or other media filter devices. The filter elements shall be designed to 1) trap sediment, particulates and other solids and 2) remove or mitigate contaminants through infiltration and/or biological uptake. The drainage system shall also be designed to convey and discharge runoff in excess of this standard from the building site in a non-erosive manner.

(c) The plan shall include provisions for maintaining the drainage and filtration systems so that they are functional throughout the life of the approved development. Such maintenance shall include the following: (1) the drainage and filtration system shall be inspected, cleaned and repaired 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 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 and restoration of the eroded area.

IV. Findings and Declarations

The Commission hereby finds and declares:

A. Project Description; Background; Environmental Setting

The proposed project is located on approximately 22.5 acres at the end of Ramirez Canyon Road, City of Malibu, County of Los Angeles. The site contains five single family residences on six separate lots and was donated as a unit to the Santa Monica Mountains Conservancy (hereafter, "Conservancy" or "applicant"), a state agency, by Barbra Streisand in December, 1993. Originally named the "Streisand Center for Conservancy Studies," the site was recently re-named "Ramirez Canyon Park."

In addition to the residences, the site contains extensive hardscaping, such as brick-lined roadways, river rock retaining walls, paths, a turf meadow, tennis courts, swimming pool, decks, courtyards, and extensive non-native ornamental landscaping, terraced orchards, and vegetable gardens. The site is bounded on three sides by the Santa Monica Mountains Recreation Area, owned by the National Park Service. South of the site, Ramirez Canyon is designated for, and partially developed with, single family residences.

Environmental Setting

The canyon containing Ramirez Canyon Park is situated in the Malibu area of the Santa Monica Mountains, and surrounded by typical chaparral vegetation on the dry slopes above the site. The Mediterranean climate of the Santa Monica Mountains usually brings cool, wet winters and warm, dry summers. The late summer and fall seasons are often accompanied by hot, dry winds known as the "Santa Ana's." These winds blow toward the sea – opposite the usual prevailing direction of the cooler, offshore breezes – and sometimes drive rapidly spreading wildfires down the brushy canyon slopes.

Ramirez Canyon drains into a riparian corridor designated as a blueline stream on U.S. Geological Survey quadrangle maps. The creek bisects Ramirez Canyon Park and supports a remnant riparian canopy of mature sycamores and scattered oaks on the highly modified park grounds. Ramirez Canyon Creek is designated as an Environmentally Sensitive Habitat Area (ESHA) on the certified Malibu/Santa Monica Mountains Land Use Plan (LUP) Resource Maps. The riparian corridor flanking the creek is designated as a Locally Disturbed Sensitive Resource Area (DSR) in the LUP.

Downstream from the site, the creek meanders through the residential areas fronting Ramirez Canyon Road. In this portion of the riparian corridor, the streambed has been significantly altered, in some places channelized, and contains two concrete-lined Arizona crossings.

Stream Corridor Alteration

The portion of the stream corridor traversing Ramirez Canyon Park was extensively altered by the previous owner, who also placed architectural stone walls along the banks of the stream, and installed extensive plantings of non-native vegetation throughout the site, without the benefit of a coastal development permit. This report does not address the unpermitted physical alterations of the site that have taken place in the past.

The applicant agreed at the Commission's January 2000 hearing to submit a complete application for the unauthorized riparian corridor development on or before the Commission's April 2000 meeting. The applicant's representatives have informed staff that the application preparation is progressing on schedule.

Change of Land Use; Implementation of Outreach Program

The present report addresses the Conservancy's proposed use of the formerly residential estate for administrative headquarters, revenue-generating special events, tours, and small group gatherings, and for the Conservancy's proposed outreach programs for disadvantaged youth, physically challenged visitors, and/or seniors.

Trails

No designated trail corridors cross the proposed site. The Coastal Slope Trail, a main artery of the trail network for pedestrian and equestrian users in the Malibu/Santa Monica Mountains area, crosses Ramirez Canyon Road in one location. As part of the present proposal, the Conservancy proposes to construct a barrier-free, creekside interpretive trail and picnic facilities for the benefit of physically-challenged visitors.

Amended Project Description

The applicant has amended the proposed project description twice since the publication of the first Commission staff report (dated October 14, 1999) and the staff report for the January 2000 Commission meeting (report dated December 21, 1999). The most recent project description is dated March 6, 2000 and is attached hereto as Exhibit 1. Notably, the amendment caps revenue-generating events and activities on a monthly basis, incorporates all requirements and regulations of fire and life safety review authorities, and includes the Conservancy's proposal to conduct up to ten (10) outreach programs per month, among other changes noted below.

Facilities:

The applicant presently proposes to use the site and its five existing residences as follows (see Exhibit 11):

"Barwood" (5775 Ramirez Canyon Rd.), a 3,500 sq. ft. single family residence to be used for Conservancy Headquarters and administrative support functions. A total of fourteen Conservancy employees and two maintenance staff routinely work at the site, and seven Conservancy employees have offices located in this building;

"Peach House" (5750 Ramirez Canyon Rd.), a 4,900 sq. ft. single family residence, for use for special events. Three Conservancy employees have offices located in the middle level;

"The Barn" (5750 Ramirez Canyon Rd.), a 3,370 sq. ft. single family residence built as a "guest house" to the Peach House on the same lot, for use for special events on the first floor and for offices for four staff members in the upper and back portions of the structure;

"Art Deco" (5802 Ramirez Canyon Rd.), a 4,600 sq. ft. single family residence, for use for receiving visitors and shown as part of site tours (40-person events are not held in this building);

"Caretaker Residence" (5800 Ramirez Canyon Rd.), a 1,350 sq. ft. single family residence, for continued residential use for the on-site MRCA ranger and family.

Schedule of Events

The present application, as amended in accordance with the revised project description contained in Exhibit 1, seeks authorization to conduct a monthly total of 10 outreach events, 4 large special events, 8 site tours, and 4 small group gatherings. As stated in Special Condition 1, the approved numbers per month of small group gatherings, site tours, and special events cannot be recombined or substituted to achieve different proportions. For example, if only 4 tours were scheduled in a given month, 8 small gatherings could not be held to make use of the 4 authorized tours that were not scheduled for that month. In addition, only one special event may be held per week, and additional special events can not be held in lieu of other authorized events in any month.

During the non-special event season, the revenue-generating activities would be reduced from 16 per month to 12 per month, while outreach programs would continue at a total of 10 per month. The applicant's previous proposal evaluated in the

December 1999 staff report proposed a more elaborate system of traffic trip counts to modulate site use, whereas the present proposal additionally sets limits on the number of events per category. Additional non-revenue and public outreach activities could be added to the proposed schedule provided restrictions on vehicle trip counts and other applicable requirements are met.

Public Access Trail

As noted above, the applicant amended the project description last fall to include a new public access and outreach component. The Conservancy proposes to construct a barrier-free riparian area interpretive trail and picnic facilities north of the Barn facility. The gentle terrain that characterizes the proposed trail area extends to the adjacent National Park Service lands and offers relatively undisturbed creekside interpretive areas. The trail concept described by the Conservancy will provide an outdoor access opportunity for mobility-impaired visitors who are rarely able enjoy the natural areas readily available to other visitors in the Santa Monica Mountains.

Proposed New Wastewater Treatment Facility

Since the January 2000 hearing, the applicant has completed water quality studies and in-depth evaluations of the existing septic disposal systems serving the residences under consideration for alternative uses. In light of problems detected by the applicant in these studies (undercapacity of existing systems, inconclusive water quality analyses, for example) the applicant now proposed to install a new, state of the art wastewater treatment system that will produce high quality recycled water from septic effluent and discharge the water into the terraced orchards. The new system would serve the Barwood, Barn, and Peach houses.

The upgraded septic disposal system can effectively receive and treat the effluent that would be generated by a 200-person event (the maximum proposed event size), however, the applicant proposes only to utilize the system for the effluent generated by the office use of the three associated structures and for the 40-person-maximum small group gatherings and tours. Events for more than 40 guests, and all public outreach program activities, will be required to use a bank of three portable toilets that will remain continuously on site and will be serviced approximately once per week by a pump truck. The portable toilets are designed to provide handwashing facilities and to meet handicapped access standards.

Comparison to Appeal No. A-3-SLO-98-025 (Applicant: Scoggins)

On October 14, 1998, the Commission denied a coastal development permit (Appeal No. A-3-SLO-98-025, Applicant: Scoggins) to conduct special events on land zoned and used for agriculture. The Commission found substantial issue and ultimately denied a permit for a proposal to hold up to 12 "events" (such as weddings) per year on a 14-acre parcel zoned for agriculture, near Morro Bay, in San Luis Obispo County. The Commission found that the proposal was inconsistent with Local Coastal Program (LCP) policies limiting non-agricultural uses on land zoned for agriculture. The Commission found that the project would result in permanent loss of agricultural land; was not necessary to support continued agricultural use of the site; and was not one of the priority uses identified in the LCP when a supplemental use is needed to support continued agricultural use.

Because the County of San Luis Obispo has a certified LCP, the standard of review was whether the proposed project was consistent with the policies and provisions of the certified Land Use Plan and implementing measures. As noted above, the proposed project was not consistent with specific policies—particularly related to agricultural land uses—set forth in the County's certified LCP.

In contrast, the project proposed by the Conservancy is located within the City of Malibu. Unlike the County of San Luis Obispo, the City of Malibu does not have a certified LCP. Therefore, the standard of review for the pending application is whether the proposed project is consistent with the applicable policies of the Coastal Act. Based on the discussion below, the Commission determined that the proposed project, as conditioned, is consistent with the Coastal Act.

B. Hazards

Section 30253 of the Coastal Act states in pertinent part that new development shall minimize risks to life and property in areas of high geologic, flood, and fire hazard.

Wildfire threat

The proposed project is located in the Santa Monica Mountains, an area subject to a number of natural hazards, including landslides, erosion, and flooding. In addition, the chaparral plant community that typically grows on the slopes of the mountain canyons is adapted to natural fire cycles. These cycles statistically result in wildfire return times averaging between 12 and 30 years in any single stand of chaparral.

The subject site is located at the end of Ramirez Canyon Road in a relatively steep canyon, from which no alternative exit route exists. Past evaluations of the possible construction of secondary road construction to nearby Kanaan Dume Road, northwest of the site, have identified significant landform alteration, destruction of habitat, and adverse visual impacts that would result. Thus, the construction of an alternative route appears to be infeasible due to the extent of the anticipated adverse impacts to coastal resources posed by such a project.

The chaparral vegetation typical of the Ramirez Canyon area poses an extremely high risk of wildfire. Many chaparral shrub species store highly flammable terpenes within their tissues (Mooney in Barbour, Terrestrial Vegetation of California, 1988). The combination of flashy fuels created by concentrated flammable compounds stored in dry leaves and twigs, low humidity, warm temperatures, high "Santa Ana" winds that occasionally blow toward the coast, often steep terrain, and the unpredictability of potential ignition sources, render the chaparral-covered canyons of the Santa Monica Mountains prime wildfire country.

As noted, chaparral and coastal sage scrub communities (sometimes referred to as "hard" and "soft" chaparral) have evolved in concert with, and continue to produce the potential for, frequent fires. The typical warm, dry summer conditions of coastal California's Mediterranean climate combine with the natural characteristics of the native chaparral vegetation to pose a risk of wildfire destruction of property that cannot be completely avoided or mitigated so long as development is undertaken amidst these conditions.

As the dry summer fire season progresses (the season may be officially declared as early as June 1), vegetation becomes desiccated from lack of rain, and by August or September the Santa Ana winds often begin to blow. Reversing the normal direction of the typical onshore coastal breezes which ordinarily bring a cooling, marine influence to coastal canyons, the Santa Ana's instead send hot, dry interior air sweeping down canyon slopes toward the sea, drying the native vegetation into tinder.

When these conditions arise, wildfires can be touched off by any source of ignition, and quickly fanned across acres of mountain land. Wildfires may consume hundreds of acres in a few short hours, or in extreme cases, such as the Old Topanga Fire of 1993, may burn through hundreds of acres in a matter of 15 to 20 minutes.

As noted previously, the canyon slopes and immediate surroundings of the site are vegetated with mature chaparral that has not burned in over twenty-five years, according to the Conservancy's head ranger.

State and County Fire Safety Review

These considerations led Commission staff to convene a meeting with the applicant, the Deputy State Fire Marshal, and the Captain of the Los Angeles County Fire Department Fire Safety Division, at Ramirez Canyon Park on December 15, 1999. As a state facility, the site is under the direct review authority of the State Fire Marshal. The State Fire Marshal has, in turn, delegated some aspects of fire review (particularly emergency vehicle access) to the Los Angeles County Fire Department.

Since the December 1999 site visit, the Conservancy has received extensive feedback from both the State Fire Marshal and the Los Angeles County Fire Department Division of Fire and Life Safety, and Division of Forestry. In response, the Conservancy has incorporated all recommendations and requirements identified by these authorities into the proposed project, including measures set forth within the revised emergency access plan and the updated fire management and evacuation plan.

The emergency access component of the plan, for example, incorporates Los Angeles County Fire department requirements that on site turnouts, hammerhead turnarounds, parking restrictions for shuttle vans, some on site road resurfacing and widening, and fuel modification be performed. The County Fire Department also required evidence that the wooden bridge at the end of Ramirez Canyon Road can safely support a 25 ton fire truck. These measures will help to ensure safe ingress and egress for vehicles at all times.

Reinforcement of Wooden Bridge

Captain Jim Jordan of the Los Angeles County Fire Department further determined that retaining the wooden construction of the bridge across Ramirez Canyon Road next to the park is acceptable because the bridge is located immediately adjacent to the site and because the Conservancy's foam fire fighting rig could be deployed to defend the bridge during a wildfire. Further, Captain Jordan determined that the width of the bridge (12 feet) is acceptable because there is ample visual clearance on both sides to ensure that opposing vehicles can navigate the bridge crossing successfully.

The Conservancy's consulting civil engineer has evaluated the bridge and determined that with the addition of cross supports and other simple measures, the bridge can

achieve the necessary standard. The implementation of these measures is required by Special Condition 11. Fully implemented, Special Condition 11 will ensure that the bridge can safely support a 25 ton fire truck for the short period of time necessary for such a truck to cross the bridge. This improvement will provide reliable emergency vehicle access not only to the site but also to Via Acero residences, who must cross the bridge before Via Acero splits off from Ramirez Canyon Road.

Ramirez Canyon Road - Emergency Access

At the previous hearing, concerns were raised by a number of speakers that Ramirez Canyon Road does not conform to fire code requirements, and thus would be by definition inadequate to evacuate Ramirez Canyon Park visitors.

Following the December 15, 1999 site visit at the park, Fire Captain Jordan, in the company of representatives from the Conservancy, the State Fire Marshal's office, and Commission staff, specifically evaluated the entire length of Ramirez Canyon Road and applicable portions of Delaplane Road and Winding Way) for required emergency vehicle access clearances, considering both road width and clearance height. In the few locations where the road is less than 20 feet in width, Captain Jordan determined that there was either adequate visual clearance or sufficient road shoulder width with acceptable surfaces to ensure safe passage of an emergency vehicle despite the presence of oncoming traffic.

All overarching tree limbs and brush along the road were inspected and measured by Captain Jordan and Commission staff to determine whether the required vertical clearance of at least 13 feet 6 inches could be achieved. Captain Jordan concluded that with minor pruning or brush thinning, the road from Ramirez Canyon Park and along Delaplane Road to the private entrance gate, offered acceptable emergency vehicle access. In addition, Commission staff concurrently determined that no specimen oaks or sycamores adjacent to Ramirez Canyon Road would require removal or severe limbing that might threaten the continued health of the trees.

On Site Fuel Modification

Captain Jordan also determined that the Los Angeles County Fire Department, Forestry Division would separately review a fuel modification plan for the subject site. As part of the amended project description (Exhibit 1), the applicant has provided a Forestry Division approved plan, which calls for the removal of all non-native pine trees and other highly flammable vegetation within a minimum of 100 feet of the existing structures, commencing with those trees that are presently either dead or clearly diseased. The plan requires the phased removal from the park of all pines, eucalyptus and other locally non-native species known to carry fire efficiently.

Final Fire Department and State Fire Marshal Review

To ensure that the final emergency access and parking plan, and the final fire management and evacuation plan are reviewed for final compliance with all applicable state and county fire and life safety requirements, Special Conditions 6 and 10 require that the applicant submit evidence to the Executive Director that the Los Angeles County Fire Department, Division of Fire and Life Safety, and the office of the State Fire Marshal, as applicable, have approved the final plans. Special Condition 11 requires the applicant to demonstrate that the Los Angeles County Fire Department has reviewed and approved the final bridge reinforcements to ensure that emergency response vehicles can safely cross the bridge to the subject site.

Contingency Shelter-in-Place Plan

The applicant has previously submitted a report entitled "Preliminary Evaluation of Fire Department Access, Wildland Fire Protection, and Evacuation for the Streisand Center for Conservancy Studies" located at 5750-5802 Ramirez Canyon Road, dated June 14, 1999, and prepared by Klaus Radtke, Ph.D., Wildland Resource Sciences. That report recommends measures to enhance the applicant's ability to safely shelter site visitors in place should evacuation during a wildfire prove impossible. The report suggested sheltering site visitors in place, rather than evacuating them, as the best emergency response to a wildfire in the area.

Commission staff, however, were unconvinced that the older, mainly wood frame buildings on site would provide adequate shelter during a wildfire. Since the first Commission staff report was prepared for the proposed project last fall, however, the applicant has substituted site evacuation as the primary response to a wildfire threat to the park. However, the applicant has incorporated a number of measures recommended by the Radtke report into the project description, to provide a backup plan for visitor protection.

As a backup plan in case safe evacuation of park visitors via Ramirez Canyon Road is not possible, the Conservancy has upgraded the Art Deco building (which is the most fire resistant structure on site), for example replacing the building's existing panoramic pane glass windows with fire resistant double paned windows.

In addition, the Conservancy's head ranger has confirmed that the Art Deco structure is large enough to shelter more than 200 people, the largest number of guests allowed on site for special events.

Additional Fire Safety Measures

In addition to specific measures noted above, the applicant also proposes to install a 4,500 gallon and a 10,000 gallon water tank on site, and to pump the contents of the existing swimming pool adjacent to the Art Deco building for extra fire defense water supplies.

Backup Power Supplies

Loss of power during wildfires – even when the fires are burning relatively far away - is not uncommon in relatively rural areas served by long tap lines and isolated feeder circuits and substations. These facilities can be disrupted when a wildfire burns through, and prolonged power outages during critical conditions may result.

To ensure that the backup pumping systems and emergency lights will be available should power be lost during an emergency, Special Condition 10 requires the applicant to provide adequate backup generators and fuel for fire fighting efforts and to provide emergency lighting.

The implementation of Special Condition 10 will ensure that lighting at Ramirez Canyon Park is available if an evening event must be evacuated. For example, emergency power supplies would facilitate ushering large numbers of guests celebrating in the meadow adjacent to the Barn house south to the designated van shuttle parking lot with a reduced likelihood of panic or injury that could otherwise result from moving a large, uneasy groups of people through unfamiliar terrain in total darkness.

Evacuation Impacts On Ramirez Canyon Road

Residents of Ramirez Canyon Road have raised concerns that an evacuation of a large special event at the park would create congestion on the road and reduce their own ability to evacuate safely in a wildfire emergency. The applicant has incorporated a number of measures into the revised project description to address these concerns, which are also incorporated into Special Conditions 1, 4 and 6. For example, these conditions require the applicant to deliver all special event guests to the site via one-way van shuttles during peak fire season months, which are defined by condition as August 1 through December 31, although the season for large special events ends October 31 in accordance with the applicant's proposal. The van shuttles would minimize the number of vehicles necessary to evacuate large events, thereby reducing traffic on Ramirez Canyon Road during an emergency.

The required van shuttles accomplish several fire safety objectives. Transportation remains continuously on site to remove the total number of guests immediately, without resorting to relay shuttles. Vans are parked on site, as required by Special Condition 6,

in one specific area that is designed to permit vans to leave the site efficiently without impeding incoming emergency vehicles.

In addition, guests at special events would be continuously under the supervision of at least one, and for events over 100 participants, at least two, MRCA rangers. The rangers are fully trained in fire fighting and emergency response procedures. Should evacuation become necessary, party guests would be quickly evacuated under the orders and supervision of a ranger.

In addition, guests at Ramirez Canyon Park could be expected to leave quickly upon the order of the supervising ranger. Guests, unlike residents, have no significant personal property or pets to collect prior to evacuation, and would not therefore linger over matters of understandable concern to residents before boarding shuttle vans to exit the park. Guests could be expected to board shuttle vans upon the direction of a ranger, and be on their way out of the area in a matter of minutes. Wildfire experiences in the past, including in Malibu, indicate that homeowners, on the other hand, tend to remain with their properties longer, seeking to defend homes by hosing down roofs or performing last minute fuel modification – activities that would not cause temporary site visitors at the park to delay departure. It is quite likely, therefore, that site visitors would be evacuated far more quickly than typical residents and would not, therefore, be likely to arrive at the road at the same time as the typical homeowners.

The Commission also notes that in response to inquiries by Commission staff, the State Fire Marshal has indicated that as many as 200 visitors could be safely evacuated from the site provided all requirements identified by the state and local fire and life safety officials are addressed. Special Condition 10 requires final approval of the state and county fire and life safety review authorities prior to the issuance of Coastal Development Permit 4-98-334.

Other Concerns: Uncertain Fire Emergency Response from Outside of the Canyon

Area residents have expressed concern that fire fighting equipment is not typically brought into the narrow canyon road areas until after a fire has already burned through. This may be true in some circumstances due to the triage method of deployment fire response commanders must employ. However, a strategic decision not to send equipment into Ramirez Canyon before a fire has passed through does not affect the Ramirez Canyon Park fire response planning. The Conservancy's emergency management scenarios do not rely on intervention by County Fire Department fire trucks. The plan relies on site evacuation first, and only secondarily upon MRCA ranger training and equipment (use of foam rig, water pumping) and on site preparation (fuel modification, for example) to increase the defensibility of the site should defense be warranted or necessary. The Conservancy only relies upon a shelter in place strategy as a very last resort, and that strategy does not rely on Fire Department intervention.

All of these measures are intended to ensure that the MRCA rangers on duty at the site will have ample time to evacuate site visitors. The Conservancy and the Los Angeles

County Fire Department have indicated that because of the site location and the accessibility of the MCRA ranger or staff at the Ramirez Canyon Park to up-to-date information regarding wildfires, that it is expected that there will generally be ample time to evacuate the site.

Potential Safety Benefits to Area Residents

An evacuation of Ramirez Canyon Park could potentially enhance the safe evacuation of other canyon residents fleeing an approaching fire. For example, MRCA rangers carry chainsaws and other means of clearing roadway blockages (fallen limbs or downed trees) that could impede evacuation. In addition, MRCA rangers are in radio contact with fire response agencies and would be likely to receive emergency notice to evacuate the site before other canyon occupants would otherwise learn of the danger. Conservancy guest evacuation would provide early warning and support to other residents who might otherwise remain unaware of impending danger. Public safety officials are typically stretched to the limit under such circumstances, and sometimes do not arrive in an area until minutes before an evacuation must be undertaken.

The Conservancy's fuel modification plan also removes non-native, and highly flammable vegetation from the island immediately in front of the site entrance, thereby creating a neighborhood area that would resist the spread of wildfire. This area would be available as a staging area for emergency vehicles.

In addition, and as previously noted, the required upgrade of the wooden bridge for fire truck support (Special Condition 11), provides significantly enhanced protection for the Via Acero residents, who take access to their street over that bridge before Via Acero splits off of Ramirez Canyon Road. For these residents, the enhanced ability of the bridge to support a fire truck might not otherwise have been accomplished, and the improvement could ultimately provide lifesaving emergency response vehicle access to their residences.

Los Angeles Fire Department Captain Jim Jordan has informed Commission staff that ninety percent (90%) of emergency responses undertaken by his department are for medical emergencies, and therefore the likelihood is far greater that a heart attack or other life threatening medical emergency, rather than a wildfire, would trigger the need for emergency response vehicles to drive into Ramirez Canyon. Thus, the proposed bridge reinforcements will render the northern end of Ramirez Canyon Road more reliably accessible to emergency response personnel.

Event Cancellation -- Hazard Warnings

As an additional precaution, the Conservancy states in its revised project description, which is attached in full as Exhibit 1, that it has adopted a policy to cancel any special event, tour, or other function on site on those days when a "red-flag" warning of extreme fire, flood, or weather hazard has been issued by fire or emergency management agencies. This policy has been adopted by the Conservancy above and beyond any applicable regulation of the State Fire Marshal or Los Angeles County Fire Department.

The Conservancy has explained that such warnings are obtained by monitoring National Weather Service bulletins daily, which the MRCA rangers routinely do. A more detailed explanation of the National Weather Service bulletin written by MRCA Head Ranger Walter Young is attached as Exhibit 3.

Special Condition 10 implements the Conservancy's proposal to cancel events or activities when hazard warnings are issued, and further requires the Conservancy to provide written warning of this policy to prospective event sponsors prior to entering into any binding commitments for park use.

Maintenance of Ramirez Canyon Road

Finally, the Commission notes that proper maintenance of Ramirez Canyon Road is necessary to keep the road in good condition, and that such maintenance therefore provides for emergency response access to the park, as well as providing a safe conduit for park evacuation under a wildfire threat. Keeping the road operable and safe, as opposed to allowing it to become worn and filled with potholes, provides obvious benefits for emergency ingress and egress along all points of the road.

Ramirez Canyon Road is a private road maintained collectively by the residents whose parcels take access from the road. Funds for this purpose are collected from the property owners, who pay approximately $500 per year per lot for this purpose.

Area residents assert that the applicant, although using the road extensively to access the site for significant numbers of special events during the past several years, has not paid its assessments into the road maintenance fund.

Proper maintenance of Ramirez Canyon Road is unlikely to occur if the maintenance funding obligations of all parties using the road are not fulfilled. To ensure that the Conservancy pays its proportionate share into the road maintenance fund, the Commission finds it necessary to impose Special Condition 13 to require that the applicant annually pay the assessment equivalent for six (6) lots into the Ramirez Canyon Road maintenance fund managed by the homeowners association. This assessment equivalent if based on the calculation that the Conservancy's authorized traffic trips on Ramirez Canyon Road have been considered elsewhere in these findings as roughly approximating the equivalent use of the road that might be expected by six estate sized residences on the applicant's six legal lots.

Assumption of Risk

Despite the imposition of the applicable special conditions discussed above, and the extensive fire and life safety protection measures incorporated by the applicant in its own project description, the Commission has consistently determined that all development in the Santa Monica Mountains is subject to a risk of wildfire and flooding hazard that cannot be fully mitigated or avoided. The project site is traversed by Ramirez Canyon Creek, which, during peak precipitation events, can reach or exceed

flood stages. Therefore, the Commission finds it necessary to impose Special Condition 7 (Assumption of Risk). Through Special Condition 7, the applicant acknowledges the nature of the fire hazard and flood hazard which exists on the site and which may affect the safety of the proposed project. Moreover, through acceptance of Special Condition 7 the applicant also agrees to indemnify the Commission, its officers, agents and employees against any and all expenses or liability arising out of the acquisition, design, construction, operation, maintenance, existence, or failure of the permitted project, including injury or death that may occur to visitors to the site or to the applicant's employees or other parties present at the site to perform (by way of example, but not limited to) maintenance, construction, or any other purpose. This Condition recognizes that a legislative appropriation would be required to enable the Conservancy to indemnify the Commission.

Future Development

In addition, the Commission finds it necessary to impose Special Condition 9 (future development) to require the applicant to seek an amendment to Coastal Development Permit 4-98-334 or a new coastal development permit if any development, including changes in intensity of use, are proposed in the future. Special Condition 9, if implemented, will ensure that such development is reviewed by the Commission or the Commission staff for potential hazards that may be created or exacerbated by the proposal, or that may result in increased hazards to site visitors or employees. Should the Conservancy be unsure as to whether a particular proposed activity would trigger the definition of "development" and therefore require an application under this condition, the Conservancy may seek a determination from the Executive Director.

For all of the reasons set forth above, the Commission finds that only if the proposed project is conditioned in accordance with the requirements of Special Conditions 1, 4, 6, 7, 9, 10, 11, and 13 would the proposed project be consistent with the requirements of Son 30253 of the Coastal Act.

C. Environmentally Sensitive Habitat Areas; Water Quality/Septic; and the Location of New Development

Section 30230.

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

Section 30231.

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

Section 30240.

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

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

Section 30250.

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

The proposed project is located immediately adjacent to Ramirez Canyon Creek. The creek is recognized as a blueline stream with regular water flows into the Pacific Ocean. The mouth of the creek is just west of Paradise Cove, an area noted for the presence of the rich, environmentally sensitive kelp bed habitat immediately offshore. The Commission recognized the importance of this creek in certifying the Malibu/Santa Monica Mountains Land Use Plan (LUP) and identified the creek as a designated Environmentally Sensitive Habitat Area (ESHA). The Coastal Act provides for the strictest protection of water quality and environmentally sensitive habitat areas, such as this stream, as essential for the protection of coastal resources. The Coastal Act also provides that development adjacent to ESHAs must prevent impacts that would degrade the sensitive habitat.

Septic Disposal Systems

The subject site contains five (5) single family residences situated in varying degrees of relatively close proximity to the creek. The residences predate the Coastal Act and are served by aging septic disposal systems and leachfields that in some cases do not meet the setback requirements from the blue line stream established by the Commission in past permit decisions and set forth in the certified LUP, upon which the Commission has relied for guidance. In addition, these setback requirements are established in the Uniform Plumbing Code (UPC).

For example, LUP Policy P80 requires that leachfields be set back at least 50 feet from the outer edge of riparian or oak canopy and that seepage pits be set back at least 100 feet from the outer edge of riparian or oak canopy. The policy allows for a greater setback if necessary to prevent lateral seepage from the disposal beds into stream waters. The leachfield for the Barwood facility has been determined to extend within 24 feet of the nearest adjacent creekbank.

The purpose of requiring adequate setbacks from riparian corridors, and adequate septic disposal system capacity and performance, is to protect water quality. The necessary setbacks and performance standards for septic disposal systems prevent the overflow or lateral seepage of leachate into the stream corridor. Improperly located, or inadequately designed and/or undersized septic disposal systems are coming under increased scrutiny as primary sources of water contamination. Resultant pollution (in conjunction with other sources of contaminated discharge into coastal waters) has resulted in record numbers of downstream beach closures in recent years. Additionally, the contaminants and acid/alkaline characteristics of leachate may adversely affect the native vegetation adjacent to stream corridors and the biota of coastal waters.

The applicant has submitted a series of reports and analyses concerning the location and condition of the existing septic disposal systems serving the five residences on the subject site. The most recent reports received by Commission staff on March 22, 2000 contained the results of water quality analyses of up- and downstream samples taken from Ramirez Canyon Creek. The tests showed elevated concentrations of bacteria in stream water samples drawn downgradient of the park as compared with

concentrations detected in water samples drawn upgradient of the park. The tests were inconclusive as to the exact source of contamination but could not rule out the possibility that septic contamination of the stream may be occurring. In light of this information, and conjunction with other studies commissioned by the applicant that determined that the septic facilities for Barn, Barwood, and Peach are significantly undersized to accept the effluent for the uses proposed for these structures, the applicant has amended the proposed project to include the abandonment of all or portions of the respective septic systems and abandonment of the idle septic disposal system and leachfields that located beneath the tennis courts.

In place of the aging septic systems, the applicant proposes to install a new wastewater treatment system. The new, advanced treatment technology incorporated into the wastewater treatment & reuse system proposed by the applicant is described in detail in the report titled "Septic System Analysis, Ramirez Canyon Park," prepared by Penfield & Smith, dated March 9, 2000. The proposed system will treat septic effluent to a high standard of quality and the resultant recycled water will be applied to the existing terraced orchards. See Exhibit 6.

The ranger residence and the Art Deco facility will continue to be served by existing septic disposal systems. The ranger residence is set back significantly from the creek and is not used for any function other than as a single family residence. The Art Deco facility is situated closer to the creek, but still set back significantly, beyond applicable setback distances for septic systems. In addition, the Art Deco facility is rarely used.. According to the applicant, tours pass through the Art Deco building, and it is occasionally used as a greeting area for other events, but gatherings that could generate significant septic burden are held in the Barn and Peach facilities. Barwood, which will also be attached to the new system, is strictly an administrative facility with staff offices. The existing Barwood leachfields encroach significantly into the stream corridor setbacks (less than 24 ft. of the 50 ft. minimum required) and these leachfields will be abandoned. The tank will still be used, but the effluent will be pumped into the new system.

Special Condition 8 requires the applicant to submit a final septic disposal plan for the review and approval of the Executive Director, who will review the final plan in consultation with either the City of Malibu Environmental Health Department, the Los Angeles County Environmental Health Division, or an independent registered environmental sanitarian. By these means the Commission will ensure that plan is independently verified to meet the requirements of the Uniform Plumbing Code.

Because bacterial counts could not rule out potential septic contamination as a source of contaminants, and because two older septic systems will continue in use under the present proposal, Special Condition 8 requires an additional four quarters of water quality surveys after the new wastewater treatment system is installed. If study results remain inconclusive, further evaluation of the remaining two septic disposal systems will be triggered by Special Condition 8, in addition to the ultimate requirement that the older systems may be abandoned and the Art Deco and ranger residence added to the upgraded wastewater treatment system proposed by the present permit application (this

requirement would only be triggered if possibility of failure of the systems cannot be ruled out by further evaluation).

In addition, Commission staff determined that the applicant's consultants are relying on the presence of citrus species in the target orchard to provide winter season evapotranspiration (citrus trees are evergreen). Deciduous orchard species would not perform this function adequately while dormant. In addition, significant mulching of the orchard area is also required as a management practice to encourage the soil fauna to flourish and assist in the water recycling process. Because the long term maintenance of the proper orchard species composition and specific management practices are necessary to ensure the long term performance of the system, Special Condition 8 requires the applicant to include a landscape planting and maintenance plan in the final Septic System Plan.

The applicant has further proposed to retain the leachfields (other than the Barwood leachfield) associated with the Barn and Peach septic systems as backup capacity should a power failure paralyze the new wastewater treatment system. The new system relies on electrically powered pumps to move the produced effluent into the treatment system. Because the existing systems are suspected as potential sources of stream contamination, Special Condition 8 instead requires that all existing septic disposal system components, except the existing tank for the Barwood facility, associated with Barwood, Barn and Peach structures, and the idle system underneath the tennis court, be permanently abandoned in accordance with the requirements of the Uniform Plumbing Code once the new system is on line. Backup use of the systems is not an acceptable option.

The applicant's septic consultant (Penfield & Smith) has informed Commission staff that the new wastewater treatment system is sized and designed to process the effluent from a 200 person event, even if such an event were held during the rainy season when the discharge orchard might be subject to significant precipitation. The applicant has declined to construct additional restroom facilities, however, and will continue to rely on three portable toilets to serve groups of over 40 and the public outreach functions. All smaller gatherings of up to 40 participants plus administrative staff in the respective buildings, will be adequately served by the new system, however, without risk of system overload. In addition, should occasional guests at larger events use the restrooms in Barn or Peach, there is no risk that such use will cumulatively overburden the existing septic systems because the capacity of the new system will be more than sufficient to process the resultant volume of effluent.

The Commission notes that the upgraded wastewater treatment system will replace the septic disposal system presently serving the Peach House. This system was identified in the December 1999 staff report as being of special concern because the system is located in the area where the stream channel once existed (it was re-routed by the previous owner). Thus, the septic disposal system serving Peach House is situated within the alluvial formation deposited by the stream. Alluvial materials are sandy and highly permeable, and it is possible that septic effluent from this system might have an increased tendency to leach into the adjacent stream.

If fully implemented, Special Condition 8 will ensure that the uses of the site proposed by the applicant will not result in adverse impacts to coastal waters that might otherwise be caused by the existing septic disposal systems. Further, Special Condition 8 requires continued water sampling to verify that the bacterial contamination of the creek has been remedied, and contains measures to require further action if not.

Control of Polluted Runoff

The proposed project poses an additional potential source of contamination to Ramirez Canyon Creek through contaminated runoff from proposed parking areas that are presently surfaced with pavement, gravel, grass, or compacted earth with bark chips. In addition, the applicant has submitted an on-site parking plan (Exhibit 4) that shows that existing parking areas are located immediately adjacent to the stream corridor. The on site parking plan also contains a Best Management Practices with extensive recommendations and measures to reduce or prevent contaminants from entering the creek (also described in Exhibit 4).

In addition, Special Condition 17 requires the applicant to prepare a Drainage and Polluted Runoff Plan to prevent oil, grease and sediment from washing off the parking and hardscape areas and entering Ramirez Canyon Creek. Some portions of the existing parking areas are located immediately adjacent to the creek, and implementation of Special Condition 17 will ensure that potentially adverse impacts from parking area contamination are fully mitigated.

Review of Future Development

Finally, the Commission notes that any future changes to the kinds, locations, and/or intensities of land uses of the site, including changes to the residential structures, septic disposal systems, access roadways or driveways, or the removal of significant vegetation other than that required by the fire safety requirements addressed previously in this report, that may otherwise be exempt from the requirement of applying for a coastal development permit, shall instead require the applicant to submit an application for an amendment to the permit or a new coastal development permit. This requirement, imposed by Special Condition 9, ensures that new development will be evaluated by Commission staff to ensure that such development does not result in new, potentially adverse effects upon the water quality or habitat value of the Ramirez Canyon Creek riparian corridor and designated ESHA.

ESHA Protection/Trail Construction Restrictions

The applicant proposed last fall to include a plan to conduct public outreach events at the site, and specifically to build a barrier-free interpretive trail and outdoor picnic area that is easily accessible for disabled or senior visitors. Special Condition 12 incorporates the applicant's proposal but requires the applicant to apply for a new coastal development permit if the final improvement plan requires grading, removal of native vegetation, or other development within 100 feet of the riparian canopy or top of

streambank where no canopy exists. If fully implemented, Special Condition 12 will ensure that the planning and implementation of a creekside interpretive trail and amenities that will not adversely affect the sensitive habitat of Ramirez Canyon Creek.

For all of the reasons set forth above, therefore, the Commission finds that to protect ESHAs, marine waters and the quality and biological productivity of coastal waters, and to ensure that new development does not individually or cumulatively adversely affect coastal resources, the proposed project would only be consistent with the applicable policies of the Coastal Act if conditioned as required by Special Conditions 2, 6, 8, 9, and 12.

D. Coastal Access; Recreation

One of the basic mandates of the Coastal Act is to maximize public access and recreational opportunities for all people and to reserve lands suitable for coastal recreation for that purpose. The Coastal Act has several policies which address the issues of public access and recreation within coastal areas.

Section 30210 of the Coastal Act states:

> In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30212.5 of the Coastal Act states:

> Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

Section 30213 of the Coastal Act states:

> Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.

Section 30223 of the Coastal Act states:

> Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

Section 30252 of the Coastal Act states:

> The location and amount of new development should maintain and enhance public access to the coast by...(6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

As stated previously, the Conservancy proposes to convert six legal lots containing five existing residences to Ramirez Canyon Park and to use the park site for a ranger residence, administrative headquarters, for special events, tours, and small gatherings, and for public outreach programs. Visitors to Ramirez Canyon Park will rely on carpool and van shuttle transportation to the site from remote satellite parking locations. Remote parking reduces the number of vehicle trips on Ramirez Canyon Road, a private road bordered by residential properties. The shuttles and carpools will also reduce the parking demand at the site and eliminate the need to construct additional parking areas.

The applicant proposes to use three private parking areas, including the Church of Christ Scientist, 28635 Pacific Coast Highway, a private property in the 27400 block of Pacific Coast Highway, and the Paradise Cove Beach Café, 28128 Pacific Coast Highway. The applicant has deleted the previous proposal to shuttle site tours from remote parking at the Conservancy's Winding Way trailhead.

Shuttles, car pools, and individual drivers will access Ramirez Canyon Park solely from Ramirez Canyon Road, which is the only route in and out of the canyon.

Coastal Slope Trail Crossing

The Coastal Slope Trail crosses Ramirez Canyon Road at the lower reaches of the road. The trail is identified in the certified Malibu/Santa Monica LUP as a key component of the trail system that provides access between the growing urban areas on and above the coastal terrace and the Santa Monica Mountains park system.

Traffic Impacts

A significant increase in vehicle trips on Ramirez Canyon Road and therefore across the Coastal Slope Trail could potentially result in adverse impacts upon the recreational use of the trail by pedestrians and equestrian users. To ensure that traffic impacts to the trail crossing, and to Ramirez Canyon Road in general, that may be caused by the applicant's proposed use of the site are less than significant, the applicant proposes an event schedule for all authorized uses of the site that approximates the traffic that would be generated by residential estate use of the site. The Conservancy estimates that the proposed event schedule would typically produce approximately 68 to 74 trips on Ramirez Canyon Road per day, but that the number could rise to as many as 80 trips under certain combinations of special events and routine Conservancy business.

To compare the applicant's estimate of vehicle trip generation, Commission staff consulted the trip generation manual published by the Institute of Transportation

Engineers (Trip Generation, 6th Edition). The manual is the standard reference for traffic analysis in environmental review documents. According to the manual, single family residences generate between 4 and 20 trips per day, per residence. Estate residences of the scale currently typical of construction in Malibu are generally estimated to generate between 11 and 13 trips per day by the City of Malibu staff, according to the applicant's traffic consultant.

Thus, the six lots comprising Ramirez Canyon Park could therefore be expected to generate approximately a minimum of 24 trips per day and a maximum of 120 trips per day according to the traffic engineering manual, and approximately 66 to 78 trips per day if converted to estate residential use and analyzed in accordance with the typical standards used by the City of Malibu. Special Condition 3 (Traffic Trip Restrictions) restricts the combined uses of the site authorized by this permit approval to a maximum of 80 trips per day, which only exceeds the range that would be considered typical of the potential use of this site for estate residential development by two, which is so minimal as to be insignificant. In addition, the Institute of Transportation Engineers' trip generation figures indicate that the six lots could potentially generate even greater traffic, up to a maximum of 20 trips per day per residence, for a total of 120 trips per day. Thus, the approval of 80 trips per day is well below what could potentially be generated by the six lots if considered individually.

No Use of Winding Way Coastal Access Parking Lot

As noted above, Special Condition 4 requires the applicant to identify and secure remote area parking with sufficient unused capacity to ensure that van shuttle staging from the identified remote parking sites will not result in the displacement of existing parking demand to public coastal access parking elsewhere. In addition, Special Condition 4 restricts the applicant from using the public coastal access parking at the Winding Way Trailhead as satellite parking for visitors to Ramirez Canyon Park, as had been previously proposed, in accordance with the applicant's revised project description (Exhibit 1).

As conditioned by Special Conditions 1, 3, and 4 therefore, the proposed project would not significantly increase the traffic impacts on Ramirez Canyon Road, or upon the Coastal Slope Trail crossing of Ramirez Canyon Road, above the level that would be associated with estate residential use of the same site. Therefore, the project would not have significant, adverse impacts upon coastal access and recreation.

Barrier-Free Trail for Physically-Challenged Visitors

In addition, and as discussed previously, the applicant has amended the proposed project description (See Exhibit 1) to incorporate the construction of a special trail. The proposed trail will be designed to barrier-free standards and will provide an interpretive area within the natural area of the Ramirez Canyon Creek corridor, creekside picnic facilities, and other related amenities within the newly designated Ramirez Canyon Park. The primary purpose of the new trail and recreational amenities is to provide an outdoor recreational and educational experience for disadvantaged youths, physically-

challenged visitors, and seniors. The Conservancy proposes to sponsor outreach programs for these groups free of charge, and to sponsor low, or no cost transportation to Ramirez Canyon Park.

Coastal Act Section 30210, set forth above, states that ***recreational opportunities shall be provided for all the people***. The visitors that the Conservancy proposes to reach through outreach programs at Ramirez Canyon Park represent a highly underserved, and growing, portion of California's residents. Coastal access and recreational amenities abound for mobile coastal visitors unimpeded by physical or mental challenges that otherwise prevent many potential visitors from enjoying coastal resources.

The area of the site proposed for the trail (north of the Barn facility and adjacent to Ramirez Canyon Creek and the National Park Service lands north of the site) is ideal for this purpose because it contains a relatively large expanse of land with modest topographic relief. The proposed trail area borders a natural area of the creek that has not been altered by the placement of stonework or other artificial features. A barrier-free trail and picnic facilities in this area will provide an outdoor experience for underserved coastal visitors that is unavailable at any of the Conservancy's other properties, according to Conservancy staff.

The Conservancy has asserted that the proposed schedule of revenue-generating events is necessary to generate the funds required for maintaining Ramirez Canyon Park and providing the proposed outreach programs (see Exhibit 1, Special Condition 1, and Exhibit 8). The Conservancy proposes 16 revenue-generating events and 10 outreach events per month during the season extending from March 1 through October 31, and 12 revenue-generating events and 10 outreach events per month during the remainder of each year.

The Conservancy has proposed the 10 outreach events as a maximum number that would be held monthly, but to ensure that the primary objective of providing public programs at Ramirez Canyon Park is met, Special Condition 2 requires that the 10 outreach events per month be offered <u>at a minimum</u>, commencing March, 2001. The Conservancy staff plan to begin the outreach program as soon as the coastal development permit is issued, but need time to develop the program fully and can not be expected to produce the full schedule of programs right away. In addition, the construction of the trail will temporarily disrupt the interpretive area. For these reasons, the 10 outreach program per month minimum may not be feasible until next year. Similar constraints (installation of the new wastewater treatment system, bridge reinforcements, parking area improvements) will similarly reduce the feasible number of revenue-generating events that may be held during the present season.

The Conservancy's headquarters at Ramirez Canyon Park are used to conduct the administrative responsibilities associated with open space acquisitions, planning, research, and the management of conservation and recreation activities at Conservancy holdings. The Conservancy's outreach program at Ramirez Canyon Park will provide a new dimension to the Conservancy's public programs, by offering an

outdoor recreational experience specifically designed for the comfort, safety, and enjoyment of physically-challenged visitors.

The division of park use between the revenue-generating activities and events and the public outreach programs will generally be as follows, within the context of available park hours:

Hours of park availability:

Monday through Sunday, 8:00 a.m. – 9:00 p.m. = 65 hours
Friday and Saturday, 8:00 a.m. – 10:00 p.m. = 28 hours
Total available park hours = 93 hours per week, or approximately 390 hours per month

Hours of Use Per Month/Special Event Season (March 1 – October 31):

Revenue-Generating Use (approx. 88 hours):

4 large special events (site reserved 10:00 a.m.–10:00 p.m.) = 48 hours/month
8 tours of 3 hours each = 24 hours/month
4 small group gatherings of approx. 4 hours each = 16 hours/month

Non-Revenue Generating Use (approx. 40 hours):

10 outreach programs of 4 hours each = 40 hours/month (minimum)

Hours of Use Per Month/October 31 – February 28:

Revenue-Generating Use (approx. 40 hours):

8 tours of 3 hours each = 24 hours/month
4 small group gatherings of 4 hours each = 16 hours/month

Non-Revenue-Generating Use (approx. 40 hours):

10 outreach programs of 4 hours each = 40 hours/month (minimum)

Thus, during the March 1 – October 31 special event season, revenue-generating events would use approximately 88 hours of the approximately 390 total hours of monthly park availability (or about 33 percent of the potential use of Ramirez Canyon Park) and non-revenue-generating outreach programs would use approximately 40 hours of the 390 available hours per month, (or about 10 percent of the potential park use). This pattern of use represents a 1.6:1 ratio of revenue to non-revenue events, based on numbers of events and activities.

During the November 1 – February 28 season, revenue-generating events would use approximately 40 hours of available park time per month (or about 10 percent of the park's available time) and non-revenue-generating outreach programs would use the

same amount (about 10 percent of the park's available 390 hours). This pattern of use represents a 1.2:1 ratio of revenue to non-revenue events, based on numbers of events but almost identical hours of use for revenue events and park use.

Thus, in any month (subject to other applicable limits, such as traffic trip generation), the proposed uses of Ramirez Canyon Park would not foreclose the possibility of conducting additional public outreach programs or providing other coastal access and recreation opportunities in the future. It also means that the use of the park for up to 12—16 revenue generating events per month does not serve as a limiting factor that would preclude the provision of additional public access and recreation programs at Ramirez Canyon Park in the future.

For all of the reasons set forth above, the Commission finds that the proposed uses of the site would not adversely impact the Coastal Slope Trail crossing at Ramirez Canyon Road, and would not adversely affect the supply of public coastal access parking off-site of the proposed project. In addition, the Commission finds that the construction of a barrier-free public recreational facility adjacent to Ramirez Canyon Creek will provide significant coastal access and recreational opportunities for an underserved component of California's coastal visitors. The Commission also finds that the provision of up to 16 revenue generating events per month will fund the non-revenue-generating public outreach programs proposed by the applicant, and fund the maintenance of Ramirez Canyon Park. Therefore, the Commission finds that as conditioned by Special Conditions 1, 2, 3, 4, 5, and 12 the proposed project would be consistent with the applicable Coastal Act policies protective of public coastal access and recreation.

E. Siting New Development

Section 30250 of the Coastal Act states:

> (a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.
>
> (b) Where feasible, new hazardous industrial development shall be located away from existing developed areas.
>
> (c) Visitor-serving facilities that cannot feasibly be located in existing developed areas shall be located in existing isolated developments or at selected points of attraction for visitors.

The applicant proposes to use of a 22.5-acre site containing five existing residences on six lots at the end of a private, semi-rural road to for administrative headquarters, a ranger residence, public outreach events, and for revenue-generating smaller group gatherings, tours, and large special events. The neighbors on Ramirez Canyon Road assert that the proposed use of the site far exceeds any reasonable equivalent in terms of traffic, noise, hours of use, impacts on safe emergency evacuation of the area, and septic use than would be expected of residential use of the site. The neighbors state that the applicant has not paid dues to the Ramirez Canyon Homeowners Association that are paid by other property owners for the maintenance of the Ramirez Canyon Road.

Special Conditions 1 (Approved Site Uses), 2 (Monitoring of Site Use), 3 (Traffic Trip Restrictions), 4 (Van Shuttle/Carpool Parking), 5 (Protocol on Ramirez Canyon Road), 6 (Final Emergency Access and On-Site Parking Plan), 8 (Septic), 10 (Fire Management and Evacuation Plan), 11 (Wooden Bridge Reinforcement Plan), 13 (Payment of Road Maintenance Dues), and 14 (Amplified Music/Noise Restriction), address the concerns raised by the neighbors.

The applicable special conditions ensure that traffic trips associated with the use of Ramirez Canyon Park do not significantly exceed the number of trips that would be generated by the estate residential use of the six-parcel property (although strictly limiting the use of Ramirez Canyon Park to a residential equivalent is not the intent of these special conditions or findings, but rather serves as a means of comparison and assurance that the impacts are not excessive when evaluated in this context).

The special conditions noted above also require van shuttles and carpools are used to minimize the number of individual vehicle trips to the site, that special events must end by 9:00 p.m. on Sunday through Thursday evenings and that all accompanying vehicles leave the site by 10:00 p.m., that amplified music be prohibited after 8:00 p.m. on the same evenings, (the applicable limits are extended by one hour on Friday and Saturday evenings), and that signage at the entrance gate warn against honking (neighbors have complained of idling vehicles honking for admittance to the site).

In addition, and in accordance with the applicant's revised proposal, special events (groups of over 40) will be restricted to no more than one such event per week, between March 1 and October 31. This restriction addresses the neighbors' concerns that too many caterers, flower deliveries, and other special event support trips were adversely affecting Ramirez Canyon Road.

The applicant proposes to install a new, state-of-the-art wastewater treatment plan and recyled water program, and will retire and abandon the aging septic disposal systems within the riparian corridor on site. Special Condition 8 ensures the implementation of these commitments and requires additional monitoring to ensure that water quality concerns associated with the presence of septic disposal systems are fully addressed.

A number of concerns related to fire risk and feasibility of evacuation and/or defense of the site if threatened by wildfire are addressed in detail in Section B (Hazards) of these findings. Examples of measures to address the neighbors concerns in these areas include the applicant's proposal to cancel all activities on "red flag" high fire hazard alert days issued by the National Weather Service, retaining special event van shuttles on site throughout fire season events to ensure the ability to quickly and effectively evacuate the site, and the performance of fuel modification along Ramirez Canyon Road and reinforcements of the wooden bridge on the road to ensure safe, ingress and egress for emergency response vehicles.

The Commission finds that if fully implemented, the applicable special conditions noted above will ensure that there is sufficient infrastructure to serve the proposed project and that the proposed kinds and intensities of land uses proposed by the applicant will not adversely affect coastal resources if conducted in compliance with these special conditions. The Commission further finds that if fully implemented, these conditions will help to preserve the peaceful, semi-rural character of the Ramirez Canyon Road area. Therefore, the Commission finds that as conditioned by Special Conditions 1, 2, 3, 4, 5, 8, 10, 11, 13, 14 and 15 the proposed project is consistent with Section 30250 of the Coastal Act.

F. Violation

Various developments have been carried out on the subject site without the required coastal development permits. Addressed in this staff report is the change in the kinds, locations, and intensities of uses represented by the use of the site as the applicant's staff headquarters, for on site ranger residential use, and for various uses of the site for special events, tours, and for barrier-free access to the newly designated Ramirez Canyon Park.

The Commission has herein determined that the uses of the site proposed by the applicant may continue, as conditioned herein, and subject to the applicant's complete and continuous compliance with all special conditions set forth herein. Special Condition 15 requires that the applicant satisfy all conditions of this permit which are prerequisite to the issuance of this permit within 120 days of Commission action on the proposed project.

The Commission's approval of use of the site for the specified uses addressed herein does not constitute approval of development associated with the installation and maintenance of gardens on the site. The applicant, in this application, did not seek approval for and the Commission did not consider this land use.

Consideration of this 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 alleged violations nor does it constitute an admission as to the legality of any development undertaken on the subject site without a coastal permit.

G. 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 applicable provisions of Chapter 3 of the Coastal Act.

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

H. California Environmental Quality Act

Section 13096(a) of the Commission's administrative regulations requires Commission approval of Coastal Development Permit application to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The Commission finds that the approval of the proposed project, as conditioned, will not have significant adverse effects on the environment, within the meaning of the California Environmental Quality Act of 1970. Therefore, the proposed project, as conditioned, has been adequately mitigated and is determined to be consistent with CEQA and the policies of the Coastal Act.

ATTACHMENT A

LIST OF EXHIBITS

Exhibit 1. Amended Project Description submitted by Santa Monica Mountains Conservancy, dated March 6, 2000.

Exhibit 2. Regional Map.

Exhibit 3. Area Map.

Exhibit 4. Emergency Access, On-Site Parking, and Best Management Practices Plan, revised March, 2000 and prepared by Penfield & Smith.

Exhibit 5. National Weather Service Red Flag Warnings, Walt Young, MRCA Head Ranger.

Exhibit 6. Septic System Analysis for Ramirez Canyon Park, prepared by Penfield & Smith, dated March 9, 2000.

Exhibit 7. Water sampling and analysis, prepared by Penfield & Smith, dated March 9, 2000.

Exhibit 8 Revenues/Costs for Ramirez Canyon Park, prepared by the Santa Monica Mountains Conservancy, dated March 27, 2000.

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

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March 6, 2000

Mr. Chuck Damm
Deputy Director
California Coastal Commission
89 South California Street, Suite 200
Ventura, California 93001

Re: State of California, Santa Monica Mountains Conservancy (4-98-334)

AMENDMENT TO PROJECT DESCRIPTION
RAMIREZ CANYON PARK

Dear Mr. Damm:

As we discussed in our meeting in your office on February 24, the Santa Monica Mountains Conservancy desires to revise the description of its Ramirez Canyon Park project both to clarify project specifics and respond to concerns raised by your staff and the Commission.

Specifically, we are revising the project description to incorporate state-of-the-art septic system improvements (including upgrades to an existing septic tank, two new septic tanks and a recirculating tank) and upgrades to the bridge located just outside the property. A hard copy of the bridge analysis and proposed improvements, previously faxed to your office, is enclosed.

In addition, we are amending the project description to clarify the maximum number of events proposed at Ramirez Canyon Park as follows:

1. Special events, as defined in the December 8, 1999 amendment to the project description, will be limited to no more than 32 per year (16 small and 16 large), and never more than one event per weekend.

2. The Outreach Programs will be limited to no more than 10 per month;

3. The Canyon and Garden Tours will be limited to an average of 8 per month; and

4. Small group gatherings will be limited to no more than 4 per month.

A revised project description which incorporates these changes these c
We also have included several exhibits that should be helpful in dem

EXHIBIT NO. 1 (59 PAGES)
APPLICATION NO. SMMC
4-98-334
Project Description

public access programs will operate and fit within the limitations of our Transportation and Parking Management Plan (Appendix A). It should be noted that, even though these exhibits assume maximum usage and are therefore "worst cases" , all scenarios fall within the limits of our traffic management plan, which is based on the trip generation of six residences. However, our typical usage is, in fact, expected to be much lower. For example, garden tours and outreach programs usually do not use the number of vehicles allotted because they carpool or use vans and typically generate 8 - 18 trips as opposed to the 30 reflected on the exhibits.

In addition to the revised project description we are attaching revised versions of the Park Operations Guidelines, the Transportation and Parking Management Plan, and the Fire Management and Evacuation Plan, under which all activities in Ramirez Canyon Park are managed and the Public Access Programs.

These documents have been modified to clarify operations policies in response to specific questions by staff and the Commission. Key changes include:

1. The addition of a second ranger at events of over 100 people, the inclusion of August in the defined "fire season";

2. The limitations on number of scheduled events as already stated;

3. The minimum number of vans required for shuttling operations during special events; and

4. The mechanisms used by Conservancy staff to limit and track the number of vehicles at each event.

The proposed uses for the Ramirez Canyon Park compound have not been changed, and, for clarity's sake, break down as follows:

1. Park administrative offices for the Conservancy and Mountains Recreation and Conservation Authority (a joint powers agency consisting of the Conservancy and Conejo and Rancho Simi Recreation and Park Districts).

2. A ranger residence utilized by a ranger charged with security and public safety duties.

3. Public access improvements involving existing improved grounds and pathways, and a proposed new trail and creekside picnic area to accommodate ADA accessible

public access.

4. Implementation of a Public Access Program consisting of the following, subject to on-site parking constraints: (a) Small Group Gatherings, (b) Canyon and Garden Tours, (c) Special Events, and (d) Conservancy Outreach Programs.

We will be providing you shortly, under a separate cover, with the following additional documents: (1) a detailed plan of the septic system improvements from Penfield and Smith Engineers; (2) the fuel modification plan approved by the Los Angeles County Fire Department; (3) the results of water quality analysis, also from Penfield and Smith (at this point a non-issue because of the proposed state-of-the-art septic improvements which will be installed); and (4) a more detailed plan for the bridge work as requested by staff.

Finally, by letter from Melanie Hale dated February 17, 2000, you have directed that the streambed alteration work be dealt with under separate application, and not through an amendment to the application currently before the Commission. Accordingly, please be assured that we will be submitting a separate application for that purpose soon and are committed to working closely with you to resolve any issues related to that application.

Please do not hesitate to call if we can provide any additional information concerning the revised project description.

Sincerely,

for

Amy Lethbridge
Deputy Executive Officer

cc: Mr. Gary Timm
Sandra Goldberg, Esq.
Mr. Jack Ainsworth
Ms. Melanie Hale
Ms. Nancy A. Lucast
Mr. Richard M. Frank

Enclosures

Enclosures to Amendment to
Project Description
March 6, 2000

1. Revised Project Description
2. Park Operations Guidelines
3. Transportation and Parking Management Plan
4. Fire Management and Evacuation Plan
5. Public Access Programs
6. Appendix A: Illustrative Exhibits
7. Bridge Analysis

STATE OF CALIFORNIA

SANTA MONICA MOUNTAINS CONSERVANCY

APPLICATION NO. 4-98-334

RAMIREZ CANYON PARK

REVISED PROJECT DESCRIPTION

MARCH 6, 2000

State of California, Santa Monica Mountains Conservancy
Ramirez Canyon Park
Revised Project Description
March 6, 2000

The proposed project involves a change of use of six contiguous improved residential lots to public park (Ramirez Canyon Park), including administrative offices of the Santa Monica Mountains Conservancy, on-site ranger accommodations, public gardens, meeting facilities, public access trail and picnic areas, public parking and two water tanks.

The site is presently improved with five single-family residential structures (known as "Barwood," "Peach," "Barn," "Deco" and "Caretaker") and appurtenances including a pool, tennis court, driveway system, parking areas, two bridges, three footbridges, hardscape and garden improvements and a sediment basin.

The breakdown of proposed uses for the park compound is as follows:

1. *Park Administrative Offices.* Barwood and portions of Barn and Peach will be converted to administrative offices for the Santa Monica Mountains Conservancy and the Mountains Recreation and Conservation Authority. These offices will be staffed weekdays year-round (approximately 8 a.m. to 6 p.m.) with up to 16 employees of whom two are grounds maintenance personnel.

2. *Ranger Residence.* The Caretaker unit will be utilized as residential quarters for a ranger charged with security and public safety duties.

3. *Public Access Improvements.* Existing improved grounds and pathways and a proposed new trail and creekside picnic area will be provided to accommodate both general public access and barrier-free ADA public access.

4. *Public Access Program.* The park compound will be operated to implement a public access program consisting of one or a combination of the following, subject to on-site parking constraints. The Public Access Program will be managed in accordance with the terms of the Park Operation Guidelines, the Transportation and Parking Management Plan and the Fire Management and Evacuation Plan.

    - *Small Group Gatherings*. The gatherings are generally conducted year-round, seven day per week, 8 a.m. to 10 p.m., with a typical attendance of up to 40 people. The premises are typically provided free or at-cost to non-profit organizations, educational groups and public agencies, and for a fee to for-profit groups. There will be no more than four small group gatherings per month.

- *Canyon and Garden Guided Tours*. Guided tours are conducted year-round on weekdays, between 10 a.m. and dusk, with typically up to 40 participants per tour. Tours are free to disadvantaged and community service groups, while a fee is charged to other groups, including garden clubs and tour packagers. There will be an average of 8 canyon and garden tours scheduled per month.

- *Special Events*. These functions are confined to the period from March 1 through October 31, on weekends and holidays between 8 a.m. and 10 p.m. and between 6 p.m. and 10 p.m. on weekdays. There are two categories of special events: Standard (up to 150 participants), and large (up to 200 participants). Standard special events are permitted at any time during the special event period, while large special events are allowed only from April 1 through August 30. The premises are provided at reduced cost to non-profit organizations and for a fee to for-profit organizations and individuals. There will be a limit of 32 special events per year (16 standard and 16 large) and there will never be more than one special event scheduled per weekend.

- *Outreach Programs*. These programs, conducted year-round, seven days per week from 10 a.m. to dusk, are intended to provide access to resources and amenities not usually available to disadvantaged and/or disabled youths and seniors. The programs provide free or low-cost round-trip transportation from inner-city areas. There will be 10 outreach programs per month.

Proposed new development consists of additional public trail/picnic area improvements, two water tanks, and upgrades to the bridge just outside the property. The septic systems serving the Barwood, Barn and Peach houses will also be significantly upgraded with state-of-the-art improvements. Specifically, the septic tank for the Barwood will be upgraded, while the septic systems serving the Barn and Peach will be replaced with larger tanks. A recirculating tank will be installed to clean the waste from these tanks and will replace the leachfields. The cleaned water from the recirculating tank will then be pumped to an irrigation system to be installed in the terraced orchard. These improvements will ensure that the above listed uses are in accordance with requirements set forth by both the County Fire Department and the Uniform Plumbing Code.

STATE OF CALIFORNIA

SANTA MONICA MOUNTAINS CONSERVANCY

APPLICATION NO. 4-98-334

RAMIREZ CANYON PARK

PARK OPERATIONS GUIDELINES

MARCH 6, 2000

State of California, Santa Monica Mountains Conservancy
Ramirez Canyon Park
Park Operations Guidelines
March 6, 2000

The Santa Monica Mountains Conservancy (Conservancy) has the jurisdiction and authority to administer and manage the public parks and property which it owns or which are under its control pursuant to Public Resources Code Section 33300 et. seq. These Special Park Operations Guidelines shall govern in the case of Ramirez Canyon Park.

EVENT COORDINATION

The Conservancy shall designate an Events Coordinator for Ramirez Canyon Park who shall maintain a Master Calendar for purposes of scheduling Public Access Programs. The Master Calendar shall be used to coordinate the programs to ensure that park usage is not overburdened and that on-site parking demand will be accommodated at all times.

The Conservancy shall at all times implement and enforce the Ramirez Canyon Park Transportation and Parking Management Plan and the Fire Management and Evacuation Plan.

General Site Restrictions

1. All activities related to each program shall be at the direction of the Events Coordinator.

2. No activity will be permitted inside the Barwood, Lower Peach, Barn or Art Deco offices.

3. Fires are strictly prohibited. There is no smoking allowed on the property except on the Barn patio and next to the Art Deco pool.

4. All events and programs shall end no later than 10:00 p.m.

Special Use Permits

The Conservancy shall require that the sponsors of all Small Group Gatherings and Special Events obtain a Special Use Permit from the Conservancy.

Permittee and all outside vendors are required to meet with the Events Coordinator and demonstrate understanding and compliance with these Guidelines, as well as the Transportation and Parking Management Plan and the Fire Management and Evacuation Plan.

The Special Use Permit shall, at a minimum, include the following requirements:

General Use Conditions

1. Permittee, its employees, agents, contractors and vendors will agree in writing to comply with the Special Park Operations Guidelines, the Transportation and Parking Management Plan and the Fire Management and Evacuation Plan which will be included with the Special Use Permit. Acceptance of the Special Use Permit indicates that these have been received and agreed to.

2. No landscaping, trees, shrubs or plants - native or exotic - are to be injured, trimmed or removed for any reason during activities allowed under this permit. Do not pick the wildflowers; they are protected.

3. Permittee shall not affix any decoration into, or onto, the structures, trees or other vegetation without prior written approval of the Events Coordinator.

4. If smoking occurs anywhere on the grounds outside of designated areas or butts are found anywhere on the grounds, the security deposit will not be refunded. If visitors are found smoking inside the structures, Permittee will be fined an amount equal to and in addition to the security deposit.

5. Permittee may only use power outlets as indicated and approved by the Events Coordinator.

6. A prior walk through of the grounds is required for the Permittee, the caterer, musicians, party rental coordinator, shuttling company and any other vendors to review all rules and regulations of Ramirez Canyon Park.

7. Permittee will only receive an executed copy of the Special Use Permit upon the Conservancy receiving a signed copy of the Entertainment Agreement, the Shuttle Company Agreement and written evidence of permission to use one or more of the designated off-site parking areas.

8. Failure to comply with any of these provisions may result in the termination of the Special Use Permit. All visitors, vendors and employees must be informed of the rules, regulations and sensitivities of Ramirez Canyon Park.

9. The Conservancy may terminate any events when necessary for the safety of the attendees, employees of the Conservancy and MRCA; for the protection of resources; for violation of any rules and regulations of the State of California, Santa Monica Mountains Conservancy; or for breach of the Special Use Permit. Events will be canceled on "Red Flag" days or in the event of a "Flash Flood/Flood Warning" or "Urban and/or Small Stream Advisory" issued by the National Weather Service.

10. Events shall not commence before 8 a.m. and must end at or before 10 p.m.

Catering and Food Service Conditions

1. Permittee and/or their vendors will be responsible for removing all trash related to the event. Permittee may rent a small dumpster for this purpose to be located on the grounds at the discretion of the Events Coordinator. Any trash found on the grounds is cause for not refunding the security deposit.

2. Planted areas, lawns and drains on the grounds and in the buildings are not available for caterer or any vendor to dispose of any liquids or solids, i.e. beverages, dirty water from dishes, scraps from food preparation or clean-up.

Rental Equipment Conditions

1. The Conservancy shall annually select a single rental vendor to serve all Public Access Programs held at Ramirez Canyon Park. Large rental items (tables, chairs, kitchen equipment and heaters) shall be stored on-site in the Art Deco garage during the special event season to minimize vehicle trips. Small rental items such as linens and plateware shall be delivered the Friday prior to an event, and picked up the following Monday. No more than three deliveries shall be allowed for small rental items, and no large trucks shall be used for such deliveries.

Noise Level Conditions

1. Amplified music is only permitted in the meadow or the area in front of the Barn and Peach Houses.

2. Noise levels are monitored by Conservancy staff and should not be audible beyond park boundaries.

3. An Entertainment Agreement signed by the Permittee and any entertainment vendors shall be required to ensure compliance with noise restrictions.

Restroom Usage Conditions

1. Restrooms are available in the Barn and Peach for events up to 40 people. For events over 40 people, Permittee may only use the portable restrooms located on the grounds. A minimum of three portable toilets will be permanently maintained on site.

CANCELLATION OF PUBLIC ACCESS PROGRAMS AND EVENTS

All public access to the site, including Outreach Programs, Canyon and Garden Tours, Small Group Gatherings and Special Events, will be canceled as follows:

1. During "Red Flag" days, as designated by fire weather forecasters at the National Weather Service; and

2. In the event of "Flash Flood/Flood Warning" or "Urban and/or Small Stream Flood Advisory" issued by the National Weather Service.

3. All scheduled Public Access groups will be required to designate an emergency contact person with instructions on how that person can be reached 24 hours a day. That person shall be notified by Conservancy Staff in the event that either of these warnings are issued, and shall be responsible for that event participants are notified of such cancellations and any resulting change of venue.

STATE OF CALIFORNIA

SANTA MONICA MOUNTAINS CONSERVANCY

APPLICATION NO. 4-98-334

RAMIREZ CANYON PARK

TRANSPORTATION AND PARKING MANAGEMENT PLAN

MARCH 6, 2000

State of California, Santa Monica Mountains Conservancy
Ramirez Canyon Park
Transportation and Parking Management Plan
March 6, 2000

The Conservancy shall control and minimize the number of vehicle trips to Ramirez Canyon Park consistent with findings and recommendations of the Traffic Engineer, Crain and Associates, and the Master Calendar maintained under the Special Park Operations Guidelines. The Event Coordinator shall ensure that no combination of events is scheduled such that the daily trip allowance, as determined by Crain and Associates, is exceeded.

Public Access

Outreach Programs, Canyon and Garden Tours, Small Group Gatherings

A. A maximum of twelve vehicles may access the site for these programs.

B. Groups that meet acceptable numbers and for which parking is available may be allowed to park on-site in accordance with the on-site parking layout.

C. Groups that exceed acceptable numbers of vehicle trips will be required to secure off-site parking reservoirs for staging and transfer of participants to a smaller number of vehicles.

Special Events

A. A maximum of twelve (12) vehicles are allowed to access Ramirez Canyon Park on the day of the event not including shuttles. This number includes all vendors such as caterer, photographer, officiant, florist, cake delivery and musicians.

B. A list of scheduled vehicle's license plates is to be provided to the Event Coordinator prior to the day of the event. These vehicles shall be admitted by a staff member present at the event. Any additional vehicles will be denied entrance to the Park.

C. Permittee will be required to secure off-site parking reservoirs for staging and transfer of guests to Shuttle Vans.

D. Shuttle vans must accommodate 15 passengers and must run at full capacity.

E. During fire season (August, September, October, November) shuttle vans will be required to remain on site at all times to ensure rapid evacuation of guests.

F. For events where shuttle vans are allowed to make multiple trips a minimum number of vans will be required to ensure shuttle trips stay within the daily traffic allowance for Ramirez Canyon Park. For events of 150 people, a minimum of 3 vans will be required. For events of 200 people, a minimum of 9 vans will be required.

Off-Site parking areas

Three off-site parking areas are presently designated for carpooling/vanpooling of events: Church of Christ Scientist (28635 Pacific Coast Highway), private property (27469 block of Pacific Coast Highway), and Paradise Cove Beach Café parking lot (28128 Pacific Coast Highway).

The Conservancy shall identify and update annually lists of:

1. Candidate off-site parking reservoirs with sufficient capacity to ensure that no public coastal access parking will be adversely affected.
2. Candidate transportation companies to provide shuttle vehicles for participant transfer from off-site parking areas to Ramirez Canyon Park.

On-Site parking areas

A. All potential parking areas on-site, including required spaces for staff parking, visitor parking, shuttle parking, and ADA accessible parking are designated on the Parking Plan prepared by Penfield & Smith, dated March 2000. No cars shall be parked outside of these areas.

B. In compliance with the Fire Management and Evacuation Plan, during fire season (August, September, October, and November) sufficient vehicle capacity for full evacuation of visitors will be maintained on-site at all times.

C. Driveways shall remain clear at all times for emergency access.

Accessing Ramirez Canyon Park

A. Vehicles accessing Ramirez Canyon Park shall not exceed a maximum height of eleven feet.

B. Except for the RTP program, no buses or vans with a capacity in excess of 15 passengers shall be permitted. 15-passenger vans shall be required for all Special Events. The RTP program may use 22-passenger vans or small buses which can accommodate no more than 24 passengers.

C. Vehicles shall not exceed a speed of 15 mph along Ramirez Canyon Road.

D. Vehicles shall cede right-of-way to all pedestrians, children and animals along Ramirez Canyon Road.

E. Horns shall be used in emergency situations only.

F. No parking is permitted anywhere along Ramirez Canyon Drive at any time.

STATE OF CALIFORNIA

SANTA MONICA MOUNTAINS CONSERVANCY

APPLICATION NO. 4-98-334

RAMIREZ CANYON PARK

FIRE MANAGEMENT AND EVACUATION PLAN

MARCH 6, 2000

State of California, Santa Monica Mountains Conservancy
Ramirez Canyon Park
Fire Management and Evacuation Plan
March 6, 2000

Fire Management Policies

Public safety is the number one priority of the Fire Management and Evacuation Plan and requirements and policies have been determined accordingly. Special provisions have been made for additional requirements during the months of August, September, October and November due to the significantly increased fire risk during those months (see attachment A).

Operation and maintenance of the site will comply with the State Fire Code.

Fuel Modification/Management Policies

Removal of flammable vegetation and modifying existing ornamental and native fuels within 200' from structures will be regularly undertaken to protect the structures from wildland fires. An effective fuelbreak extending up to 200' northeast of the Barn House and Peach House has been completed. Within the complex itself various pine and palm trees species will be thinned out and limbed up to 15 to 20 feet above the ground. Palm trees will be pruned not less than once a year; all Pine trees will be removed by 2002, starting with dead or diseased trees.

All structures will conform to a minimum 100 foot clearance standard utilizing State Fire Marshal guidelines. Grass and other vegetation of less than 18 inches high and located more than 30 feet from any building or structure may be maintained to stabilize soil and prevent erosion.

Portions of any tree extending within 10 feet of the outlet of any chimney or stovepipe shall be removed as shall any dead or dying portions of trees located to or overhanging any buildings.

Roofs shall be kept free of leaves, needles and any other vegetation. A screen of noncombustible material, with openings of not more than ½ inch, will be placed on the outlet of every operating chimney or stovepipe.

Vegetation shall be cut back, thinned out, trimmed up, and dead material removed for a minimum of 10 feet on each side of roadways.

All Oleanders adjacent to roadways shall be removed to provide better access and increased safety and visibility.

Roofs will be kept free of leaves, needles and any other vegetation. A screen of noncombustible material, with openings of not more than ½ inch, will be placed on the outlet of every operating chimney or stovepipe.

Flammable ornamentals and non-native vegetation will be removed from the large central island outside the park gates and the area will be maintained in such a condition as to be available as a fire protected "hunkerdown" area for local residents and staging area for fire emergency vehicle parking.

Safety Precautions

All exit doors shall continue to be openable from the inside without the use of key or any special knowledge.

No unpermitted uses of cords or cables is allowed in substitution for properly installed electrical outlets within the buildings and structures, as required in the State Fire Code, Title 19.

Fire extinguishers shall be conspicuously located where they will be readily accessible and immediately available in the event of fire. Extinguishers shall be installed on hangers, brackets or in cabinets. During cooking events, a minimum of 2A and 20BC extinguishers are required and will be located near the cooking setup.

All caterers or other contractors who desire to utilize tents, awnings or other fabric enclosures will be required to show proof that these materials meet the State Fire Code requirements as defined in Title 19, CCR, Chapter 2.

Access roads to the entrance gates of the site will be maintained as required by Los Angeles County Fire Department.

All wood shingle roofing (specifically, a portion of the roof of the Barwood) will be replaced with non-combustible material.

All staff located at Ramirez Canyon Park, as well as all 30 MRCA firefighters will be routinely briefed and trained regarding public safety protection, fire suppression and procedures as they relate to the Ramirez Canyon Park site. Emergency response to a fire threatening the park will be governed by the agency fire "Red Book", appropriate section attached. (Attachment B)

On-Site Fire Protection Equipment

Fire apparatus and supplies located on site will include one fire engine with foam eductor, one eleven horse power pool pump, 125 gallons of class A foam concentrate, 350 feet of 2.5 inch hose, 600 feet of 2 inch, 1200 feet of 1.5 inch, 400 feet of 1 inch and all appropriate nozzles and appliances.

The water capacity maintained on site will total 40,250 gallons - tank capacity totaling 14,500, the pool with 25,000 gallons and the fire engine with 750 gallons. In addition, two water tanks will be placed on site, one of 4,500 gallons, one of 10,000 gallons.

All fire safety equipment shall be properly maintained at all times.
A site map with the location of firefighting equipment and supplies is attached. (Attachment C)

MRCA Training and Qualifications - Fire personnel are attached. (Attachment D)

Evacuation Policies and Plans

All public access to the site will be canceled during "Red flag" days as designated by fire weather forecasters at the National Weather Service. As a matter of practice, the MRCA is in daily contact with Los Angeles City Fire Department to obtain said designation.

Requirements for use of the site during the high fire season (August, September, October, November), include no special events of more than 150 people during the months of August, September and October and no events of over 40 people in November.

During the months of August, September, October and November, sufficient vehicle capacity for full evacuation of visitors is required on-site at all times.

All special events require the on-site attendance of three staff members. For events smaller than 100 people one ranger is included among the three. For events larger than 100 people two rangers are included. All staff members are trained in evacuation procedures and one is designated at the beginning of each event as the evacuation

officer. A ranger will bring a fire patrol vehicle with a slip-on tank to all events of 100 persons or more.

Evacuation of the site will take place when the following conditions have been determined to exist by the MRCA Ranger in charge or the Los Angeles County Fire Department:

1 A wildfire is in progress in the area but is not anticipated to reach the site for at least an hour; or

2. Fire and/or police department personnel have arrived on site requesting evacuation; or

3. A fire has bypassed the area and the road has been surveyed and found safe for passage; or

4. It is determined by the Ranger/Firefighter in charge that, based on existing conditions, evacuation is the safest and most prudent action.

In the event of evacuation, the predesignated evacuation officer will immediately make direct contact with the van drivers of the impending evacuation, provide them with a briefing on the evacuation plan and provide them with direction on the primary and secondary evacuation routes.

The evacuation officer will then notify guests using the amplified sound system that an evacuation will take place and direct them to gather as a group and then walk them single file to the entrance to the lower parking area where they will be loaded into vans. Guests will be instructed to remain in a single file line to facilitate loading and to keep the road clear for incoming emergency vehicles.

The support service personnel (caterers, etc) will remain on site until all guests are evacuated. These personnel then will be instructed to evacuate the site using their service vehicles.

The following conditions will govern whether guests are guided by MRCA or Los Angeles County firefighting personnel to remain on-site in a designated safe area:

1. A wildland fire is burning in the general vicinity towards Ramirez Canyon Park, and is predicted to arrive in less than one hour; or

2. It is determined by the Ranger/Firefighter in charge that, based on existing conditions, remaining in place is the safest and most prudent action; or

3. If it is determined that remaining in place is the safest action then guests shall be directed to remain in place within the Deco House.

In the event of a decision to remain in place, the predesignated evacuation officer will immediately notify guests using the amplified sound system that an emergency is taking place and direct them to gather as a group. They will then be walked in a single file line to the entrance of the Deco House utilizing the front steps. For those guests with disabilities, the handicapped accessible entrance to the house, located on the North side, will be utilized.

The evacuation officer will ensure that service personnel (caterers, drivers, etc) are also notified and that they line up with the guests.

The Deco House shall be maintained as the on-site emergency fire shelter in the event that remaining in place is determined to be the safest and most prudent action. Maintenance of the Deco House shall include keeping the asphalt roof in good repair. All windows within the structure shall be replaced with double paned glass.

Attachment A
Special Provisions

The Ramirez Canyon Park Fire Management and Evacuation Plan contains special provisions during the months of August, September, October and November due to the increased fire risk during this season.

Historically, major wildland fires in the Santa Monica Mountains occur during the late fall. During the period of March through July there is substantially less risk of fire. This is due to typical rainy season in March and a coastal fog patterns which usually occur in May/June. During the months of July and August winds are generally not a factor. Live fuel moisture contents during these months are typically between 70% to 80%.

In September, October and November, the live fuel moisture content typically ranges between 63% and 70% (18 year average). The Conservancy conservatively defines as critical fuel moisture content as below 70%. (The L.A. County Fire Department defines as critical fuel moisture content as below 60%). Further, it is during the late fall that Santa Ana winds occur. Again, historically, the large fires in the Santa Monica Mountains have occurred in the late fall during Red Flag warnings.

Attachment B – MRCA Red Book

FIRE RESPONSE PRE-PLAN

Ramirez Canyon Park

SEND PAGE AND ACTIVATE EMERGENCY MESSAGE CENTER AS NEEDED

ALERT 1

Unknown Hazard

Southern Division	Units prepare and standby Ramirez Evacuation Officer prepare to implement evacuation plan Ramirez staff to prepare park fire engines Southern Division slip-on units move up to Temescal
Office	Operator cover phones (business hours) Alert employees, guests, and ranger residence

ALERT 2

Fire in Area

(plus actions of ALERT 1)

Southern Division	Activate radio relay at Kanan Road Activate radio relay at Temescal Temescal Engine respond to SCCS 1 slip-on respond to SCCS, 1 slip-on to Temescal Agency Rep to Fire Department command post All remaining Southern rangers respond to SCCS Evacuation Officer implement evacuation plan
Mulholland Division	Activate radio relay at San Vicente/Nike site Respond 1 supervisor Respond 3 firefighters
Northern Division	Respond 1 supervisor Move-up/stage engine at I-5 / Roscoe

ALERT 3

Threat Fire

(plus actions of ALERTS 1 &2)

Southern Division	Fully activated
Mulholland Division	Respond remaining firefighters (less 1 slip-on with firefighters)
Northern Division	Respond staged engine from I-5/Roscoe Respond remaining firefighters (less manned slip-on & engine)

RAMIREZ CANYON PARK
FIRE ACTION PLAN

FIRST ON SCENE: YOU ARE THE I.C. UNTIL RELIEVED IN PERSON
ASSESS/SIZE UP & CONSIDER RESOURCES REQUIRED:
- **FIRE – LAW ENFORCEMENT – RANGERS – MRCA CREW – NPS –**

First Priority is safe evacuation of all people on site

CONTACT VIA PHONE:
1. LA County Fire - Call 911
2. MRCA Staff - Call (888) 562-1116 – Send message to Supervising Ranger Group
3. Walt Young - Home (310) 589-2413
4. Set emergency message center (323) 221-8900 x 121

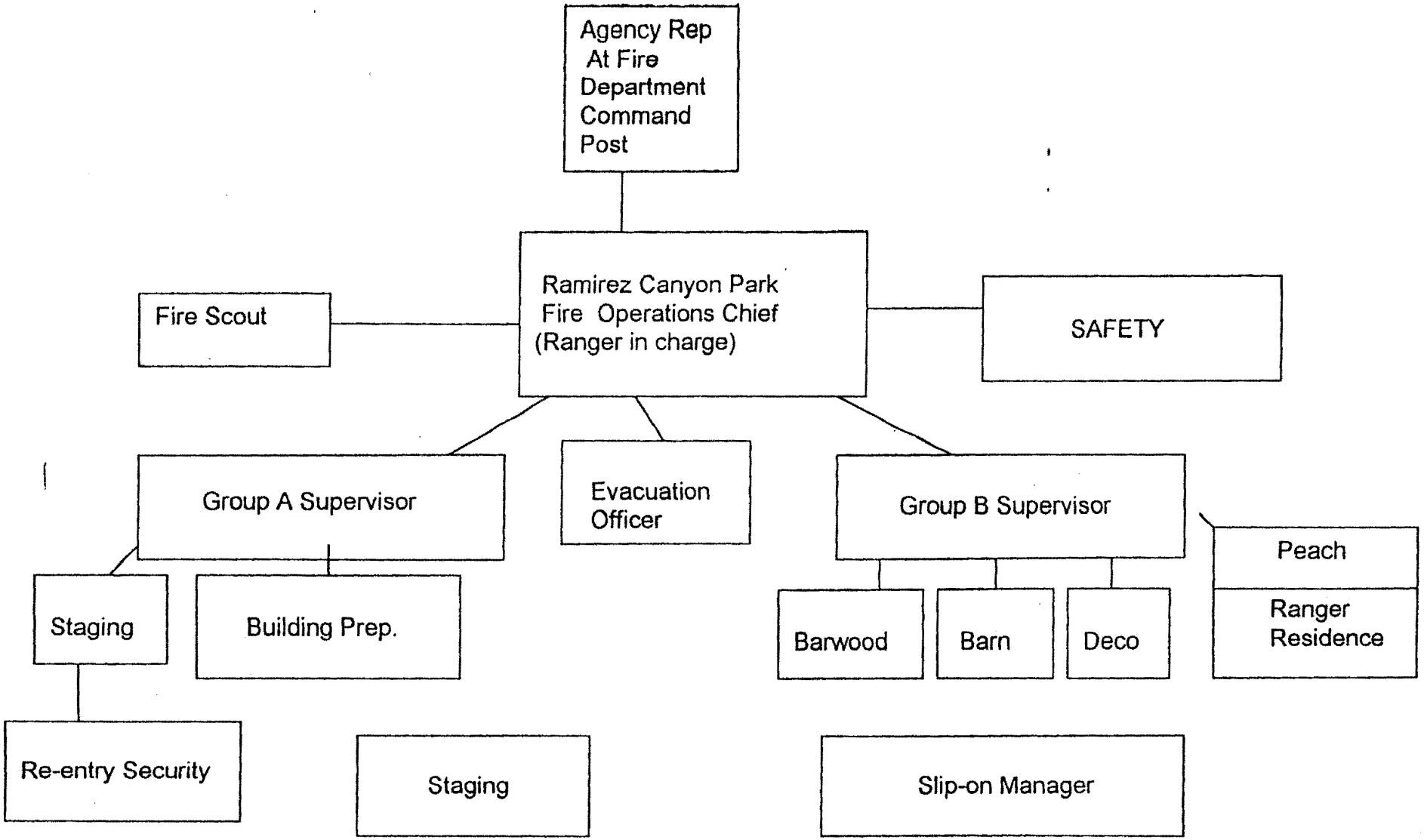
OFFICE STAFF & RESIDENTS:
1. Use truck Siren/P.A. to alert Center (wait & P.A.)
2. Use CB radio – channel 9
3. Notify Ranger house, by telephone.

EVACUATION
1. Safe evacuation of all people is number one priority
2. Implement procedures as directed by the Fire Management and Evacuation Plan
3. Designated evacuation officer implement evacuation, direct vehicles to safe route
4. Primary evacuation route – Ramirez Canyon to Delaplane to West Winding Road to PCH
5. Secondary evacuation – Ramirez Canyon to PCH

COMMAND POST – Barwood Office
1. (310) 589-3200 Fax line back-up (310) 589-3207
2. Establish CB/FM radio net (use AA batteries)
3. Radio frequency channel 5 Blackjack/channel 14
4. Move ranger vehicle to Barwood
5. Utilize Checklist forms
6. Monitor TV & News Radio

OBSERVATION POST – Kanan Road above SCCS and/or Winding Way (Helispot 71D)
1. Radio relay
2. Cell phone contact
3. Fire scouts duties

STAGING & OPERATIONS
1. Staging at Island at entrance (primary)
2. Lock gate open, switch next to motor
3. Park non-slip on units at staging area.
4. Check in at Barwood with gear for assignment.
5. "Slip-ons" Radio while en-route for assignment at PCH Ramirez.
6. Staff on-site deploy equipment and hoselines as trained



Unit 1_____

Unit 2_____

Unit 3_____

Unit 4_____

RAMIREZ CANYON PARK
Building Check list

LOCK FRONT GATE OPEN – SWITCH NEXT TO GATE MOTOR

BARN – STRUCTURE: WINDOWS CLOSED/DRAPES OPEN LEVELS 1 2
INTERIOR DOORS CLOSED
EXTERIOR DOORS CLOSED & UNLOCKED
PARKING NORTH OF BUILDING: EMPTY CARS (WHO)_____
PERSONNEL REMAINING - _____
ADVISED TO CHECK OUT WITH - _____
TURN OFF GAS & A.C. YES NO

PEACH – STRUCTURE: WINDOWS CLOSED/DRAPES OPEN LEVELS 1 2 3 4
INTERIOR DOORS CLOSED
EXTERIOR DOORS CLOSED & UNLOCKED
PARKING – UPPER LOT EMPTY CARS (WHO)_____
PERSONNEL REMAINING:_____
ADVISED TO CHECK OUT WITH:_____
TURN OFF A.C. & ELECTRICITY MAIN NEXT TO FIRE HYDRANT YES NO

BARWOOD – STRUCTURE: WINDOWS CLOSED/DRAPES OPEN LEVELS 1 2
INTERIOR DOORS CLOSED
EXTERIOR DOORS CLOSED & UNLOCKED
PARKING BY GARAGE: EMPTY CAR(WHO)_____
PARKING BY TENNIS COURTS: EMPTY CAR(WHO)_____
REFER TO OFFICE RECOVERY PLAN FOR DATA/CPU SAFEGUARDING.
PERSONNEL REMAINING:_____
ADVISED TO CHECK OUT WITH:_____ TURN OFF A.C. YES NO
TURN OFF GAS AT BRIDGE YES NO – TURN OFF ELECTRICITY AT MAIN BY TENNIS COURTS YES NO

DECO STRUCTURE: WINDOWS CLOSED/DRAPES OPEN LEVELS 1 2
INTERIOR DOORS CLOSED
EXTERIOR DOORS CLOSED & UNLOCKED
PARKING BY GARAGE: EMPTY CAR (WHO)_____
PERSONNEL REMAINING:_____
ADVISED TO CHECK OUT WITH:_____
TURN OFF GAS YES NO - TURN OFF A.C. & ELECTRICITY YES NO

RANGER RESIDENCE – STRUCTURE: WINDOWS CLOSED/DRAPES OPEN
INTERIOR DOORS CLOSED
EXTERIOR DOORS CLOSED & UNLOCKED
PARKING BY GARAGE: EMPTY CAR(WHO)_____
PERSONNEL REMAINING:_____
ADVISED TO CHECK OUT WITH:_____
TURN OFF ELECTRICITY YES NO - TURN PROPANE OFF YES NO – RANGER HAS 2 DOGS

COMPLETED BY: _____ *TIME:* _____ *DATE* _____

Attachment D
Mountains Recreation and Conservation Authority
Training and Qualifications - Fire personnel

The Mountains Recreation and Conservation Authority (MRCA) has 30 fire personnel who have completed the minimum training required by the agency as well as refresher training. This required training is :

Wildland Firefighter - National Park Services
Urban Wildland Interface - United States Forest Service
Standardized Emergency Management Systems - Office of Emergency Services
Red Cross First Aid
CPR for the Professional rescuer

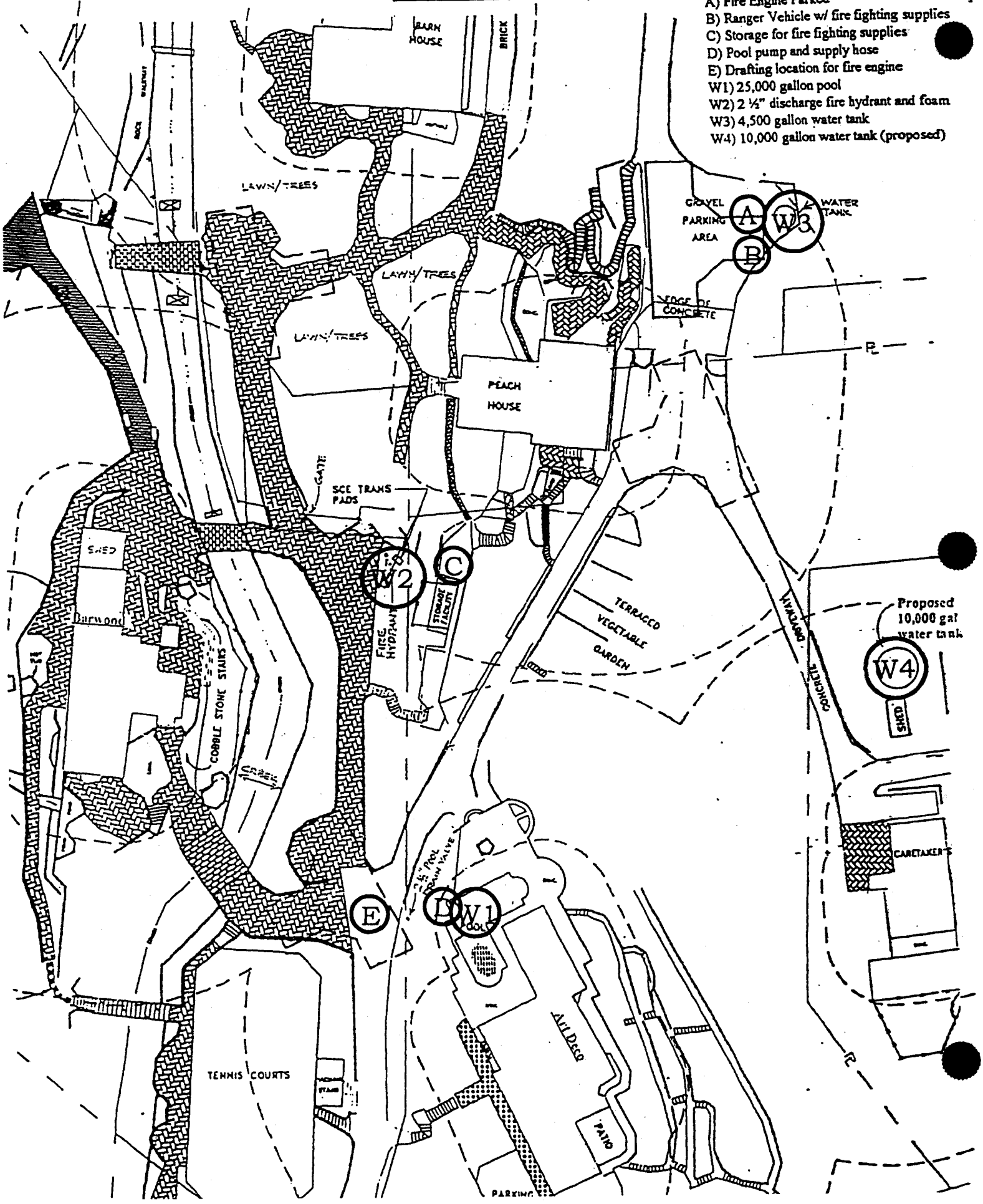
In addition, senior firefighters have completed the following:

Nine firefighters have completed structure firefighting academies
Nine firefighters have completed Hazardous Materials - First Responder Operational
Seven firefighters are Emergency Medical Technicians
Six firefighters have completed Rescue Systems 1
Five firefighters have completed Incident Command System 300

MRCA Chief Ranger Young , in addition to satisfying all of the foregoing training, lives on-site in Ramirez Canyon Park and serves as the resident ranger. Chief Young has the additional following qualifications:

> 20 years with the Ventura County Sheriff Department Search and Rescue Team 3, where he held positions of Team Captain, Training Officer and Squad Leader
>
> 7 years experience with the National Park Service as a firefighter / paramedic as well as an instructor in a variety of related subjects.
>
> He has served the Mountains Recreation and Conservation Authority for six years and was appointed Chief Ranger in January 1999. As a Park Ranger, Mr. Young is a Full Time California Peace Officer, Wildland Firefighter, Emergency Medical Technician, Search and Rescue expert. He is also a licensed paramedic in the State of California.

Attachment C
Ramirez Canyon Park



STATE OF CALIFORNIA

SANTA MONICA MOUNTAINS CONSERVANCY

APPLICATION NO. 4-98-334

RAMIREZ CANYON PARK

PUBLIC ACCESS PROGRAMS

MARCH 6, 2000

State of California, Santa Monica Mountains Conservancy
Ramirez Canyon Park
Public Access Programs
March 6, 2000

Public access at Ramirez Canyon Park is conducted through defined programs, consistent with existing local and state park uses in Malibu and the Santa Monica Mountains. The Public Access Programs will comply with the Special Park Operations Guidelines, the Transportation and Parking Management Plan, and the Fire Management and Evacuation Plan.

To further the Public Access Programs, the Conservancy will implement the Public Access Improvements, as shown on the Conceptual Plan dated March 1999. The specific programs and strategies to maximize their exposure to the public are described below.

Public Access Programs

The Outreach Program. The Outreach Program is a year-round Conservancy program, operated by the Mountains Recreation and Conservation Authority (MRCA) that targets seniors and the disabled from disadvantaged areas of the region. The on-site operation of this program will be funded by the other public access programs conducted at Ramirez Canyon Park. To facilitate the Outreach Program, the existing Recreational Transit Program (RTP) will be expanded to include Ramirez Canyon Park. The RTP provides free or low-cost transportation to groups from all over Los Angeles County that otherwise would not have access to parks and beaches in the Santa Monica Mountains. The program at Ramirez Canyon Park will be available seven days a week, 10 a.m. to dusk, though polling of our target populations leads us to anticipate that the majority of these programs will be held on weekdays. Typically, a group in this program will bring up to 40 people per visit. The group will arrive either in vans provided by a senior home, church or facility for the disabled (school, etc.) or by vans or small buses provided through the RTP program. The small buses have a maximum capacity of 24 passengers and are 20 feet long, 8 feet wide, and 10 feet high. Buses exceeding this size will not be allowed. Participants in the Outreach Programs will enjoy the unique setting of Ramirez Canyon Park, which includes ADA accessible garden paths and a public access trail, a picnic area and a proposed creekside overlook, as well as interpretive programs discussing native plants and the cultural and natural history of the site. Ramirez Canyon Park is uniquely suited for the groups targeted, given the often restricted mobility of these groups and the limited number of ADA trails and facilities available at other RTP destinations.

Canyon and Garden Tours. Canyon and Garden Tours operate year round, on weekdays, 10 a.m. to dusk. Typically, these programs contain up to 40 people per tour. They are generally free to non-profit, educational, and public organizations; a fee is charged to for-profit agencies and groups. Tours provide participants with historical, ecological and architectural information on the Park, Ramirez Canyon and the Santa Monica Mountain Recreation area.

Small Group Gatherings. Small Group Gatherings operate year round, seven days a week, from 8 a.m. to 10 p.m. Typically, these programs accommodate up to 40 people per event. Park premises are generally provided free or at-cost to non-profit, educational, and public organizations. A fee is charged to for-profit agencies and groups. Small group gatherings include the use of public meeting facilities for workshops, training, and retreats.

Special Events. Special Events are permitted from March 1 to October 31, week-ends and holidays, 8 a.m. to 10 p.m., and weekdays 6 p.m. to 10 p.m. There are two categories of events: standard special events (up to 150 participants) which are conducted March 1 through October 31 and large special events (up to 200 participants) which are permitted April 1 through July 31. Only one special event is permitted per weekend. Special events are fee-based, although discounted rates are offered to non-profit organizations. Full fees are charged to for-profit agencies, groups and individuals. Special events include, for example, weddings, fundraisers, seminars and lectures.

Maximizing Public Access Through the Outreach Program

The Conservancy will maximize the exposure of the public access Outreach Program through a variety of means. The Conservancy maintains an extensive database of program users and park visitors who will be contacted and informed of this program. Details of the program will be provided to elected officials, including those at city, county, state and federal levels, for distribution to their constituents. The Conservancy will also utilize the Coastal Access Guide and other publications which provide information concerning available public access in the coastal zone and Santa Monica Mountains.

The outreach efforts of the Conservancy have always created great demand for our Public Access Programs, particularly, the RTP. To bring senior and disabled groups to Ramirez Canyon, the agency will use those methods of outreach and publicity that currently result in serving over 25,000 people a year in its other parks in the Santa Monica Mountains.

The Conservancy will further explore with the National Park Service additional public access opportunities on adjacent Park Service lands which may be developed in conjunction with Ramirez Canyon Park.

Scheduling Limits for Public Access Programs

In addition to limitations imposed by the traffic allowances described in the Transportation and Parking Management Plan, the Conservancy will limit the maximum number of programs that may be scheduled according to the following:

Outreach Programs:	No more than 10 programs per month
Canyon and Garden Tours:	An average of 8 per month.
Small Group Gatherings:	No more than 4 per month
Special Events:	No more than 32 per year, 16 large and 16 standard. No more than one event shall be scheduled per week-end. No special events will be scheduled in November, December, January or February.

Appendices to Amended Project Description
Ramirez Canyon Park
Illustrative Exhibits

1. Trip Potential Analysis
2. Sample Potential Event Schedule
3. Sample Trip Walk-Through For Large Special Event Week-End
4. Sample Trip Walk-Through For Typical Week Schedule
5. Sample Long Month Calendar with Potential Trips Generated
6. Sample Short Month Calendar with Potential Trips Generated

TRIP POTENTIAL ANALYSIS

		Trips/Month
Trips allowed by 6 Residences *		
Weekday	12.47 trips/home/weekday x 6 homesx 22 weekdays/month	1646
Weekend	13.15 trips/home/weekend day x 6 homes x 9 week-end days/month	710
Total Baseline Trip Budget For A Month		2356
January, February November, December		
Normal Office Activity	16 employees x 2 trips per employee/weekday x 22 weekdays/month	704
Ranger Residence	6 trips/weekday x 22 weekdays/month + 10 trips/weekend x 9 weekend days/month	222
Outreach Programs	(Maximum of 12 vehicles/program x 2 trips/vehicle + 3 Interpretive Staff x 2 trips/staff member) x 10 programs/month	300
Garden Tours	(Maximum of 12 vehicles/tour x 2 trips/vehicle + 3 Docents/Tour x 2 trips/docent) x 8 tours/month	240
Small Group Gatherings	Maximum of 12 vehicles/gathering x 2 trips/vehicle x 4 gathering/month	96
Special Events	Not Allowed in these months	0
Total Trip Potential		1562
March, August, September, October		
Normal Office Activity	16 employees x 2 trips per employee/weekday x 22 weekdays/month	704
Ranger Residence	6 trips/weekday x 22 weekdays/month + 10 trips/weekend x 9 weekend days/month	222
Outreach Programs	(Maximum of 12 vehicles/program x 2 trips/vehicle + 3 Interpretive Staff x 2 trips/staff member) x 10 programs/month	300
Garden Tours	(Maximum of 12 vehicles/tour x 2 trips/vehicle + 3 Docents/Tour x 2 trips/docent) x 8 tours/month	240
Small Group Gatherings	Maximum of 12 vehicles/gathering x 2 trips/vehicle x 4 gathering/month	96
Standard Special Events (<150, w/shuttling, March, 3 vans minimum)	(3 vans/event x 2 trips/van + 7 shuttling trips x 4 extra trips/shuttle + 12 support vehicles/event x 2 trips/vehicle + 2 staff shifts x 3 staff members/Shift x 2 trips/staff member + 12 Event Prep/Teardown Trips/Event) x 4 events/month	328
Standard Special Events (<150 w/o shuttling, August-October)	(10 vans/event x 2 trips/van + 12 support vehicles/event x 2 trips/vehicle + 2 staff shifts x 3 staff members/Shift x 2 trips/staff member + 12 Event Prep/Teardown Trips/Event) x 4 events/month	272
Total Trip Potential		1720 or 1782
April, May, June, July		
Normal Office Activity	16 employees x 2 trips per employee/weekday x 22 weekdays/month	704
Ranger Residence	6 trips/weekday x 22 weekdays/month + 10 trips/weekend x 9 weekend days/month	222
Outreach Programs	(Maximum of 12 vehicles/program x 2 trips/vehicle + 3 Interpretive Staff x 2 trips/staff member) x 10 programs/month	300
Garden Tours	(Maximum of 12 vehicles/tour x 2 trips/vehicle + 3 Docents/Tour x 2 trips/docent) x 8 tours/month	240
Small Group Gatherings	Maximum of 12 vehicles/gathering x 2 trips/vehicle x 4 gathering/month	96
Large Special Events (<200, w/shuttling, 9 shuttles minimum)	(9 vans/event x 2 trips/van + 4 shuttling trips x 4 extra trips/shuttle + 12 support vehicles/event x 2 trips/vehicle + 2 staff shifts x 3 staff members/shift x 2 trips/staff member + 12 Event Prep/Teardown Trips/Event) x 4 events/month	328
Total Trip Potential		1890

Note: These calculations are based on the absolute maximum number of trips allowed. In practice most of our public access programs will not require the full 12 vehicles allowed. Many of our outreach programs will use one or two small buses to transport the participants to and from the site. The garden tours will often carpool participants, using [redacted]ller number of vehicles. Based on past experience, we expect that on a[redacted]ge these two programs will generate between 8-18 trips per program, including docents, rather than the 30 trips used in these calculations.

[redacted] 6th Edition, Institute of Transportation Engineers, Washington, D.C., 1997

SAMPLE POTENTIAL EVENT SCHEDULE

JANUARY
10 Public Outreach Programs
8 Garden Tours
4 Small Group Gatherings
0 Special Events

FEBRUARY
10 Public Outreach Programs
8 Garden Tours
4 Small Group Gatherings
0 Special Events

MARCH
10 Public Outreach Programs
8 Garden Tours
4 Small Group Gatherings
4 Standard Special Events (<150)

APRIL
10 Public Outreach Programs
8 Garden Tours
4 Small Group Gatherings
4 Large Special Events (<200)

MAY
10 Public Outreach Programs
8 Garden Tours
4 Small Group Gatherings
4 Large Special Events (<200)

JUNE
10 Public Outreach Programs
8 Garden Tours
4 Small Group Gatherings
4 Large Special Events (<200)

JULY
10 Public Outreach Programs
8 Garden Tours
4 Small Group Gatherings
4 Large Special Events (<200)

AUGUST
10 Public Outreach Programs
8 Garden Tours
4 Small Group Gatherings
4 Standard Special Events (<150)

SEPTEMBER**
10 Public Outreach Programs
8 Garden Tours
4 Small Group Gatherings
4 Standard Special Events (<150)

OCTOBER**
10 Public Outreach Programs
8 Garden Tours
4 Small Group Gatherings
4 Standard Special Events (<150)

NOVEMBER*
10 Public Outreach Programs
8 Garden Tours
4 Small Group Gatherings
0 Special Events

DECEMBER*
10 Public Outreach Programs
8 Garden Tours
4 Small Group Gatherings
0 Special Events

* All Public Access is subject to cancellation in the event of "Flash/Flood Warnings" issued by the National Weather Service

** All Public Access is subject to cancellation on "Red flag' days as designated by the National Weather Service

SAMPLE TRIP WALK-THROUGH FOR LARGE SPECIAL EVENT WEEK-END

	FRIDAY	SATURDAY	SUNDAY	MONDAY
Morning	Park Staff Arrives at Offices (16 trips) Interpretive Staff and Outreach Program participants arrive (15 trips)	Morning Shift Staff and Rangers Arrive (3 trips) Bride and Support Vehicles (florist, caterer, musician, etc) arrive (12 trips)	None	Park Staff Arrives at Offices (16 trips) Interpretive Staff and Outreach Program participants arrive (15 trips)
	31 Trips	15 Trips	None	31 Trips
Noon	Ranger Residence Traffic (6 trips) Linens, plates delivered for Event (6 trips) Interp. Staff and Outreach Program participants leave (15 trips)	Guests arrive and are shuttled onto site (17 trips) Ranger Residence Traffic (10 trips)	Ranger Residence Traffic (10 trips)	Ranger Residence Traffic (6 trips) Linens, plates picked-up from Event (6 trips) Interp. Staff and Outreach Program participants leave (15 trips)
	27 Trips	27 Trips	10 Trips	27 Trips
Evening	Park Staff Leaves Offices (16 trips)	Staff shift change (6 trips) Guests leave by 10 p.m. (17 trips) Support Vehicles and Evening Staff leaves by 11p.m. (15 trips)	None	Park Staff Leaves Offices (16 trips)
	16 Trips	38 Trips	None	16 Trips
	74 Trips	80 Trips	10 Trips	74 Trips

SAMPLE TRIP WALK-THROUGH F TYPICAL WEEK SCHEDULE

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Morning	Park Staff Arrives at Offices (16 trips) Interp. Staff and Outreach Program participants arrive (15 trips)	Park Staff Arrives at Offices (16 trips) Garden Tour docents and participants arrive (15 trips)	Park Staff Arrives at Offices (16 trips) Interp Staff and Outreach Program participants arrive (15 trips)	Park Staff Arrives at Offices (16 trips)	Park Staff Arrives at Offices (16 trips) Interp. Staff and Outreach Program participants arrive (15 trips)
	31 Trips	31 Trips	31 Trips	16 Trips	31 Trips
Noon	Ranger Residence Traffic (6 trips) Linens, plates picked-up from Event (6 trips) Interp Staff and Outreach Program participants leave (15 trips)	Ranger Residence Traffic (6 trips) Garden Tour docents and participants leave (15 trips)	Ranger Residence Traffic (6 trips) Interp Staff Outreach Program participants leave (15 trips)	Ranger Residence Traffic (6 trips)	Ranger Residence Traffic (6 trips) Linens, plates delivered for Event (6 trips) Interp Staff and Outreach Program participants leave (15 trips)
	27 Trips	21 Trips	21 Trips	6 Trips	27 Trips
Evening	Park Staff Leaves Offices (16 trips)	Park Staff Leaves Offices (16 trips)	Park Staff Leaves Offices (16 trips)	Park Staff Leaves Offices (16 trips) Small Group Gathering Held. All participants leave by 10 p.m. (24 Trips)	Park Staff Leaves Offices (16 trips)
	16 Trips	16 Trips	16 Trips	40 Trips	16 Trips
	74 Trips	68 Trips	68 Trips	62Trips	74 Trips

Sample Long Month Calendar with Potential Trips Generated

Sunday 1		Monday 2		Tuesday 3		Wednesday 4		Thursday 5		Friday 6		Saturday 7	
	Trips		Trips		Trips		Trips		Trips		Trips		Trips
Ranger Res	10	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Ranger Res	10
		Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6	Lg Special Event	70
		Outreach Prog	30	Garden Tour	30	Outreach Prog	30	Garden Tour	30	Outreach Prog	30		
										Spcl Evnt Prep	6		
Total	10	Total	68	Total	68	Total	68	Total	68	Total	74	Total	80

Sunday 8		Monday 9		Tuesday 10		Wednesday 11		Thursday 12		Friday 13		Saturday 14	
	Trips		Trips		Trips		Trips		Trips		Trips		Trips
Ranger Res	10	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Ranger Res	10
Outreach Prog	30	Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6	Lg Special Event	70
		Spcl Evnt Clean	6	Garden Tour	30	Outreach Prog	30	Garden Tour	30	Outreach Prog	30		
		Sm Group Gath	24							Spcl Evnt Prep	6		
Total	40	Total	68	Total	68	Total	68	Total	68	Total	74	Total	80

Sunday 15		Monday 16		Tuesday 17		Wednesday 18		Thursday 19		Friday 20		Saturday 21	
	Trips		Trips		Trips		Trips		Trips		Trips		Trips
Ranger Res	10	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Ranger Res	10
		Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6		
		Outreach Prog	30	Garden Tour	30	Outreach Prog	30	Sm Group Gath	24	Spcl Evnt Prep	6		
		Spcl Evnt Clean	6										
Total	10	Total	74	Total	68	Total	68	Total	62	Total	44	Total	10

Sunday 22		Monday 23		Tuesday 24		Wednesday 25		Thursday 26		Friday 27		Saturday 28	
	Trips		Trips		Trips		Trips		Trips		Trips		Trips
Ranger Res	10	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Ranger Res	10
Lg Special Event	70	Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6	Lg Special Event	70
		Outreach Prog	30	Garden Tour	30	Outreach Prog	30	Garden Tour	30	Sm Group Gath	24		
		Spcl Evnt Clean	6							Spcl Evnt Prep	6		
Total	80	Total	74	Total	68	Total	68	Total	68	Total	68	Total	80

Sunday 29		Monday 30		Tuesday 31	
	Trips		Trips		Trips
Ranger Res	10	Office Activity	32	Office Activity	32
		Ranger Res	6	Ranger Res	6
		Sm Group Gath	24	Garden Tour	30
		Spcl Evnt Clean	6		
Total	10	Total	68	Total	68

Sample Short Month Calendar with Potential Trips Generated

Sunday 1		Monday 2		Tuesday 3		Wednesday 4		Thursday 5		Friday 6		Saturday 7	
	Trips		Trips		Trips		Trips		Trips		Trips		Trips
Ranger Res	10	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Ranger Res	10
		Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6		
		Outreach Prog	30	Garden Tour	30	Outreach Prog	30	Garden Tour	30	Outreach Prog	30		
Total	10	Total	68	Total	68	Total	68	Total	68	Total	68	Total	10

Sunday 8		Monday 9		Tuesday 10		Wednesday 11		Thursday 12		Friday 13		Saturday 14	
	Trips		Trips		Trips		Trips		Trips		Trips		Trips
Ranger Res	10	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Ranger Res	10
Outreach Prog	30	Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6	Sm Group Gath	24
		Sm Group Gath	24	Garden Tour	30	Outreach Prog	30	Garden Tour	30	Outreach Prog	30		
Total	40	Total	62	Total	68	Total	68	Total	68	Total	68	Total	34

Sunday 15		Monday 16		Tuesday 17		Wednesday 18		Thursday 19		Friday 20		Saturday 21	
	Trips		Trips		Trips		Trips		Trips		Trips		Trips
Ranger Res	10	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Ranger Res	10
		Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6		
		Outreach Prog	30	Garden Tour	30	Outreach Prog	30	Sm Group Gath	24	Garden Tour	30		
Total	10	Total	68	Total	68	Total	68	Total	62	Total	68	Total	10

Sunday 22		Monday 23		Tuesday 24		Wednesday 25		Thursday 26		Friday 27		Saturday 28	
	Trips		Trips		Trips		Trips		Trips		Trips		Trips
Ranger Res	10	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Office Activity	32	Ranger Res	10
Outreach Prog	30	Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6	Ranger Res	6		
		Outreach Prog	30	Garden Tour	30			Garden Tour	30	Sm Group Gath	24		
Total	40	Total	68	Total	68	Total	38	Total	68	Total	62	Total	10

STATE OF CALIFORNIA

SANTA MONICA MOUNTAINS CONSERVANCY

APPLICATION NO. 4-98-334

RAMIREZ CANYON PARK

BRIDGE ANALYSIS

MARCH 6, 2000

Penfield & Smith
ENGINEERS • SURVEYORS

101 EAST VICTORIA STREET
P.O. BOX 98
SANTA BARBARA, CALIFORNIA 93102
805-963-9532 • FAX 805-966-9801

2051 NORTH SOLAR DRIVE
SUITE 225
OXNARD, CALIFORNIA 93030
805-983-7499 • FAX 805-983-1826

March 1, 2000

W.O. 13638.01

Mr. Rhett Robb
Santa Monica Mountain Conservancy
Franklin Canyon Park
2600 Franklin Canyon Road
Beverly Hills, CA 90210

Subject: **BRIDGE DECK ANALYSIS**
Near the Entrance Of Ramirez Canyon Park,
On Ramirez Canyon Road, Malibu

Dear Rhett:

At your request, we have made a site visit to the Timber Bridge near the entrance. We have performed structural calculations on the bridge deck to determine if it can safely support the 25-ton fire-truck loading. The analysis considered only short term vertical loading of the bridge deck itself. The calculations were based upon observations made during a site visit on February 22, 2000, combined with the engineers knowledge of typical bridge design. For more information, please see the calculations.

Based upon the calculations, the bridge deck appears to be able to support an H15 loading, about 15-tons, in its current configuration. This does not meet the required 25-ton fire truck capacity. If four or six beams (either timber or steel) are added to the bridge, along with some timber wearing boards on the surface of the bridge, the bridge deck capacity could be increased to support the 25-ton fire-truck loading.

It is recommended that the retrofit construction of the bridge be performed by installing additional support beams from below the bridge deck. Timber or steel beams could be maneuvered into position, shimmed into place, and then anchored to provide the required support. During this time, the bridge would generally be open to vehicular and pedestrian traffic with only minor delays. It is estimated that two or three workers would be needed to lift the beams in place. Workers would have to be in the creek or on the creek banks in order to construct the improvements. The estimated time needed to perform this construction would be about two to three days with a crew size of four. Typical hand construction equipment is expected to be used, as well as a light duty truck with a small hoist to aid in the construction efforts. The work would also need a small staging area for materials, perhaps located on the shoulder of the roadway that approaches the bridge. The size of the staging area would not need to be more than five feet wide by twenty feet long, and it would only be needed during the time of construction.

P&S

It should be noted that the structural analysis did not include the concrete abutments. The geometry and structural capacity of the abutments can not be determined by visual observation, therefore they were not included in the analysis. However, visual observation did reveal that the existing abutments appear to be in good condition and they did not show signs of stress or stress related cracks. Additionally, there was no undercutting of the abutments by the flow of the creek and the wing walls appear to be properly supporting the creek bank on either side of the abutments. During the site visit, a large pumper truck was observed successfully using the bridge. Other large vehicles such as trash trucks also use the bridge on a routine basis.

We are including two copies of the structural analysis calculations for your use. If you have any questions or require further assistance, please call me.

Very truly yours,

PENFIELD & SMITH

Hady Izadpanah
Project Manager

Enclosures

w:\work\13000\13625\HI BEF 2 Bridge Analysis.doc

P&S

Penfield & Smith
ENGINEERS • SURVEYORS
101 EAST VICTORIA STREET, SANTA BARBARA, CA 93102
805-963-9532 • FAX 805-966-9801

BRIDGE DECK ANALYSIS

SANTA MONICA MOUNTAINS CONSERVANCY
RAMIREZ CANYON ROAD,
SANTA MONICA, CA

CLIENT: SANTA MONICA MOUNTAINS CONSERVANCY (SMMC)
5810 RAMIREZ CYN RD
MALIBU, CA 90265
(310) 589-3230
CONTACTS: RHETT ROBB, LISA SOGHOR

ENGINEER: PENFIELD & SMITH ENGINEERS
101 E. VICTORIA ST.
SANTA BARBARA, CA 93101
(805) 963-9532
BRET FOSTER, P.E.

REGISTERED PROFESSIONAL ENGINEER
BRET FOSTER
EXP. 6-30-00
NO. 48267
CIVIL
STATE OF CALIFORNIA

PURPOSE: TO DETERMINE IF THE EXISTING TIMBER BRIDGE DECK CAN SUPPORT AN H20 LOADING. THE BRIDGE IS LOCATED NEAR THE ENTRANCE TO THE SMMC FACILITY IN THE FOOTHILLS ABOVE HWY 1 WEST OF THE CITY OF MALIBU.
THIS ANALYSIS IS FOR THE BRIDGE DECK ONLY, NOT THE CONCRETE ABUTMENTS WHICH THE BRIDGE SITS UPON. SMMC HAS BEEN REQUESTED TO SEE IF THE BRIDGE CAN SUPPORT A FIRE TRUCK LOAD OF 25 TONS. THE CALCULATIONS FIRST CHECK IF THE BRIDGE CAN SUPPORT THE H20 (20TONS) LOADING.

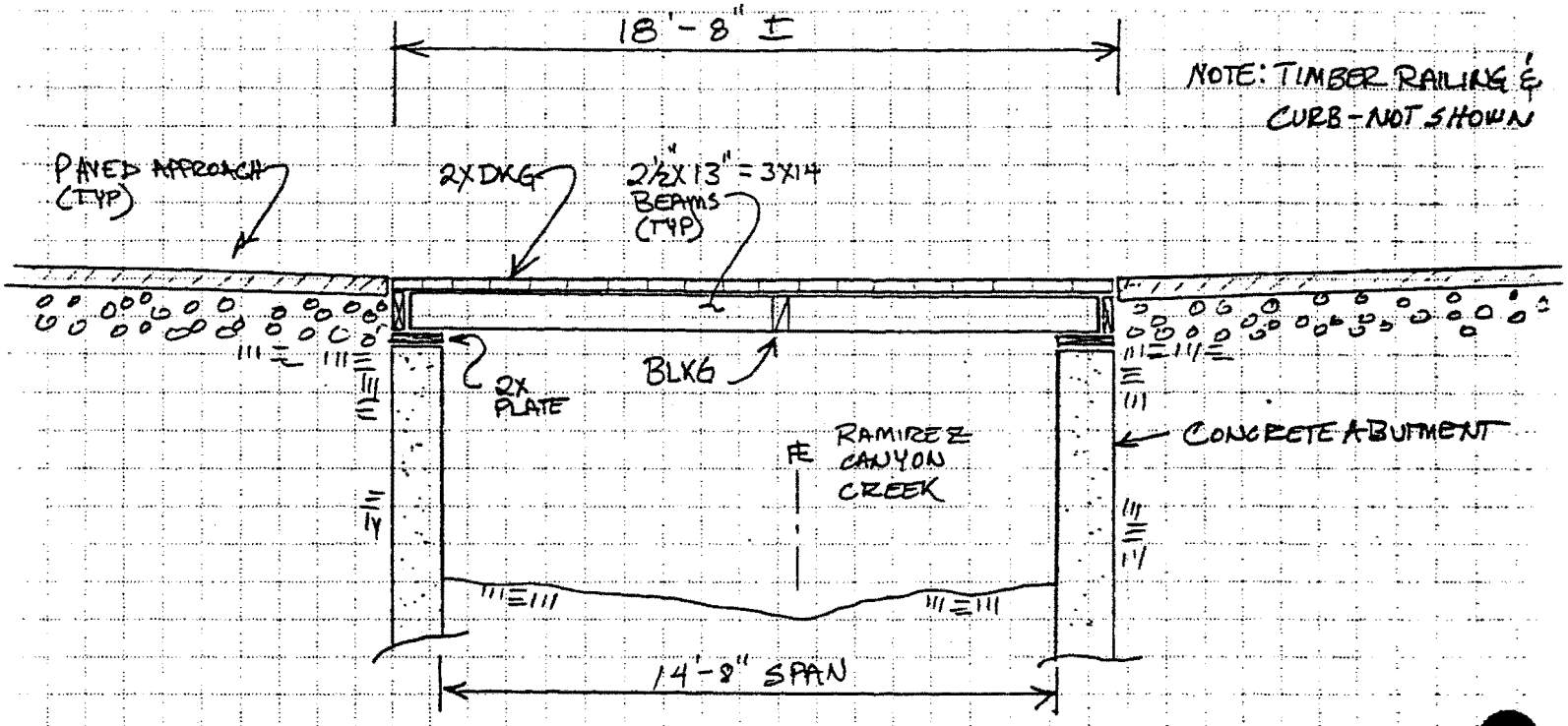
REFERENCES:
* CIVIL ENGINEERING REFERENCE MANUAL
* NATIONAL DESIGN SPECS FOR WOOD CONSTRUCTION (NDS) FROM NATIONAL FORREST PRODUCTS ASSN. (86, 91 & 97 EDITIONS)
* UNIFORM BUILDING CODE (94 EDITION - CONSIDERED MORE APPROPRIATE FOR OLDER STRUCTURES)
* CALTRANS / AASHTO H20 LOADING
* SITE VISIT ON 2/22/00

BY BLT
CK. BY

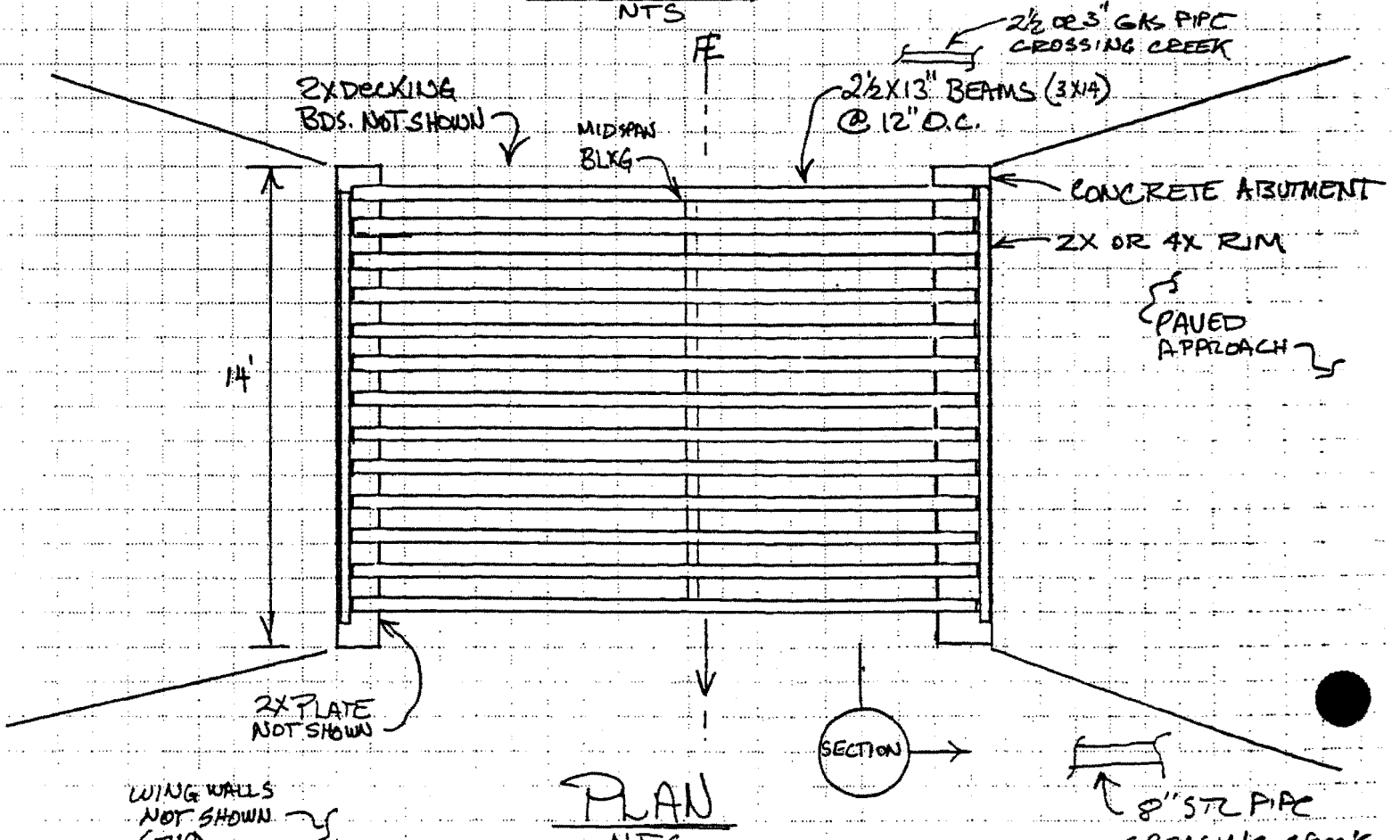
Penfield & Smith
ENGINEERS • SURVEYORS

101 EAST VICTORIA STREET, SANTA BARBARA, CA 93102
805-963-9532 • FAX 805-966-9801

SH 2 OF
SMMC - TIMBER BRIDGE
DATE 2/22/00
W.O. NO.
13638.



PROFILE
NTS



PLAN
NTS

BY BGT
CK. BY

Penfield & Smith
ENGINEERS • SURVEYORS

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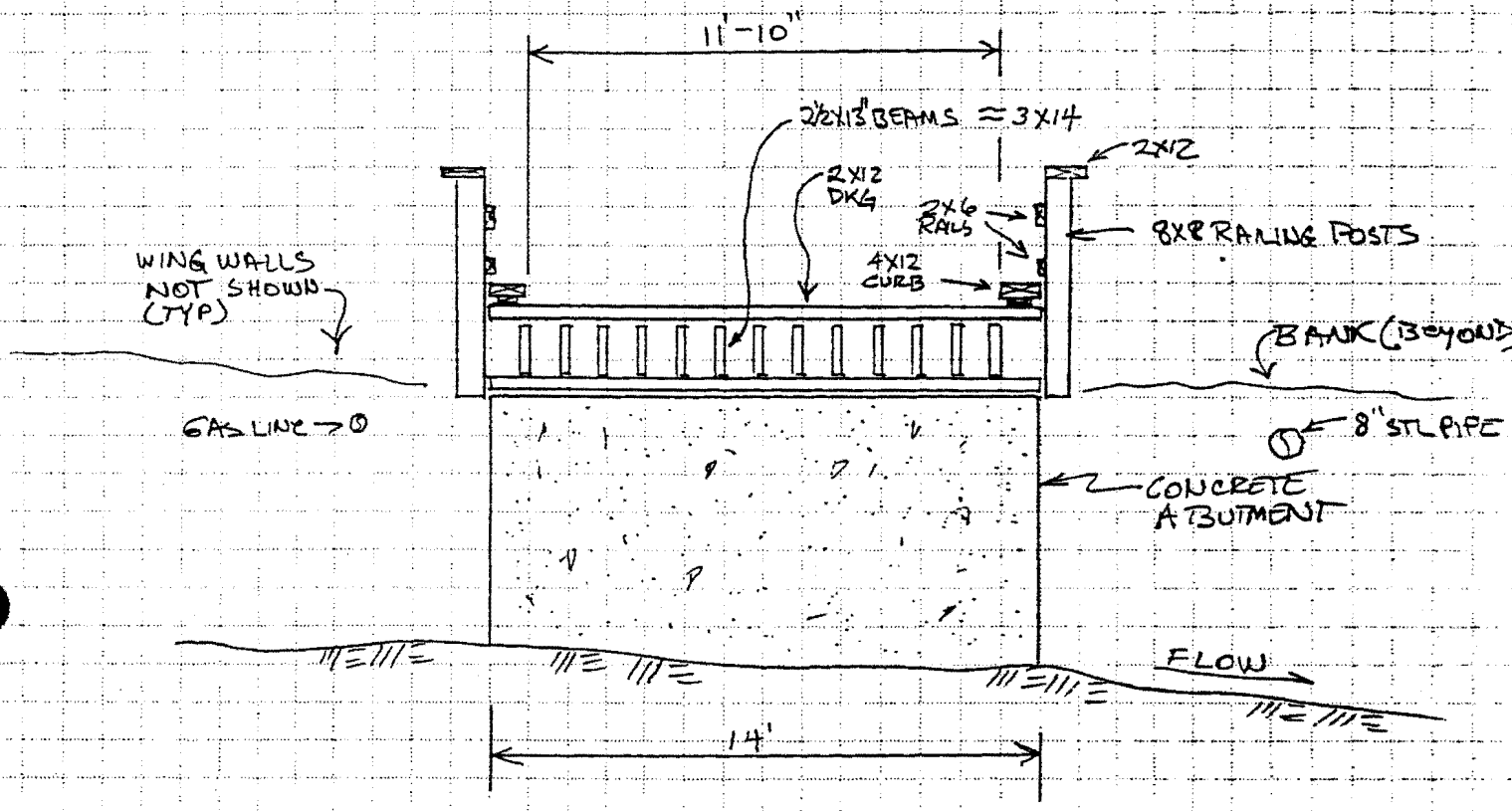
805-963-9532 • FAX 805-966-9801

SH 3 OF

SMMC - TIMBER BRIDGE

DATE 2/22/00

W.O. NO. 13638.01



SECTION
NTS

OBSERVATIONS- DECKING, BEAMS, POST, RAILS, CURB, BLOCKING & PLATES ALL APPEAR TO BE IN GOOD CONDITION. DECK & BEAMS APPEAR TO BE DOUGLAS OR HEM FIR. BEAMS APPEAR TO BE PRESSURE TREATED. SIZES OF BOLTS & NAILS WERE HARD TO DETERMINE WITHOUT REMOVING THEM. IT IS ASSUMED THEY WERE SIZED ACCORDING TO DESIGN THE LOAD CAPACITY AND ARE ASSUMED ADEQUATE.

THE CONCRETE ABUTMENTS APPEAR TO BE IN GOOD CONDITION AND IT IS ASSUMED THAT THEY TOO WERE DESIGNED & BUILT TO SUPPORT THE CAPACITY LOADING.

DECK BOARDS ARE THE WEARING BOARDS. DECK & BEAM BOARDS WERE ONLY ABLE TO BE SLIGHTLY DENTED WHEN POKED W/ SCREWDRIVER. OK

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SMMC-TIMBER BRIDGE

MATERIAL PROPERTIES (94UBC TABLE 23-I-A-1 & 97 NDS)

ANALYSIS BASED ON TYPICAL TIMBER DECK
DESIGN USING DOUGLAS FIR #1 OR BETTER

2X12 DECKING $F_b = 1200$ psi $F_v = 95$ psi
$A = 16.88\ in^2$ $S = 4.22\ in^3$ $I = 3.16\ in^4$

3X BEAMS $F_b = 1200$ psi $F_v = 95$ psi
$A = 33.125\ in^2$ $S = 73.15\ in^3$ $I = 484.6\ in^4$

C_F = SIZE FACTOR
DECKING $C_F = 1.0$
BEAMS $C_F = 1.0$

C_r = Repetitive Member Factor
DECKING $C_r = 1.15$
BEAMS (JOIST) $C_r = 1.15$

C_{FU} = FLAT USE FACTOR
DECKING $C_{FU} = 1.2$
BEAMS $C_{FU} = NA.$

C_M = Wet Service FACTOR - NA
DECKING $C_M = 1.0$
Beams $C_M = 1.0$

C_H = Shear stress FACTOR
DECKING $C_H = 1.33$ MAX observed SPLIT $\approx 12" \pm$
BEAMS $C_H = 2.0$ NO SPLITS OBSERVED
- FACTOR APPLIES TO F_v ONLY -

C_D = LOAD DURATION = 1.6 (10 MINUTES)

FACTOR ADJUSTMENTS

$F'_b = F_b (C_F)(C_r)(C_{FU})(C_M)(C_D)$
$F'_V = F_v (C_M)(C_H)$

DECKING

$F'_b = 1200\ (1)(1.15)(1.2)(1.0)(1.6) = 1200\ (2.208) = 2650$ PSI
$F'_V = 95\ (1)(1.33)(1.6) = 95\ (2.128) = 202$ PSI

BEAMS

$F'_b = 1200\ (1.0)(1.15)(1)(1.6) = 1200\ (1.84) = 2208$ psi
$F'_V = 95\ (1)(2.0)(1.6) = 95\ (3.2) = 304$ psi

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SMMC - TIMBER BRIDGE
DATE 2/22/00
W.O. NO. 13638.01

LOADING

DEAD LOAD

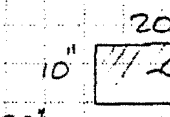
BEAM WT = 8.0 PLF OR 8 PSF
DECK WT = 4.8 PLF OR 4.8 PSF
MISCL 1.2 PSF
14 PSF

NOTE: THIS ANALYSIS IS DEAL WITH SIGNIFICANT LIVE LOADS. BY COMPARISON THE DEAD LOAD IS VER SMALL AND CONSIDERED INSIGNIFICAND AND HAS THEREFORE NOT BEEN INCLUDED IN THE CALCS.

LIVE LOAD

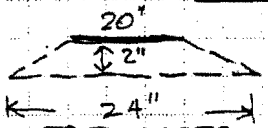
CALTRANS HS 20-44
P = 16,000 # ON A SET OF DUAL TIRES (SEE DESIGN DATA ATTACHED)

LOAD IS DISTRIBUTED BY DECKING TO 3 BEAMS



LOADED AREA (SEE SHT 10)

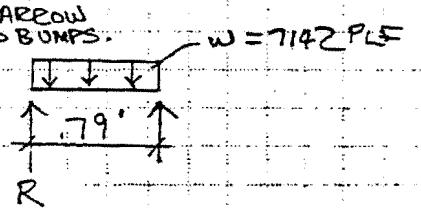
DECK LOADING AREA



⇒ 2' x 1.12' = 2.24 SF

5 MPH MAX ⇒ NO IMPACT LOAD CONSIDERED DUE TO NARROW BRIDGE WIDTH & APPROACH SPEED BUMPS.

DECKING ANALYSIS



W = 16K/2.24 = 7142 PSF = 7142 PLF
WITH BEAMS @ 12" O.C. SPAN = 12 - 2½ = 9.5" ⇒ .79'
R = (.79) 7142#/2 = 2821 # (CONSERVATIVE)
$A_{req} = 1.5R/F_v = (1.5)2821\#/202 = 20.9\ in^2$
$A_{PROVIDED} = 16.88\ in^2 < 20.9$ NO GOOD

$M_{MAX} = wl^2/8 = 7142\ PLF\ (.79)^2/8 = 557\#'$
$S_{req} = M/F_b = 557\#'(12)/2650 = 2.52\ in^3$
$S_{PROV} = 4.22\ in^3 > 2.52$ OK

DECKING FAILS IN SHEAR

MAXIMUM LOAD DECKING IS CAPABLE OF
$W = 4AF_v/3l = 4(16.98)202/3(.79) = 5755\ PSF$
$W = 2.24(5755) = 12.9\ K \simeq$ HS LOADING

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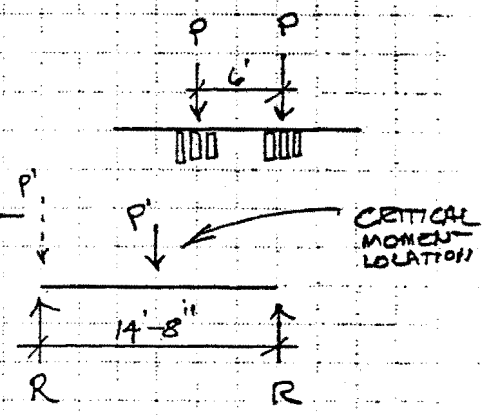
SMNL-TIMBER BRIDGE

LOADING - CONTINUED

BEAM ANALYSIS



P = 16000# OVER 3 BEAMS
P' = 16 000/3 = 5333 #/BEAM
WHEN LOAD IS AT ABUTMENT
SHEAR IS CRITICAL
WHEN LOAD is AT MID SPAN
BENDING IS CRITICAL

$R = P' = 5333\#$
$A_{Req} = 1.5\,R/F_v = (1.5)5333/304\ psi = 26.31\ in^2$
$A_{Prov} = 33.13\ in^2 > 26.31$ OK

$M = Pl/4 = 5333(14.7)/4 = 19554\ \#'$
$S_{Req} = M/F_b = 19544(12)/2208 = 106.2\ in^3$
$S_{Prov} = 73.15 < 106$

NO GOOD

BEAM FAILS IN BENDING

MAXIMUM LOAD BEAM is CAPABLE OF

$$P = \frac{4\,S\,F_b}{l\,(12)} = \frac{4(73.15)2208}{14.67(12)} = 3670\# \Rightarrow 3(3670) = 11.0\,K\ LOAD$$

≈ H 15 LOADING

CONCLUSION

THE EXISTING BRIDGE DECK APPEARS TO BE CAPABLE OF SUPPORTING AN H15 LOADING FOR A SHORT DURATION. AN H15 LOAD IS EQUIVALENT TO 15 TONS OR A 30,000# VEHICLE.

THE BRIDGE DECK WOULD NEED ADDITIONAL SUPPORTING MEMBERS TO SAFELY SUPPORT AN H20 LOADING OR THE 25 TON FIRE TRUCK LOADING.

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SMMC - TIMBER BRIDGE
DATE 2/22/00
W.O. NO. 13638.01

PROPOSED BRIDGE MODIFICATIONS

MODIFICATIONS TO THE EXISTING BRIDGE (20 TONS) ARE NECESSARY TO ENABLE IT TO SUPPORT AN H20 LOADING OR THE LOADING REQUIRED BY THE FIRE DEPARTMENT OF 25 TONS.

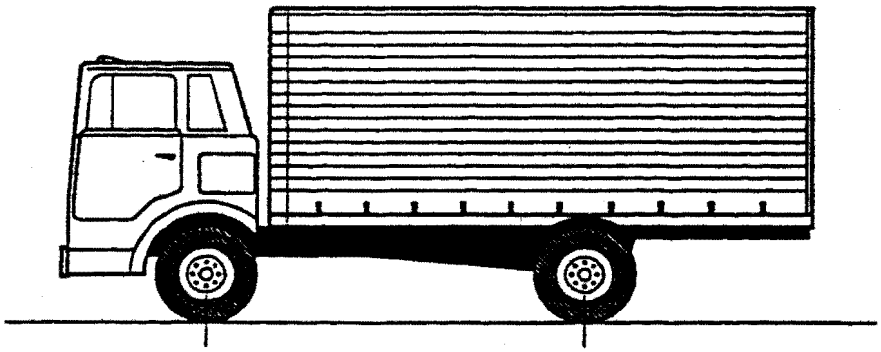
BASED UPON THE CALTRANS LOAD DISTRIBUTION (SEE SHT 10) THE DUAL TIRE LOAD IS $.4W = .4(50{,}000\#) = 20{,}000\#$.

IF 2X WEARING BOARDS ARE ADDED TO HELP DISTRIBUTE THE LOAD TO THE BEAMS & IF (2) 6X10 BEAMS ARE ADDED AT THE LOCATION WHERE THE WHEEL LOADS OCCUR THE MODIFIED BRIDGE DECK MAY BE ABLE TO SUPPORT THE 20 KIP WHEEL LOADS. (TOTAL BEAMS TO ADD = 4 MINIMUM)

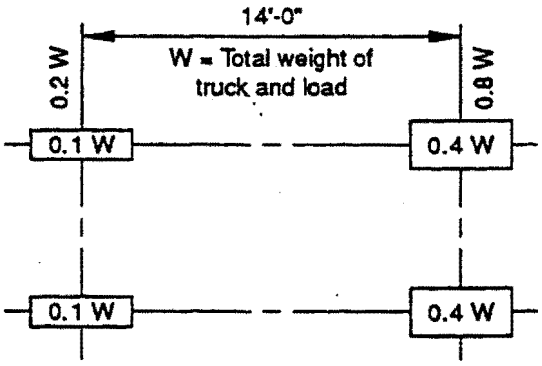
CONSIDER THE LOAD DISTRIBUTED TO 6 BEAMS, THE MAXIMUM POINT LOAD WOULD BE $20{,}000\# / 6 = 3333\#$. THIS IS BELOW THE MAXIMUM BEAM CAPACITY OF 3670 #.

CONCLUSION

BY ADDING WEARING BOARDS AND AT LEAST 4 ADDITIONAL BEAMS THE BRIDGE CAN SUPPORT THE H20 OR THE 25 TON REQUIREMENT FOR A SHORT DURATION (10 MINUTES).



H 20-44	8,000 Lbs.	32,000 Lbs.*
H 15-44	6,000 Lbs.	24,000 Lbs.



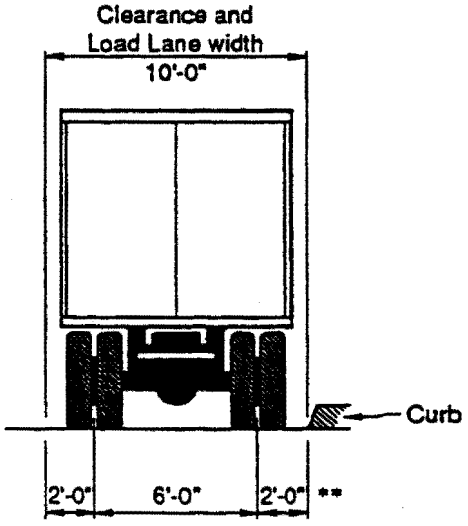
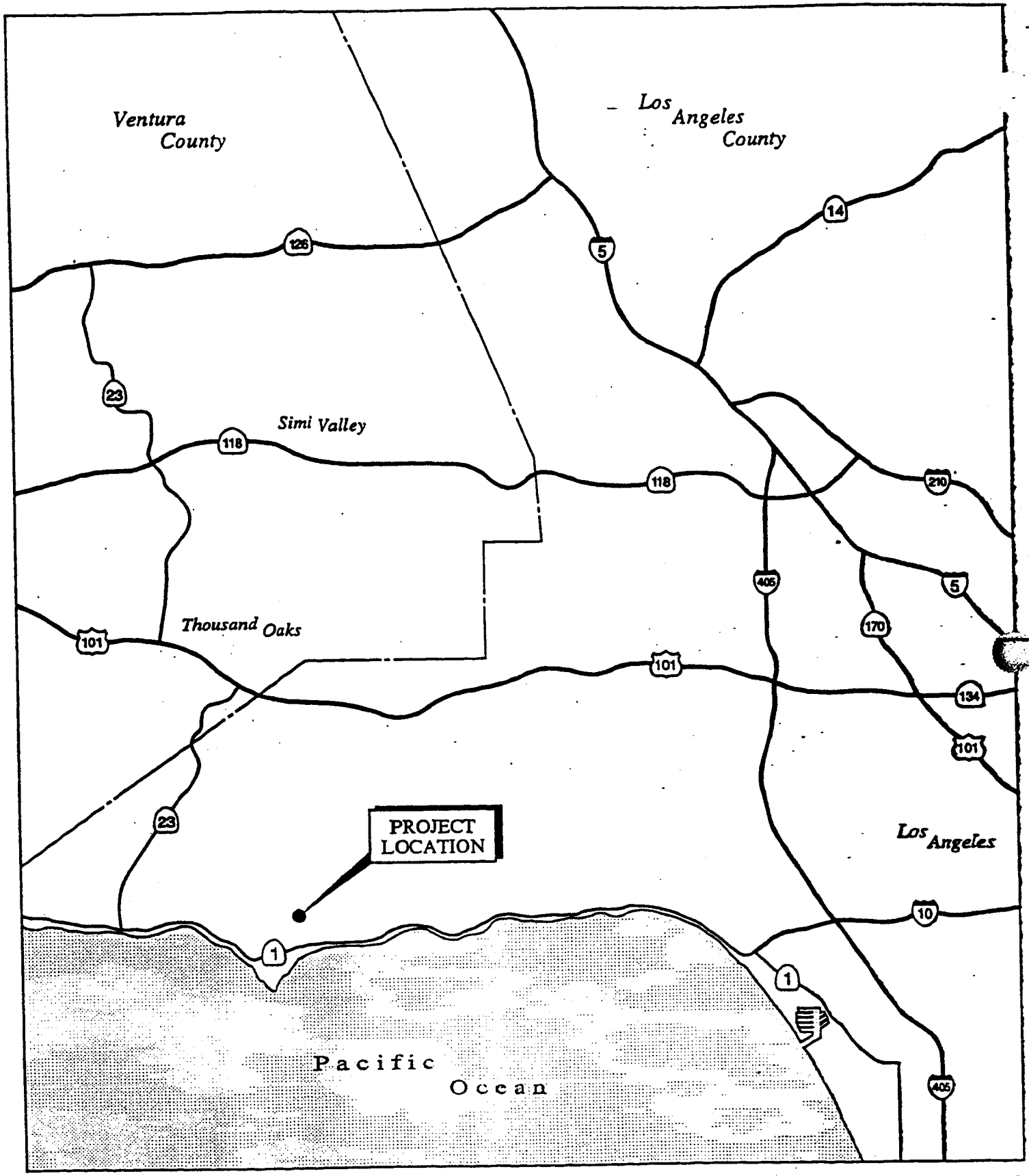


Figure 3.7.6A Standard H Trucks

*In the design of timber floors and orthotropic steel decks (excluding transverse beams) for H 20 loading, one axle load of 24,000 pounds or two axle loads of 16,000 pounds each spaced 4 feet apart may be used, whichever produces the greater stress, instead of the 32,000-pound axle shown.

**For slab design, the center line of wheel shall be assumed to be 1 foot from face of curb. (See Article 3.24.2.)



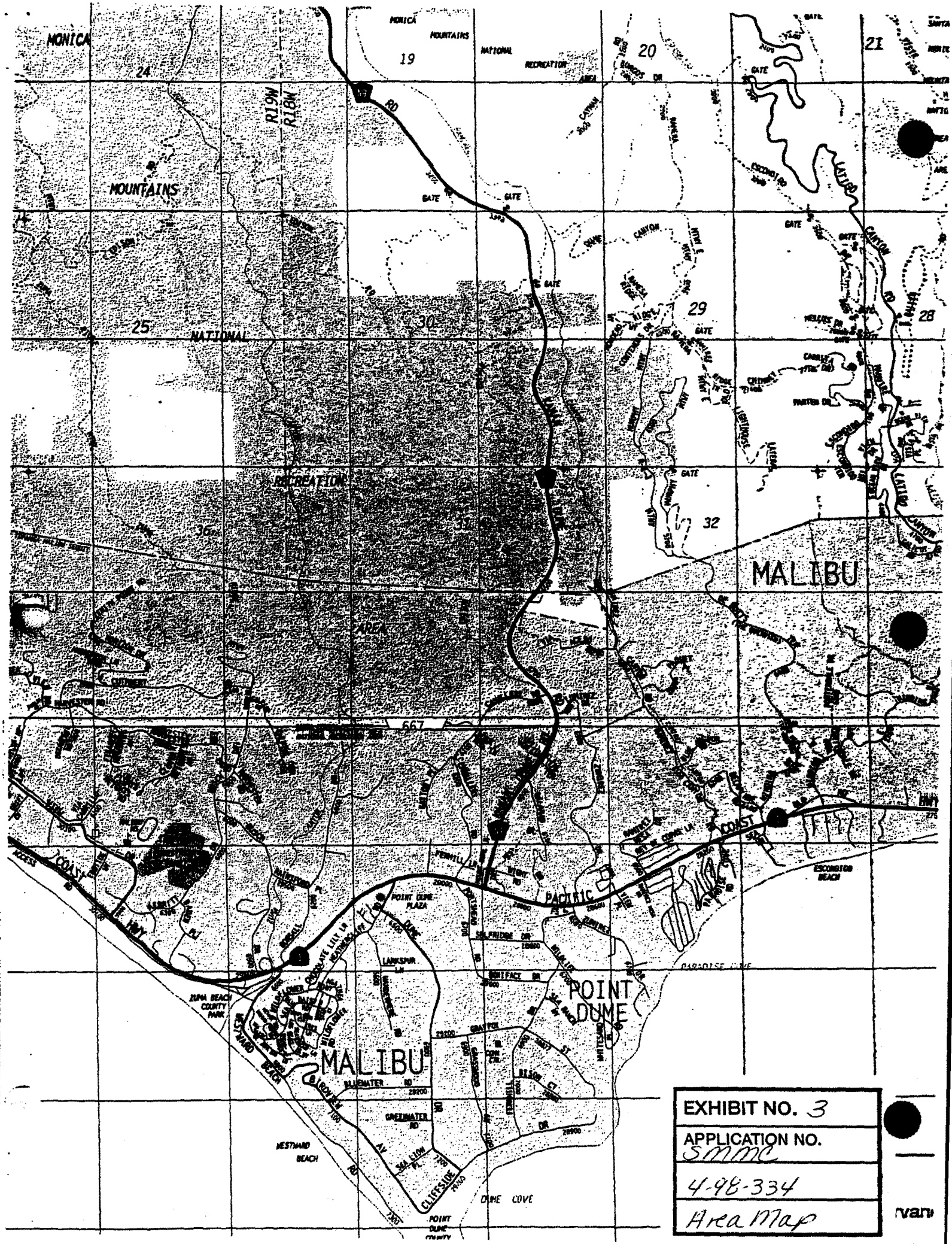
2/22/99(MRC501)

N

LSA

Scale in Miles
0 5

EXHIBIT NO. 2
APPLICATION NO. 5 of 6
4-98-334
Regional Map


MONICA
MOUNTAINS
NATIONAL
RECREATION
AREA
MALIBU
POINT DUME
PACIFIC
COAST
HWY
R19W
R18W
EXHIBIT NO. 3
APPLICATION NO.
SMMC
4-98-334
Area Map

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805-963-9532 • FAX 805-966-9801

2051 NORTH SOLAR DRIVE
SUITE 225
OXNARD, CALIFORNIA 93030
805-983-7499 • FAX 805-983-1826

W.O. 13638.01

NOTICE OF TRANSMITTAL

DATE: March 21, 2000

TO: California Coastal Commission
69 South California Street, Suite 200
Ventura, CA 93001

ATTENTION: Ms. Melanie Hale

SUBJECT: RAMIREZ CANYON PARK

GOLDEN STATE OVERNIGHT ☒
MAIL ☐
BY HAND ☐

WE ARE TRANSMITTING HEREWITH THE FOLLOWING:

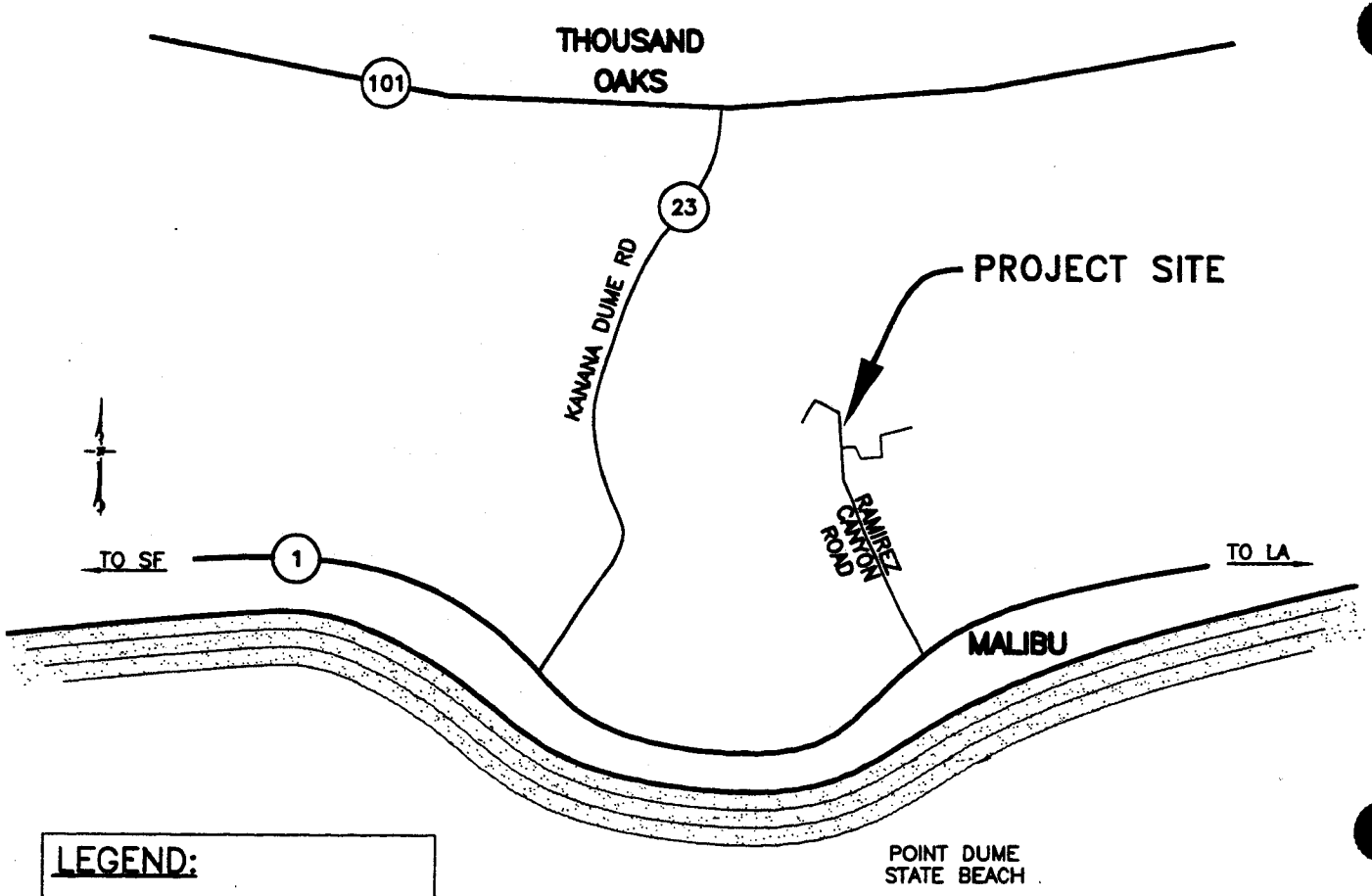
One copy of 8 ½" x 11" Current Site Plan (Sheets 1 – 17).

PURPOSE: For your review.

PENFIELD & SMITH

By Bret Foster
Bret Foster

EXHIBIT NO. 4
16 pages
APPLICATION NO.
SMMC
4-98-334
Emergency Access Parking, OMP Plan



LEGEND:

- UTILITY POLE
- DROP INLET/CATCH BASIN
- DECORATIVE BRICK PAVEMENT
- BRICK PAVEMENT
- COBBLE STONE PAVEMENT
- WOODEN DECKING
- GABIONS
- GRASS PAVERS
- PROPOSED PARKING AREAS
- GRAVEL OR ROCK RIP-RAP
- (1) CONSTRUCTION NOTE
- UNIMPROVED BANK (TOE)
- COLUMN FENCING
- CHAIN LINK FENCE
- FLOWLINE (CREEK)
- CONCRETE GARDEN/RETAINING WALL
- ROCK GARDEN/RETAINING WALL

VICINITY MAP

NTS

RAMIREZ CANYON PARK
EMERGENCY ACCESS, ON-SITE PARKING AND BEST MANAGEMENT PRACTICES PLA

SANTA MONICA MOUNTAIN CONSERVANCY

Penfield & Smith
ENGINEERS • SURVEYORS

13638.01 13638G2.dwg

March 8, 2000

SHEET 1 OF 17

GENERAL NOTES

1. ALL REFERENCED SPECIFICATIONS, CODES, DRAWINGS AND DETAILS SHALL BE INCORPORATED INTO THESE PLANS AND MADE A PART HEREOF AS IF SPELLED OUT OR DELINEATED IN THEIR ENTIRETY HEREON.

2. BEFORE BEGINNING WORK, THE CONTRACTOR SHALL DETERMINE OR VERIFY THE LOCATION AND FLOW LINE ELEVATION OF ALL EXISTING WATER AND DRAINAGE STRUCTURES AND/OR CONDUITS TO BE JOINED TO OR AFFECTED BY THE NEW CONSTRUCTION. IF DIFFERENCES ARE OBSERVED THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER BY PHONE AND IN WRITING.

3. EXISTING PERMANENT SURVEY MONUMENTS (IF ANY), INCLUDING PROPERTY CORNERS AND BENCHMARKS, SHALL BE PRESERVED BY THE CONTRACTOR OR SHALL BE TIED-OUT PRIOR TO CONSTRUCTION AND RE-SET AFTER CONSTRUCTION BY A LICENSED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.

4. NO TREES HAVE BEEN DESIGNATED TO BE REMOVED. TREES IN THE AREA TO BE GRADED SHALL BE PROTECTED FROM DAMAGE AND SURROUNDED BY TEMPORARY FENCING.

5. AREAS TO BE GRADED SHALL FIRST BE CLEARED OF ORGANIC DEBRIS. CLEARED MATERIAL SHALL BE TRANSPORTED TO SUITABLE DISPOSAL SITE AT THE CONTRACTORS EXPENSE. AREAS TO RECEIVE FILL MATERIAL SHALL BE FILLED WITH LIFTS NOT EXCEEDING 8-INCHES AND COMPACTED TO 95% MAXIMUM RELATIVE DENSITY. THE COMPACTION STANDARDS FOR TESTING RELATIVE DENSITIES SHALL BE THE ASTM D-1557-82 METHOD OF COMPACTION USING A FULL 5-LAYER CURVE. DO NOT MODIFY TO THREE LAYERS.

6. WHEN THE MOISTURE CONTENT OF THE FILL MATERIAL IS NOT SUFFICIENT TO ACHIEVE REQUIRED COMPACTION, WATER SHALL BE ADDED UNTIL THE SOILS ATTAIN A MOISTURE CONTENT SO THAT THOROUGH BONDING IS ACHIEVED DURING THE COMPACTING PROCESS. WHEN THE MOISTURE CONTENT OF THE FILL MATERIAL IS EXCESSIVE, THE FILL MATERIAL SHALL BE AERATED BY BLADING OR OTHER SATISFACTORY METHODS UNTIL THE MOISTURE CONTENT IS REDUCED TO AN ACCEPTABLE CONTENT TO ACHIEVE PROPER COMPACTION.

7. IF IMPORT OF SOIL IS REQUIRED, IT SHALL BE A GRANULAR NON-EXPANSIVE SOIL. THE SOIL SHALL HAVE AN EXPANSION INDEX OF 20 OR LESS, AS DETERMINED BY THE UBC STANDARD NUMBER 18-2.

8. IF NOT DIMENSIONED, LOCATION OF FINISH GRADE ELEVATIONS AND FEATURES SUCH AS SWALES, RIDGE LINES, ETC. SHALL BE DETERMINED BY SCALE FROM KNOWN POINTS SHOWN ON THE PLANS. UNIFORM GRADIENTS OR VERTICAL CURVES, AS APPROPRIATE, SHALL BE ASSUMED BETWEEN CONTROL ELEVATIONS SHOWN ON THE PLANS. IN GENERAL, THE PROPOSED IMPROVEMENTS SHALL BE MODIFIED TO BEST FIT THE EXISTING FIELD CONDITIONS.

9. ALL FILL SLOPES CREATED DURING THE GRADING OPERATION SHALL BE PROPERLY SHAPED TO A MAXIMUM SLOPE ANGLE OF TWO HORIZONTAL TO ONE VERTICAL AND RECOMPACTED BY ROLLING THE SHEEPSFOOT ROLLER OR SIMILAR COMPACTION EQUIPMENT OVER THE SLOPE FACE AT VERTICAL LIFT INTERVALS OF 30-INCHES OR LESS.

10. THE DESIGN IS BASED UPON TOPOGRAPHIC INFORMATION AS SHOWN ON MAPS PREPARED BY AGUILAR ENGINEERING INCORPORATED, 937 SOUTH VIA LATA SUITE 500, COLTON, CA 92324. SINCE THE INFORMATION WAS OBTAINED BY OTHERS THE ACCURACY OF THE EXISTING CONDITIONS OF THE SITE AS SHOWN HEREON MAY NOT BE ACCURATELY REPRESENTED. FIELD MODIFICATIONS OR FIELD ENGINEERING MAY HAVE TO BE PERFORMED IN ORDER TO COMPLETE THE PROPOSED DRAINAGE IMPROVEMENTS.

11. THE CONTRACTOR SHALL CALCULATE EARTH WORK QUANTITIES PRIOR TO CONSTRUCTION AND PROVIDE SAID QUANTITIES TO THE OWNER.

12. VEHICLES ARE SHOWN AS SYMBOLS FOR THE PURPOSES OF QUANTIFYING THE SIZE AND NUMBER OF PARKING SPACES AVAILABLE AT THE SITE. PAINTED STRIPES ARE NOT PLANNED TO BE PLACED IN THE FIELD.

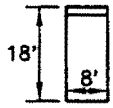
13. THE 56 TOTAL VEHICLE PARKING SPACES SHOWN HEREON PROVIDE FOR ELEVEN 15-PASSENGER VAN SPACES IN PARKING AREA 1. TWELVE SUPPORT VEHICLE SPACES IN PARKING AREAS 1 AND 4. TWO STANDARD, ONE COMPACT AND ONE PUMPER TRUCK SPACES AT THE RANGERS RESIDENCE. THIS LEAVES 28 SPACES AVAILABLE FOR EMPLOYEE AND MAINTENANCE STAFF PARKING.

RAMIREZ CANYON PARK
EMERGENCY ACCESS, ON-SITE PARKING AND BEST MANAGEMENT PRACTICES PLAN
SANTA MONICA MOUNTAIN CONSERVANCY

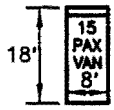
STORM DRAIN SPECIFICATIONS

1. STORM DRAINS, INLETS, PIPING, TRENCHING, BACKFILLING, ETC., SHALL BE CONSTRUCTED IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (HEREIN AFTER REFERRED TO AS THE STANDARD SPECIFICATIONS), THE UNIFORM BUILDING CODE, AND THESE PLANS.
2. ALL STORM DRAIN PIPES SHALL BE PVC OR CORRUGATED METAL PIPE AS INDICATED ON THESE PLANS.
3. FOSSIL FILTERS SHALL BE BY KRISTAR ENTERPRISES, INC., 8364 INDUSTRIAL AVENUE, COTATI, CA 94931, (707) 792-4665 OR APPROVED EQUIVALENT. CATCH BASINS SHALL BE BY BROOKS PRODUCTS OR EQUIVALENT.

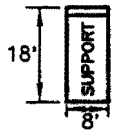
VEHICLE PARKING SYMBOLS AND DIMENSIONS



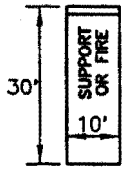
THIS SYMBOL REPRESENTS A STANDARD VEHICLE SIZE AS WELL AS A PICK-UP TRUCK SIZE FIRE PUMPER VEHICLE. THE DIMENSIONS OF THE SYMBOL ARE 8' WIDE BY 18' LONG.



THIS SYMBOL REPRESENTS A 15 PASSENGER VAN SIZE. THE DIMENSIONS OF THE SYMBOL ARE 8' WIDE BY 18' LONG.

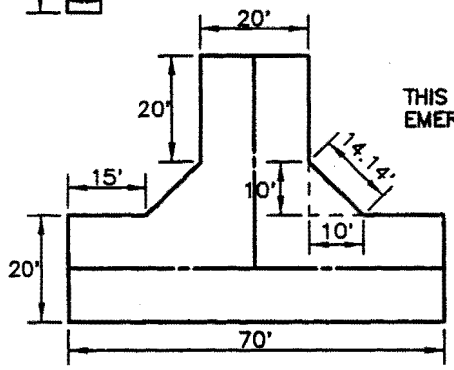


THIS SYMBOL REPRESENTS A STANDARD SIZE SUPPORT VEHICLE. THE DIMENSIONS OF THE SYMBOL ARE 8' WIDE BY 18' LONG.



THIS SYMBOL REPRESENTS A CATERING SUPPORT VEHICLE AS WELL AS THE ON-SITE FIRE TRUCK. THE DIMENSIONS OF THE VEHICLE ARE 10' WIDE BY 30' LONG.

THIS SYMBOL REPRESENTS A COMPACT VEHICLE. THE DIMENSIONS OF THE VEHICLE ARE 6.5' WIDE BY 14' LONG.



THIS SYMBOL REPRESENTS A THE AREA FOR EMERGENCY VEHICLE TURN-AROUND (HAMMERHEAD).

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EMERGENCY ACCESS, ON-SITE PARKING AND BEST MANAGEMENT PRACTICES PLA
SANTA MONICA MOUNTAIN CONSERVANCY

PARKING AREA AND BMP IMPROVEMENTS

AREA	DESCRIPTION	NUMBER OF PARKING SPACES
1 NEAR ENTRANCE	THE EXISTING DIRT PARKING AREA SHALL BE GRADED TOWARD PROPOSED BIOSWALE AT 1% (MINIMUM). BIOSWALE SHALL BE GRADED TO ACCEPT STORM WATER RUN OFF FROM PARKING AREA AND CONVEY IT TO THE PROPOSED CATCH BASIN. THE CATCH BASIN SHALL BE FITTED WITH A FOSSIL FILTER TO CATCH ANY REMAINING POLLUTANTS.	11 VAN SPACES 2 LARGE SUPPORT SPACES 2 STANDARD SUPPORT SPACES 3 STANDARD SPACES
2 ART DECO HOUSE	THE EXISTING PARKING AREA IS SURFACED WITH PAVERS THAT ALLOW GRASS TO GROW IN BETWEEN THE PAVERS. THE RUN OFF IS CONVEYED BY SHEET FLOW ACROSS THE GRASS PAVERS AND DOWN A VEGETATED SLOPE. THE EXISTING FLOW PATTERNS TRAVEL THROUGH THE VEGETATED AREA, AND IS SUFFICIENT TO FILTER THE POLLUTANTS. NO ADDITIONAL BMP'S ARE REQUIRED.	3 STANDARD SPACES
3 NORTHERLY OF PEACH HOUSE	THE EXISTING PARKING AREA IS SURFACED WITH CONCRETE OR GRAVEL AND DRAINS INTO THE EXISTING CATCH BASINS. TO FILTER THE RUN OFF THE CATCH BASINS SHALL BE FITTED WITH FOSSIL FILTER INSERTS TO CAPTURE THE POLLUTANTS.	5 STANDARD SPACES 1 COMPACT SPACE 2 VAN ACCESSIBLE SPACES 1 FIRE TRUCK SPACE
4 WEST OF AREA 1	THE EXISTING DIRT PARKING AREA CURRENTLY DRAINS TOWARD THE CREEK VIA SHEET FLOW. THAT DRAINAGE PATTERN SHALL REMAIN. THE STORM WATER RUN OFF FLOWS INTO PARKING AREA 1 AND WILL BE TREATED BY THE FILTERS AS DESCRIBED IN 1, ABOVE.	8 STANDARD SUPPORT SPACES
5 EAST OF BARWOOD	THE EXISTING AREA IS SURFACED WITH BRICK AND IT CURRENTLY DRAINS TOWARD THE OUTLETS ON THE BRIDGE. THE OUT FALL OFF OF THE BRIDGE SHALL PASS THROUGH A FOSSIL FILTER THAT IS ATTACHED TO THE BRIDGE.	8 STANDARD SPACES
6 NORTH OF BARWOOD	THE EXISTING AREA IS SURFACED WITH BRICK AND IT GENERALLY DRAINS TOWARD THE EXISTING CATCH BASIN. THE BASIN SHALL BE FITTED WITH A FOSSIL FILTER INSERT TO CAPTURE POLLUTANTS.	2 STANDARD SPACES 2 COMPACT SPACES 1 HANDICAP SPACE
7 COURTYARD AT LODGE	PARKING IN THIS AREA HAS BEEN DELETED IN LIEU OF THE EMERGENCY VEHICLE TURN-AROUND.	0 SPACES
8 RANGER RESIDENCE	THE EXISTING AREA IS SURFACED WITH CONCRETE, ASPHALT, OR BRICK AND IT GENERALLY DRAINS TOWARD THE EXISTING CATCH BASIN AT THE BOTTOM OF THE DRIVEWAY. THE BASIN SHALL BE FITTED WITH A FOSSIL FILTER INSERT TO CAPTURE POLLUTANTS.	2 STANDARD SPACES 2 COMPACT SPACES 1 PUMPER TRUCK SPACE

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SANTA MONICA MOUNTAIN CONSERVANCY

GENERAL REQUIREMENTS OF CONTRACTOR

1. THE CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONALS HARMLESS FROM ALL LIABILITY AND CLAIMS, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONALS.

2. THE CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR PROTECTION OF PUBLIC AND PRIVATE PROPERTY IN THE VICINITY OF THE JOB SITE AND FURTHER AGREES TO, AT CONTRACTOR'S EXPENSE, REPAIR OR REPLACE TO THE ORIGINAL CONDITION, ALL EXISTING IMPROVEMENTS WITHIN OR IN THE VICINITY OF THE JOB SITE WHICH ARE NOT DESIGNATED FOR REMOVAL AND WHICH ARE DAMAGED OR REMOVED AS A RESULT OF CONTRACTOR'S OPERATIONS.

3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR VEHICULAR AND PEDESTRIAN TRAFFIC CONTROL AND SAFETY AND SHALL FURNISH, INSTALL, AND MAINTAIN SUCH FENCING, SIGNS, LIGHTS, TRENCH PLATES, BARRICADES, AND/OR OTHER PROTECTION AS IS NECESSARY FOR SAID CONTROL AND SAFETY.

4. EXISTING BURIED CONDUITS AND STRUCTURES KNOWN TO THE ENGINEER ARE SHOWN ON THESE PLANS. HOWEVER, ALL SUCH CONDUITS AND STRUCTURES MAY NOT BE SHOWN AND THE LOCATIONS OF THOSE SHOWN ARE APPROXIMATE ONLY AND HAVE NOT NECESSARILY BEEN INDEPENDENTLY VERIFIED BY THE PREPARER OF THESE PLANS.

   THE CONTRACTOR SHALL INDEPENDENTLY VERIFY THE PRESENCE OF BURIED CONDUITS AND STRUCTURES. BOTH ACTIVE AND ABANDONED-IN-PLACE AND, BEFORE COMMENCING WORK, CONTRACTOR SHALL DETERMINE THE EXACT LOCATION INCLUDING DEPTHS OF ALL EXISTING UNDERGROUND UTILITIES, CONDUITS AND STRUCTURES, INCLUDING SERVICE CONNECTIONS, WHICH MAY AFFECT OR BE AFFECTED BY HIS OPERATIONS. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, CONDUITS AND STRUCTURES.

   UPON ENCOUNTERING EXISTING BURIED CONDUITS OR STRUCTURES NOT SHOWN OR LOCATED DIFFERENTLY THAN SHOWN ON THE PLANS, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND THE OWNER OF THE CONDUIT OR STRUCTURE BY PHONE AND IN WRITING. IF SUCH CONDUIT OR STRUCTURE AFFECTS OR IS AFFECTED BY THE WORK, CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION AND DIRECTION BEFORE PROCEEDING WITH THE WORK, EXCEPTING THAT IN AN EMERGENCY AFFECTING SAFETY OF LIFE, WORK OR ADJACENT PROPERTY, CONTRACTOR SHALL ACT AT ONCE WITHOUT INSTRUCTIONS TO PREVENT INJURY OR LOSS.

5. UNDERGROUND SERVICE ALERT (U.S.A.) SHALL BE CONTACTED AT (800) 422-4133, FORTY-EIGHT (48) HOURS PRIOR TO START OF ANY GRADING OPERATIONS.

UNDERGROUND SERVICE ALERT (U.S.A.)

TELEPHONE UNDERGROUND SERVICE ALERT AT 1-800-422-4133 FORTY-EIGHT (48) HOURS PRIOR TO START OF CONSTRUCTION.

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DUST AND EROSION CONTROL NOTES

1. IN ADDITION TO THESE NOTES, THE CONTRACTOR WILL BE RESPONSIBLE TO MINIMIZE DUST GENERATION THROUGHOUT THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL UTILIZE DUST CONTROL METHODS ON ANY DUST-PRODUCING CONDITION IN ORDER TO BE IN COMPLIANCE WITH REGULATIONS OF THE AIR POLLUTION CONTROL DISTRICT. DURING CLEARING, GRADING, EARTHWORK, EXCAVATION OR EMBANKMENT OPERATIONS, WATER TRUCKS OR SPRINKLER SYSTEMS ARE TO BE USED IN SUFFICIENT QUANTITIES TO PREVENT DUST FROM LEAVING THE SITE AND TO CREATE A CRUST AFTER EACH DAY'S ACTIVITIES CEASE. ALL EXPOSED AREAS AND ACCESS ROADS SHALL BE KEPT DAMP.

2. AFTER CLEARING, GRADING, EARTH MOVING, EXCAVATION OR EMBANKMENT OPERATIONS ARE COMPLETED THE ENTIRE AREA OF DISTURBED SOIL IS TO BE TREATED TO PREVENT WIND PICK-UP OF THE SOIL. THIS MAY BE ACCOMPLISHED BY:
   A. SEEDING AND WATERING UNTIL GRASS COVER IS GROWN.
   B. SPREADING SOIL BINDERS.
   C. WETTING THE AREA DOWN, SUFFICIENT TO FORM A CRUST ON THE SURFACE WITH REPEATED SOAKING AS NECESSARY TO MAINTAIN THE CRUST AND PREVENT DUST PICK-UP BY THE WIND.
   D. OTHER METHODS APPROVED IN ADVANCE BY THE AIR POLLUTION CONTROL DISTRICT.

3. INCREASED WATER FREQUENCY WILL BE REQUIRED WHENEVER THE WIND SPEED EXCEEDS 15 MPH.

4. APPROVED EROSION CONTROL DEVICES ARE REQUIRED AND THEY SHALL BE INSTALLED PRIOR TO NOVEMBER 1ST AND SHALL BE MAINTAINED ON THE SITE THROUGH APRIL 15TH OF THE FOLLOWING YEAR.

5. TO THE EXTENT FEASIBLE CONSTRUCTION RELATED TRUCK TRIPS SHALL BE SCHEDULED DURING NON-PEAK HOURS TO HELP REDUCE TRUCK TRAFFIC AND AUTOMOBILE CONGESTION ON ROADWAYS SERVING THE PROJECT SITE.

6. THE CONTRACTOR SHALL EMPLOY ALL LABOR, EQUIPMENT AND METHODS REQUIRED TO PREVENT HIS OPERATIONS FROM PRODUCING DUST IN AMOUNTS DAMAGING TO ADJACENT PROPERTY, CULTIVATED VEGETATION AND DOMESTIC ANIMALS OR CAUSING A NUISANCE TO PERSONS OCCUPYING BUILDINGS IN THE VICINITY OF THE JOB SITE. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED BY DUST RESULTING FROM GRADING OPERATIONS.

7. THE CONTRACTOR SHALL ENSURE PROTECTION MEASURES THAT GUARD AGAINST EROSION OF GRADED SOIL ARE IN PLACE PRIOR TO THE RAINY SEASON. THE PROTECTION MEASURES MAY NEED TO BE INSTALLED DURING OTHER PARTS OF THE YEAR SHOULD RAIN BE IMMINENT. THE CONTRACTOR SHALL ADJUST THE LIMITS OF THE PROTECTION MEASURES SHOULD THEY BE INADEQUATE TO CONTROL RUNOFF OF SILT LADEN WATER. THE CONTRACTOR SHALL CLEAN SUCH DEVICES INCLUDING SILT FENCE, STRAW BALES, DROP INLETS, AND CATCH BASINS AFTER EACH RAIN. THE PROTECTION MEASURES MAY BE TEMPORARILY MOVED OUT OF THE CONTRACTOR'S WAY TO FACILITATE CONSTRUCTION, PROVIDED THEY ARE REINSTALLED PRIOR TO THE NEXT RAIN STORM.

8. STAGING, REFUELING OF EQUIPMENT AND STORAGE OF MATERIALS SHOULD BE IN ONE CENTRAL AREA. THIS AREA MAY CHANGE THROUGHOUT CONSTRUCTION, AS REQUIRED. THE AREA SHOULD BE MONITORED TO ENSURE THAT NO SPILLED HAZARDOUS MATERIALS CONTAMINATE THE EXISTING GROUND. THIS SITE SHALL NOT BE LOCATED NEAR A STORM DRAIN INLET, DRAINAGE SWALE OR ADJACENT TO A FILL SLOPE.

9. NOISE GENERATING CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE HOURS OF 7 AM TO 4 PM, MONDAY THROUGH FRIDAY. CONSTRUCTION EQUIPMENT MAINTENANCE SHALL BE LIMITED TO THE SAME HOURS. STATIONARY CONSTRUCTION EQUIPMENT THAT GENERATES NOISE WHICH EXCEEDS 65 dBA AT THE PROJECT BOUNDARIES SHALL BE SHIELDED TO PLANNING & DEVELOPMENT'S SATISFACTION AND SHALL BE LOCATED AT A MINIMUM OF 50 FEET FROM OCCUPIED RESIDENCES. ADJACENT PROPERTY OWNERS SHALL BE PROVIDED A CONSTRUCTION ACTIVITY SCHEDULE THREE (3) DAYS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY.

CONSTRUCTION NOTES

1. THE EXISTING DIRT PARKING AREA SHALL BE GRADED TOWARD PROPOSED BIOSWALE AT 1% (MINIMUM). THE GRADING SHALL BE LIMITED TO THE LOWER PARKING LOT AREA ADJACENT TO THE CREEK.
2. CONSTRUCT BIOSWALE PER DETAIL "C". THE EXISTING TOP OF THE CREEK BANK SHALL NOT BE LOWERED.
3. CONSTRUCT CATCH BASIN AND CMP OUTLET PIPE PER DETAILS "A" AND "B". ADJUSTMENTS OF GRADE AND PRECISE LOCATION OF THE CATCH BASIN AND PIPING SHALL BE MADE ON SITE TO BEST FIT THE FIELD CONDITIONS. CONSTRUCT ROCK RIP-RAP AT OUTLET.
4. MATCH EXISTING GRADE AT THE TOE OF SLOPE.
5. DISTURBED AREAS SHALL BE SEEDED PER THE LANDSCAPE ARCHITECTS RECOMMENDATIONS.
6. EXISTING DIRT PARKING AREA AND ACCESS RAMP TO REMAIN.
7. PLACE 8-INCHES OF CRUSHED ROCK OVER FILTER FABRIC AT ENTRANCE TO DIRT PARKING AREA 1. ROCK SHALL EXTEND INTO PARKING AREA FOR 10-FEET.
8. PARKING AREA TO REMAIN AS IS. CLEAN SEDIMENT AND DEBRIS OUT CATCH BASINS AND FLUSH STORM DRAIN LINE TILL CLEAN.
9. INSTALL FOSSIL FILTER INSERTS INTO EXISTING CATCH BASIN.
10. CONSTRUCT SUPPLEMENTAL FOSSIL FILTER AT EDGE OF BRIDGE PER DETAIL "D".
12. CLEAN SEDIMENT AND DEBRIS OUT CATCH BASINS AND FLUSH STORM DRAIN LINE TILL CLEAN.
13. CONSTRUCT CONCRETE OR AC PAVEMENT TO WIDEN ROAD TO DIMENSIONS SHOWN ON PLAN (20-FEET WIDE MINIMUM BY 50-FOOT LONG MINIMUM) FOR VEHICLE TURNOUT. SEE DETAIL "E". POST NO-PARKING SIGNS AT TURN-OUTS.
14. CONSTRUCT 12X25 VEHICLE TURNOUT. SEE DETAIL "E".
15. LIMIT PARKING AREA TO PROVIDE ADEQUATE ROOM FOR EMERGENCY VEHICLE TURN-AROUND. REMOVE 0.2' OF GRAVEL AND CONSTRUCT 0.2' AC PAVEMENT AT PARKING AND TURN-AROUND AREAS. SEE DETAIL "E".
16. CONSTRUCT GRASS PAVE AREA FOR EMERGENCY VEHICLE TURN-AROUND.
17. THE VEHICLE ACCESS AREA AROUND THE ART DECO HOUSE WAS PREVIOUSLY APPROVED AS BEING ADEQUATE FOR EMERGENCY VEHICLE TURN-AROUND BY FIRE CAPTAIN JIM JORDAN DURING THE DECEMBER 15, 1999 SITE VISIT.
18. REMOVE ROCK TREE WELL. REBUILD WALL MATCHING EXISTING CONSTRUCTION. PATCH PAVEMENT PER DETAIL "E".
19. TRIM BUSHES BACK TO ALLOW FOR GREATER SIGHT DISTANCE ALONG ROADWAY.
20. TRIM BUSHES BACK TO ALLOW FOR VEHICLE PARKING.
21. CONSTRUCT SIGN AT ENTRY INTO PARKING AREA 1 WITH 2"HIGH WHITE LETTERING ON DARK BACKGROUND STATING "VAN SHUTTLE PARKING MUST USE THIS LOT".
22. REMOVE 0.2' OF EXISTING GRAVEL AND RE-LEVEL ROAD TO SLOPE AWAY FROM THE TOP OF SLOPE. PLACE 0.2' OF AC PAVEMENT PER DETAIL "E".

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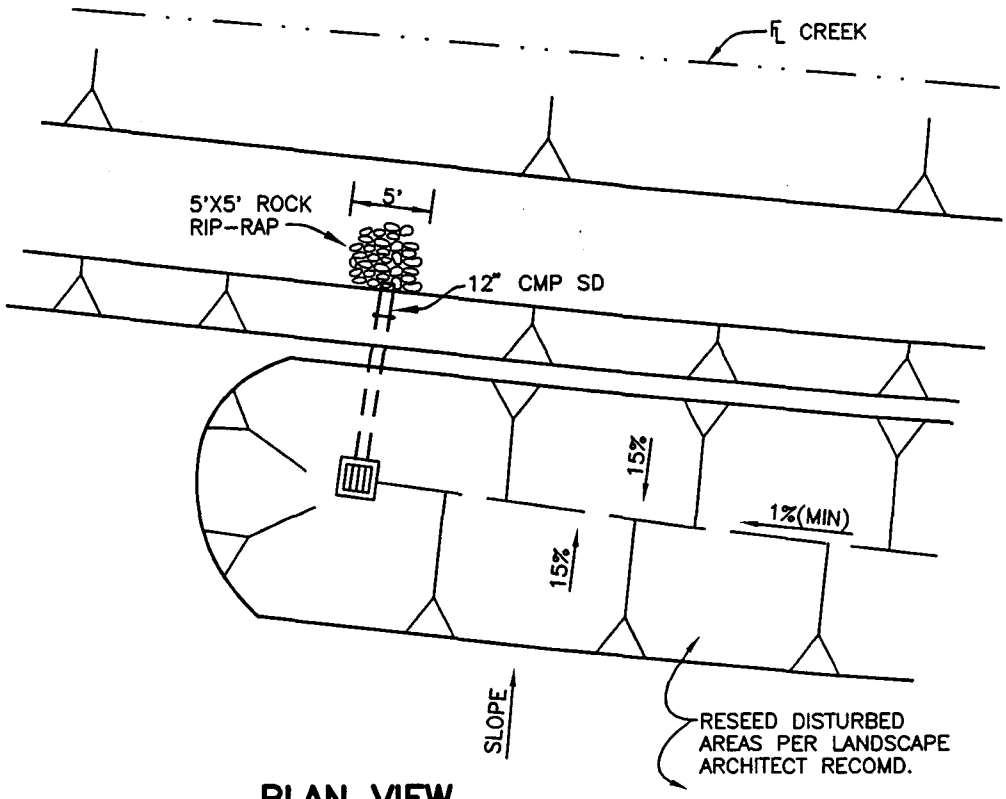

PLAN VIEW
BIOSWALE INLET/OUTLET A
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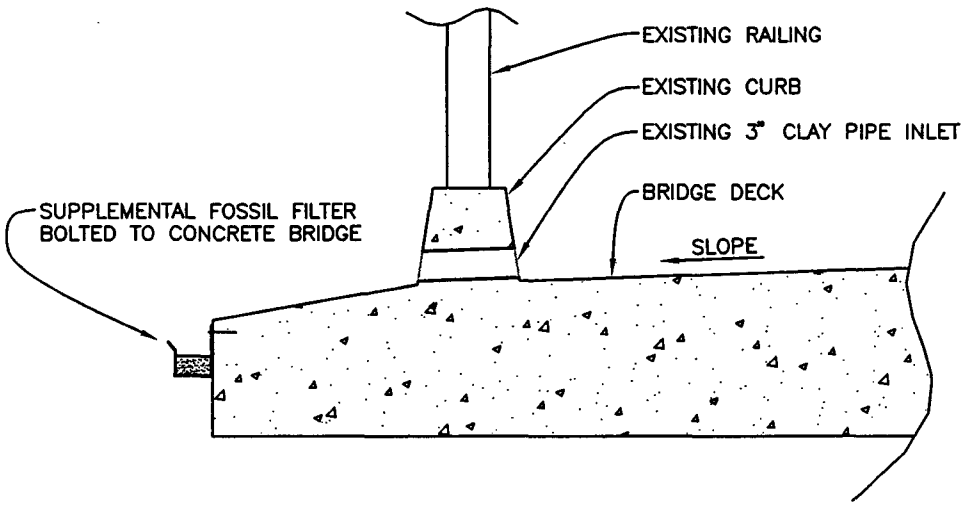

BRIDGE FILTER DETAIL D
NTS

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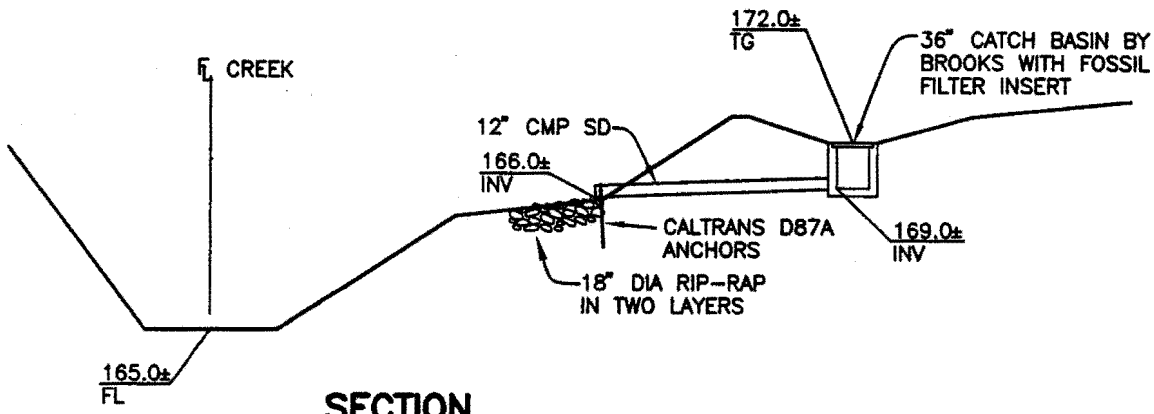

SECTION BIOSWALE INLET/OUTLET B

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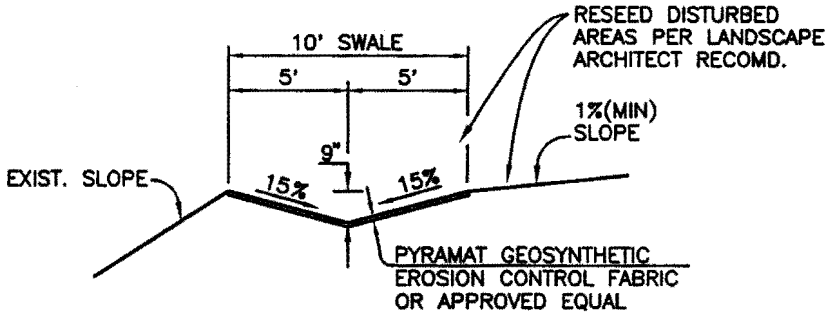

BIOSWALE DETAIL C

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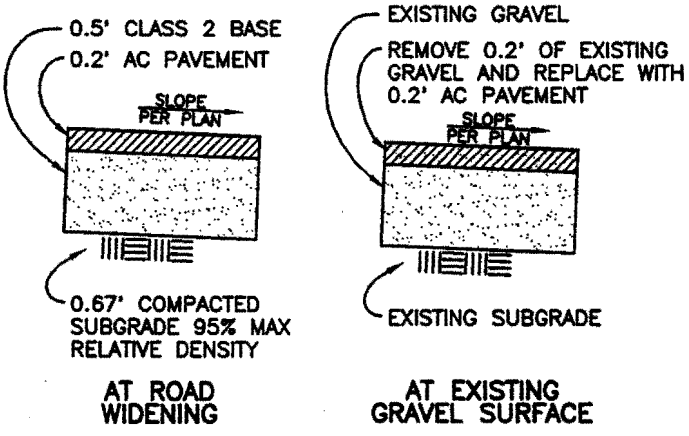

TYPICAL PAVEMENT SECTION E

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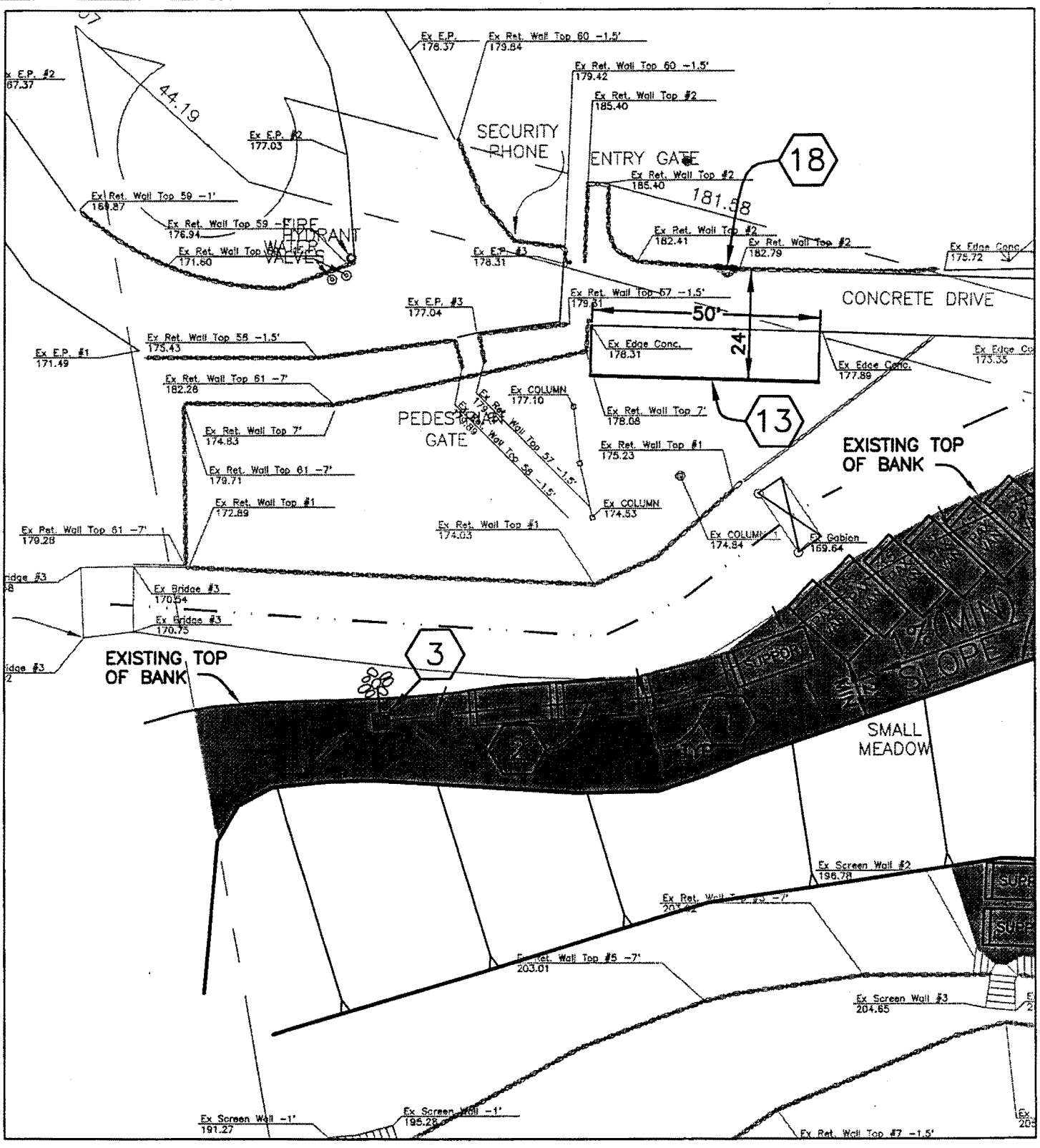

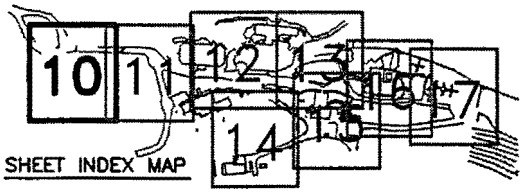

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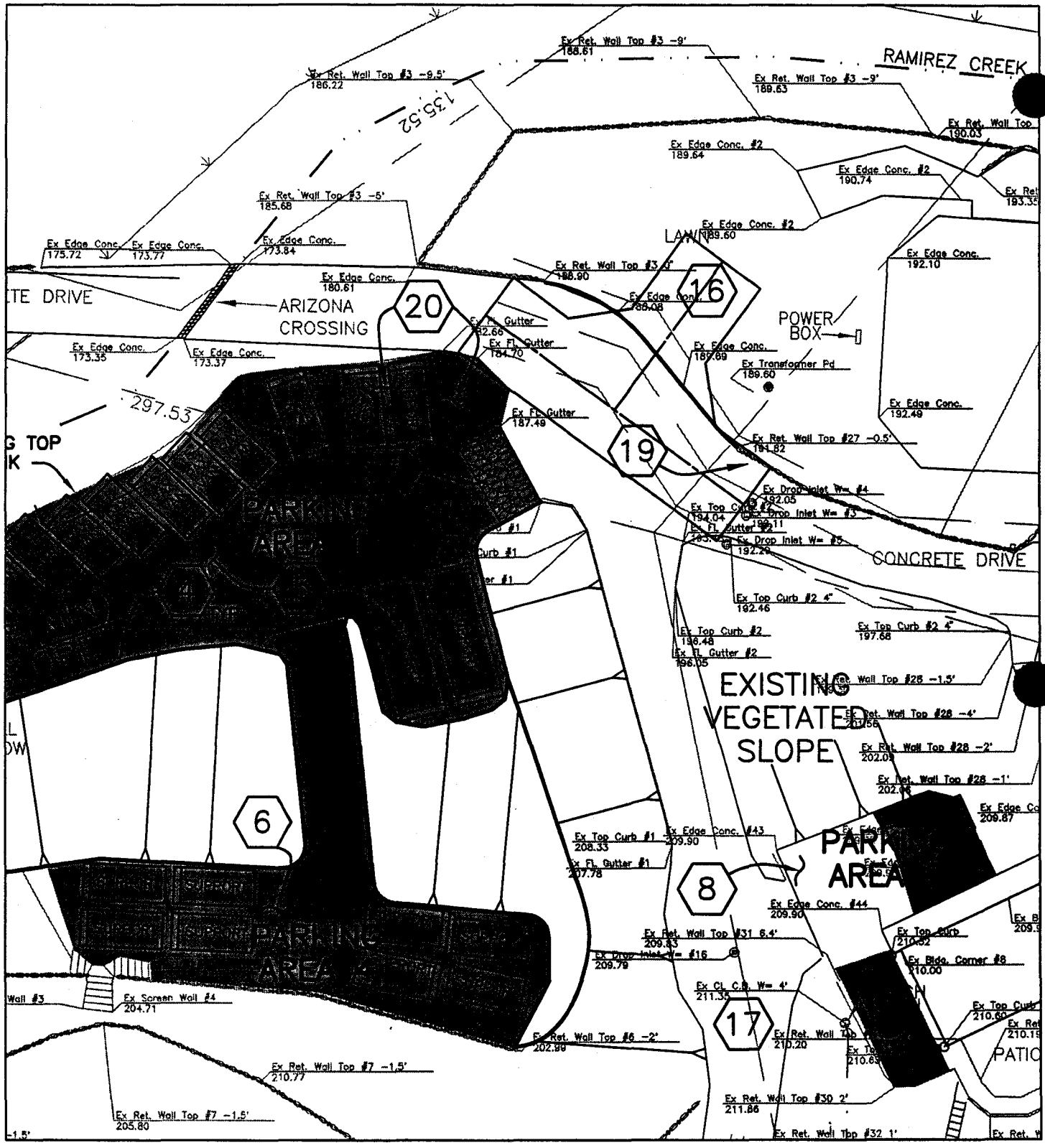

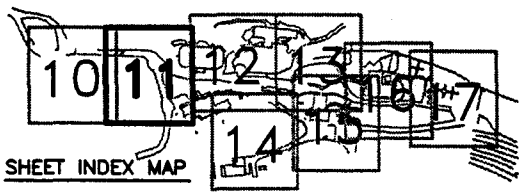

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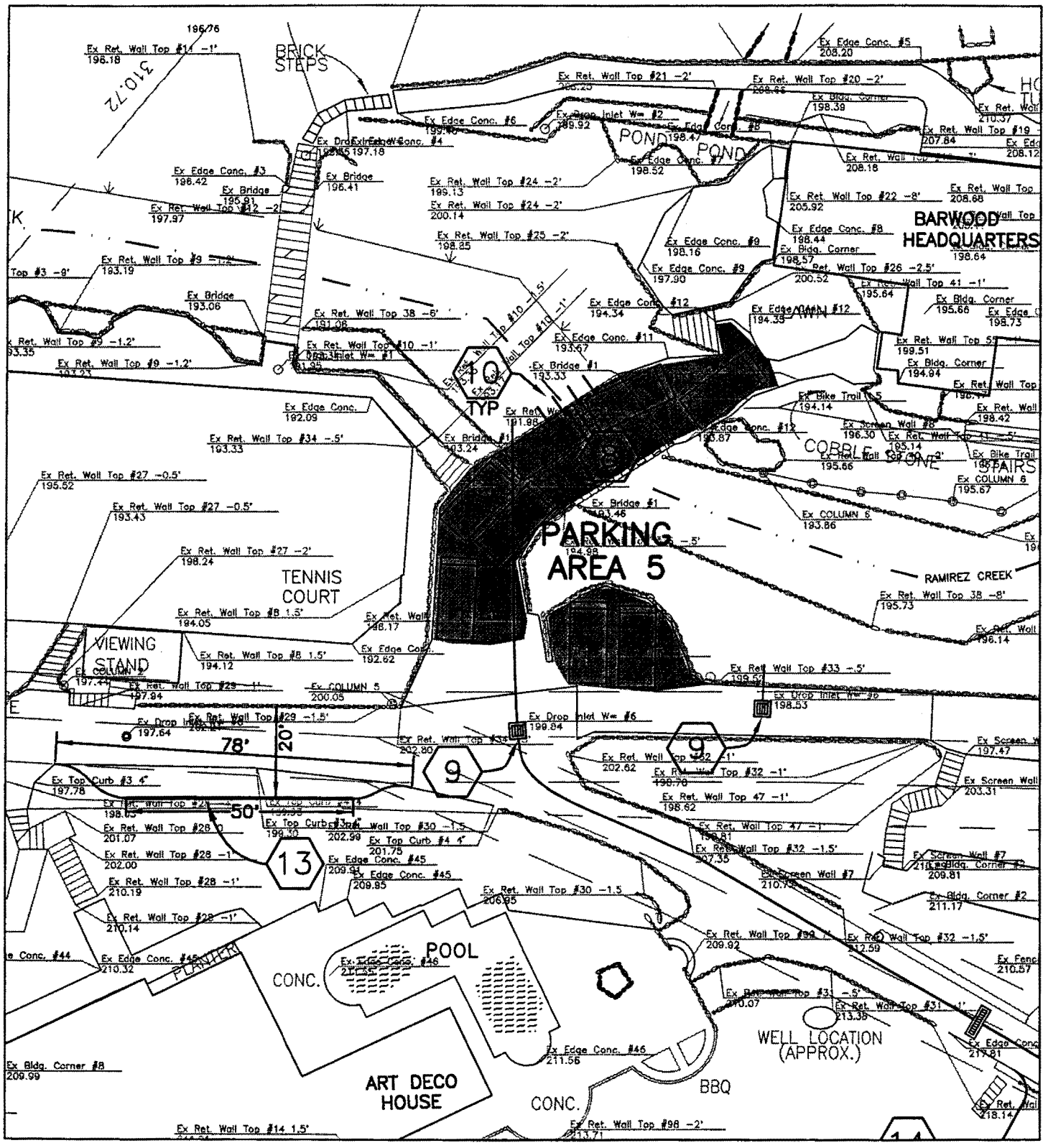

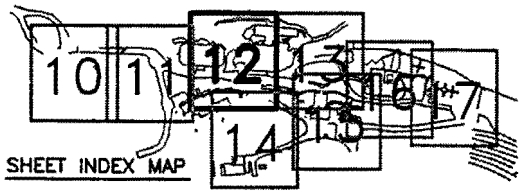

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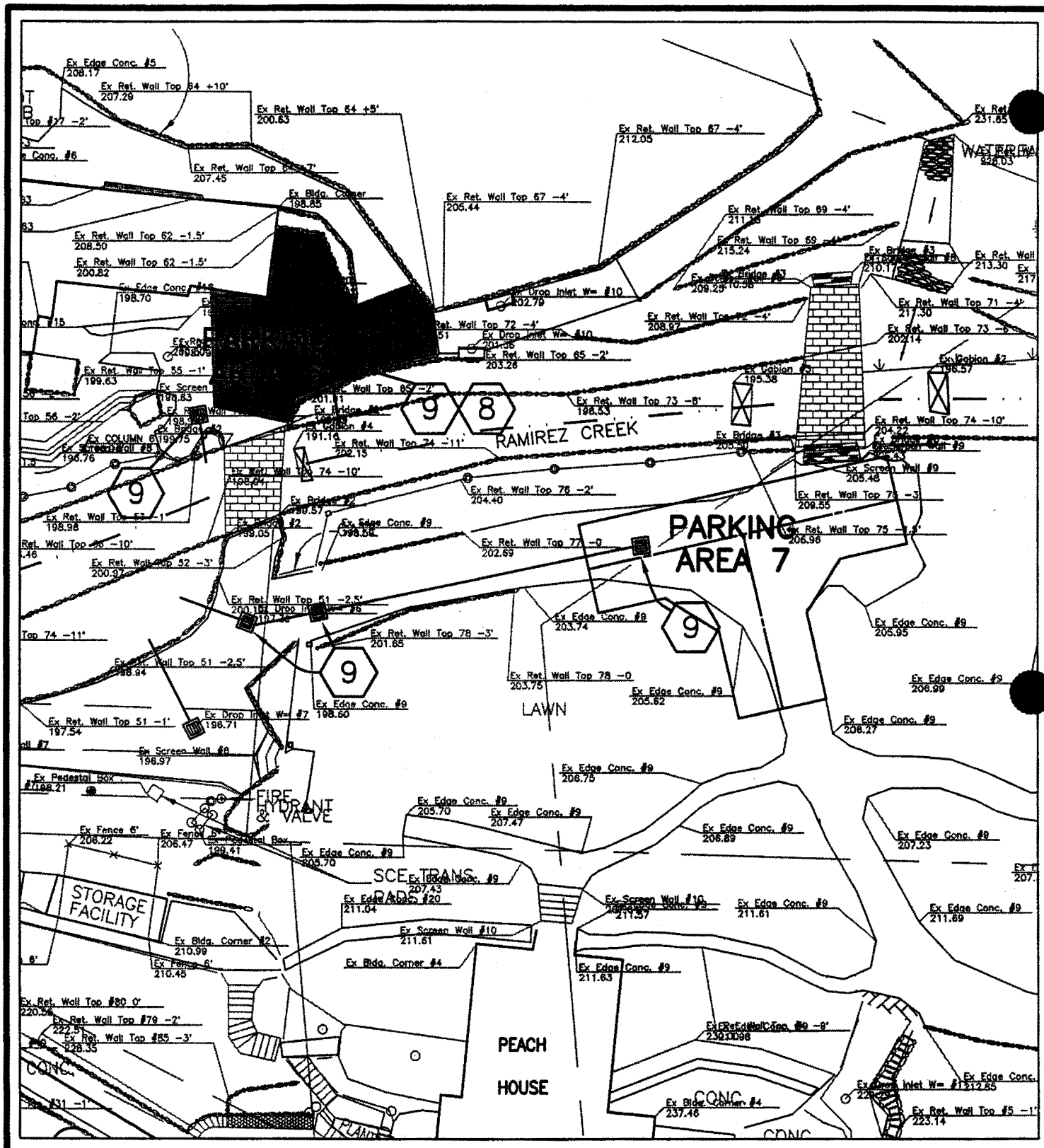

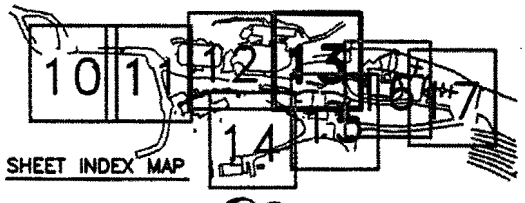

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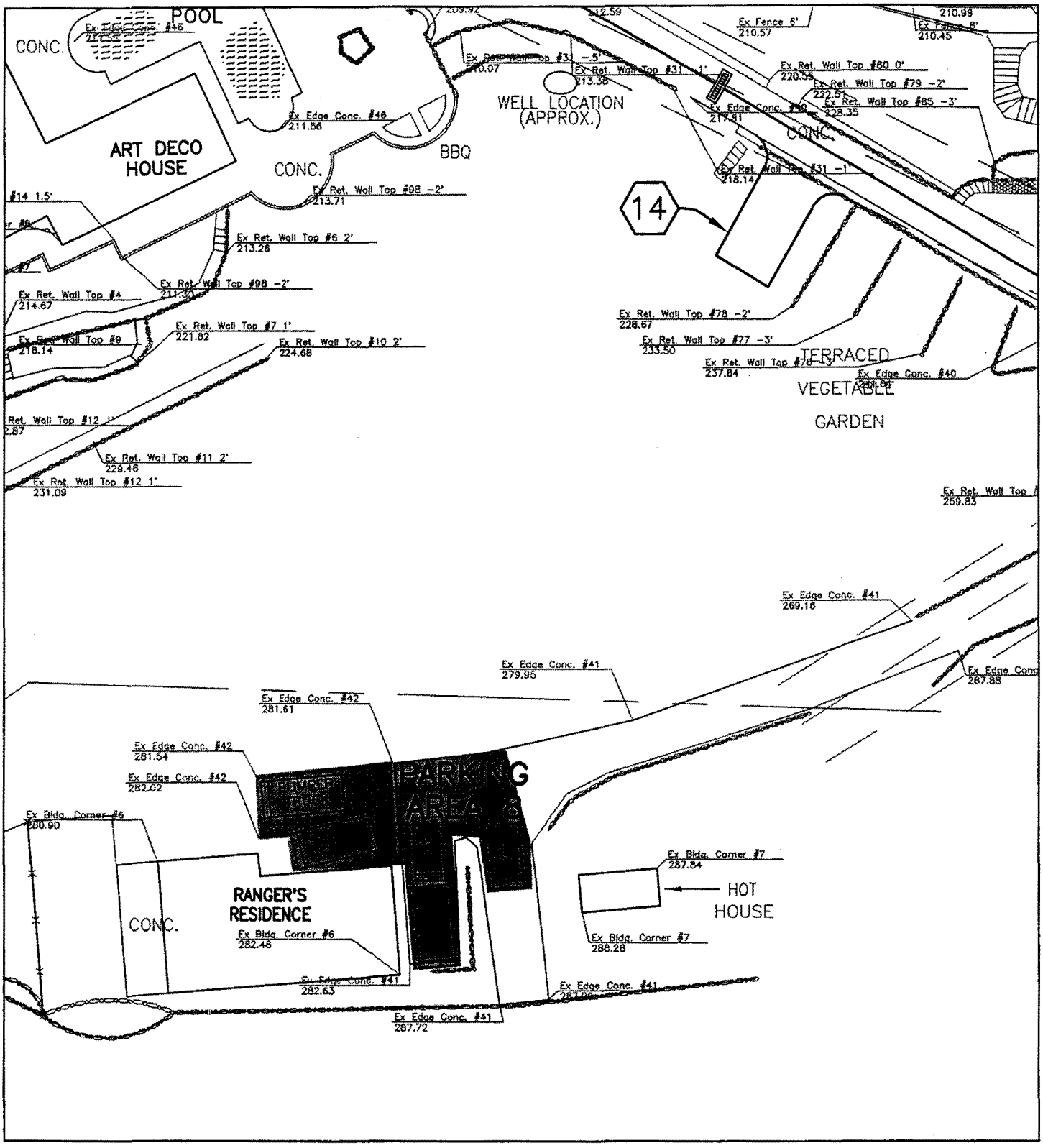

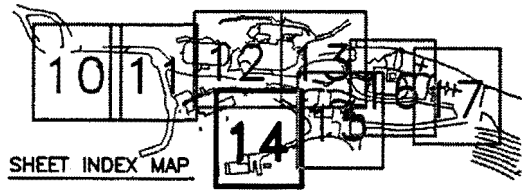

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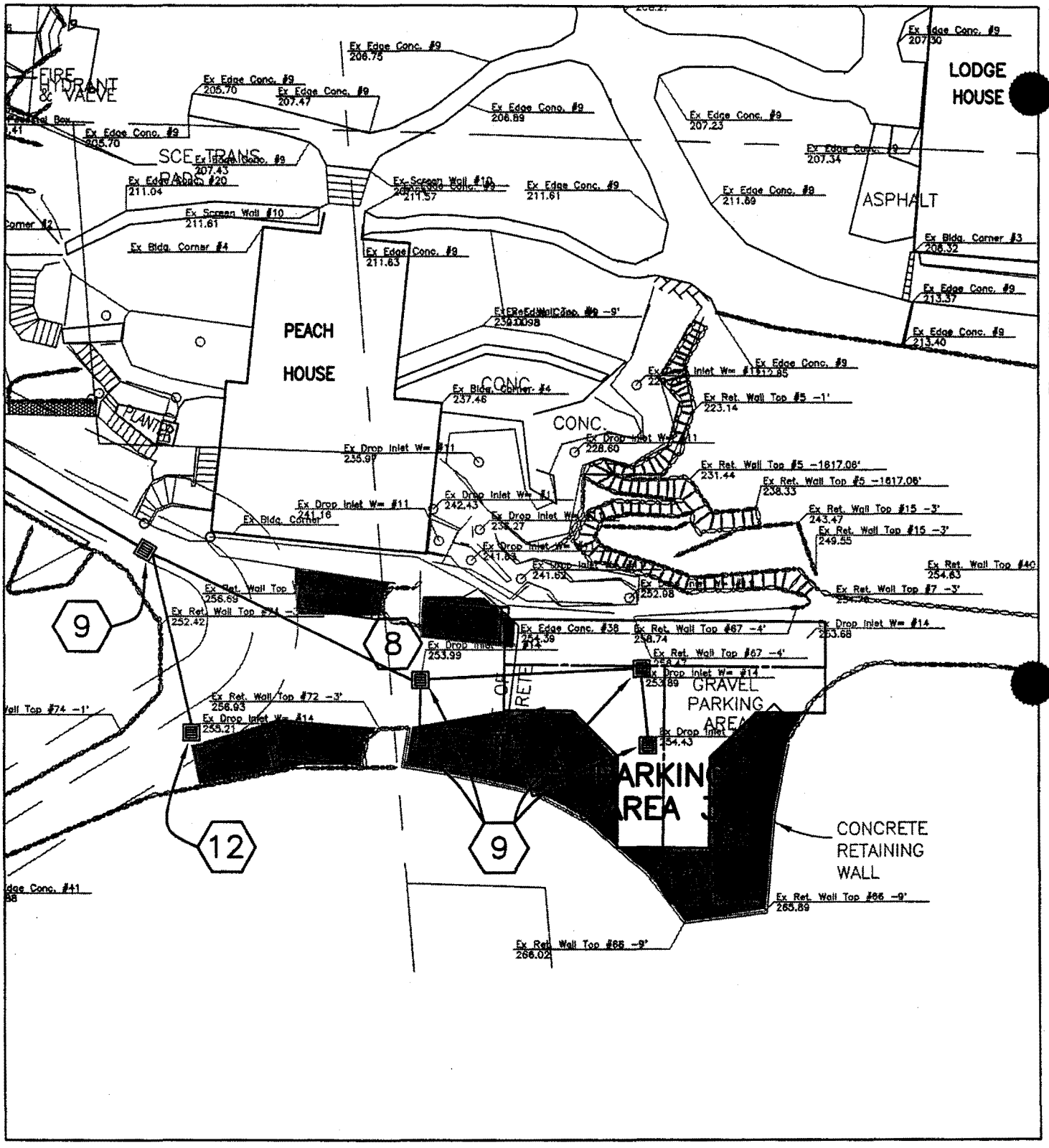

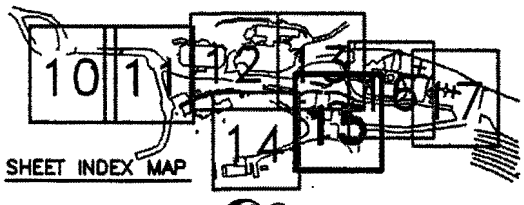

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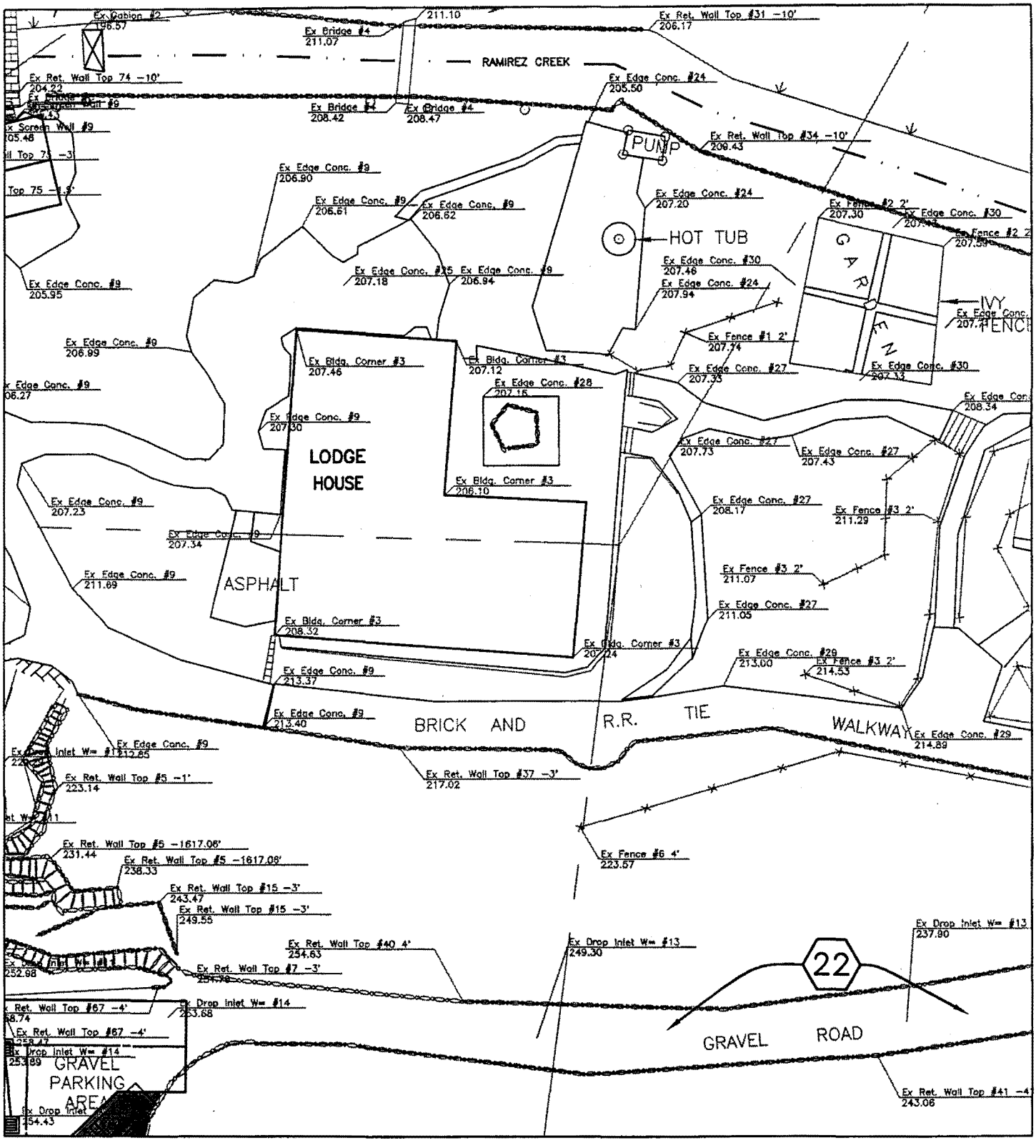

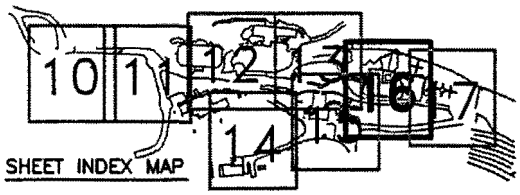

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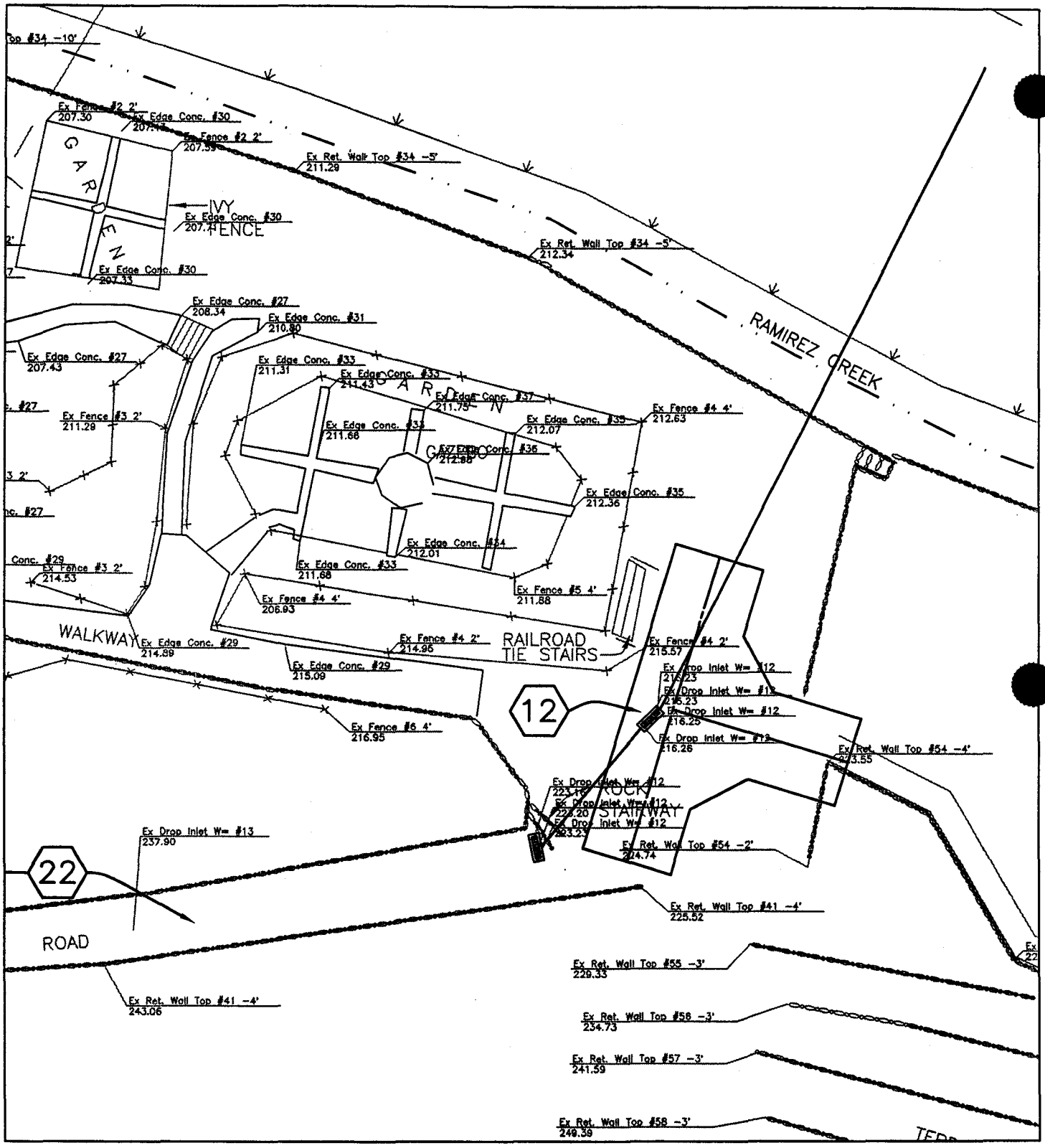

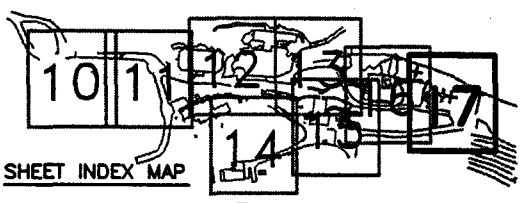

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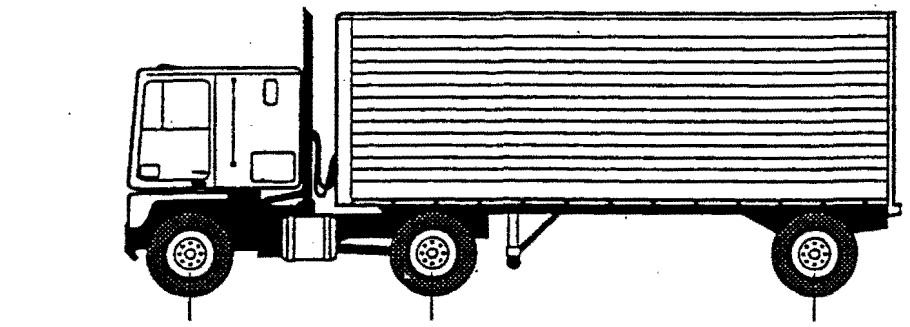
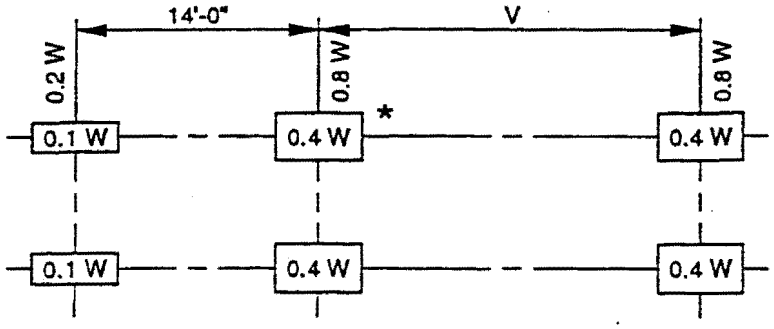
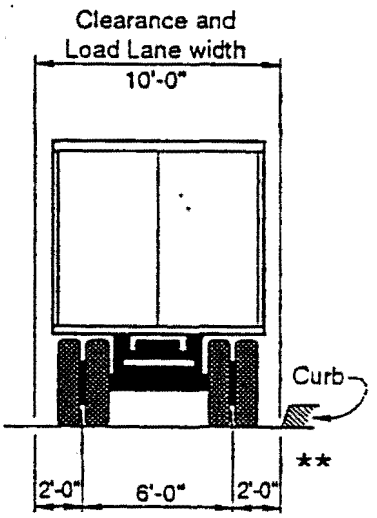
Appendix A-1

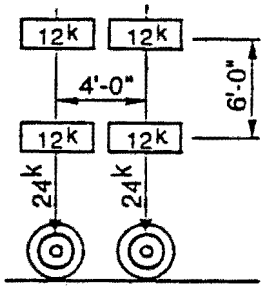
Note: Only one truck per lane is to be used for a maximum moment or shear determination for either simple or continuous spans.



HS20-44 8,000 Lbs. 32,000 Lbs. 32,000 Lbs.



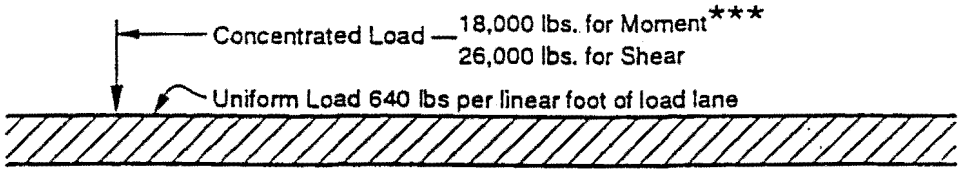




ALTERNATIVE LOADING

W = Combined weight on the first two axles which is the same as for the corresponding H truck.

V = Variable spacing—14 feet to 30 feet inclusive. Spacing to be used is that which produces maximum stresses.



* Width of tires shall be the same as the Standard H Truck

** For slab design the centerline of wheel shall be assumed to be one foot from face of curb.

*** For continuous spans another concentrated load of equal weight shall be placed in one other span in the series, in such position as to produce maximum negative moment.

FIGURE 3

over the area defined by the outside limits of the individual areas. For the design of buried conduits with less than 3 feet of earth cover subjected to moving wheel loads, *Table I* lists the recommended AASHTO impact factors.

FIGURE 2: Live Load Spacing.

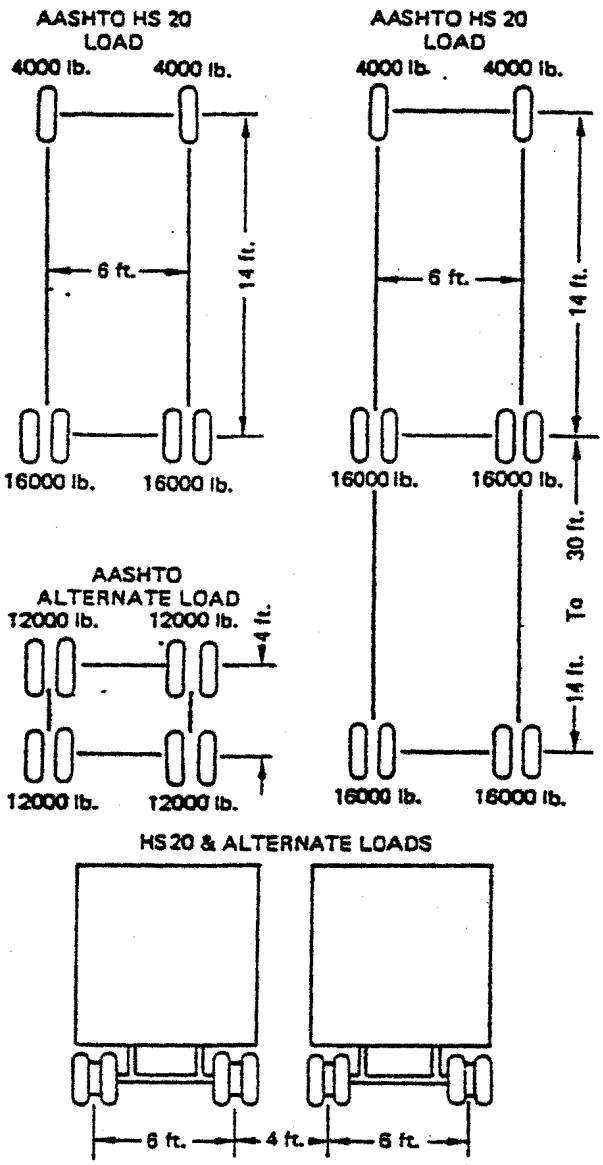


FIGURE 3: Wheel Load Surface Contact Area.

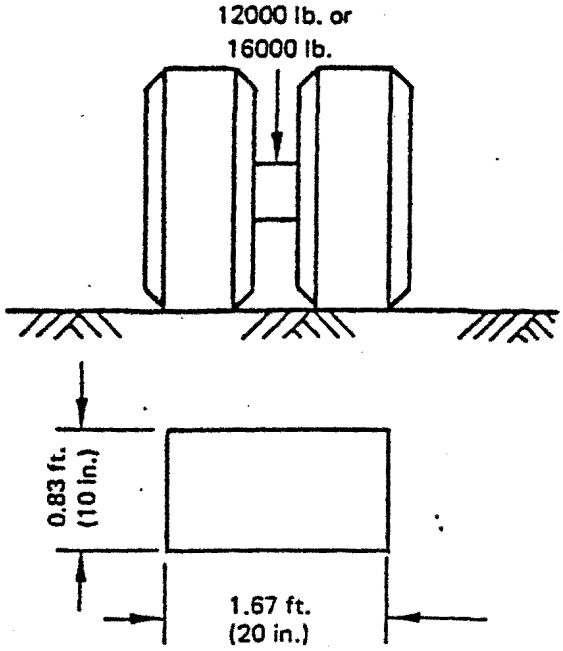


FIGURE 4: Distributed Load Area Single Dual Wheel.

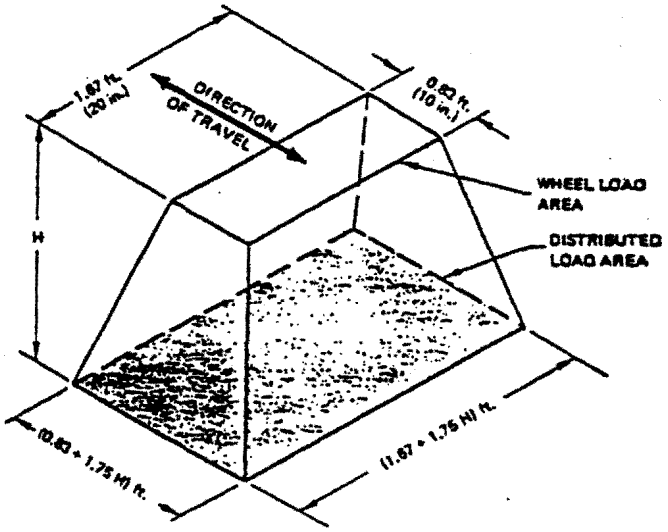


TABLE I: Impact Factors For Traffic Loads.

HEIGHT OF COVER	IMPACT FACTOR
0'-0" to 1'-0"	30%
1'-1" to 2'-0"	20%
2'-1" to 2'-11"	10%
3'-0" and Greater	0

NOTE: Impact factors recommended by the American Association of State Highway and Transportation Officials in "Standard Specifications for Highway Bridges," Eleventh Edition.

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Table 1B Section Properties of Standard Dressed (S4S) Sawn Lumber

Nominal Size b×d	Standard Dressed Size (S4S) b×d inches × inches	Area of Section A in²	X-X AXIS Section Modulus S_{xx} in³	X-X AXIS Moment of Inertia I_{xx} in⁴	Y-Y AXIS Section Modulus S_{yy} in³	Y-Y AXIS Moment of Inertia I_{yy} in⁴	Approximate weight in pounds per linear foot (lb/ft) of piece when density of wood equals: 25 lb/ft³	30 lb/ft³	35 lb/ft³	40 lb/ft³	45 lb/ft³	50 lb/ft³
1 × 3	3/4 × 2-1/2	1.875	0.781	0.977	0.234	0.088	0.326	0.391	0.456	0.521	0.586	0.651
1 × 4	3/4 × 3-1/2	2.625	1.531	2.680	0.328	0.123	0.456	0.547	0.638	0.729	0.820	0.911
1 × 6	3/4 × 5-1/2	4.125	3.781	10.40	0.516	0.193	0.716	0.859	1.003	1.146	1.289	1.432
1 × 8	3/4 × 7-1/4	5.438	6.570	23.82	0.680	0.255	0.944	1.133	1.322	1.510	1.699	1.888
1 × 10	3/4 × 9-1/4	6.938	10.70	49.47	0.867	0.325	1.204	1.445	1.686	1.927	2.168	2.409
1 × 12	3/4 × 11-1/4	8.438	15.82	88.99	1.055	0.396	1.465	1.758	2.051	2.344	2.637	2.930
2 × 3	1-1/2 × 2-1/2	3.750	1.563	1.953	0.938	0.703	0.651	0.781	0.911	1.042	1.172	1.302
2 × 4	1-1/2 × 3-1/2	5.250	3.063	5.359	1.313	0.984	0.911	1.094	1.276	1.458	1.641	1.823
2 × 5	1-1/2 × 4-1/2	6.750	5.063	11.39	1.688	1.266	1.172	1.406	1.641	1.875	2.109	2.344
2 × 6	1-1/2 × 5-1/2	8.250	7.563	20.80	2.063	1.547	1.432	1.719	2.005	2.292	2.578	2.865
2 × 8	1-1/2 × 7-1/4	10.88	13.14	47.63	2.719	2.039	1.888	2.266	2.643	3.021	3.398	3.776
2 × 10	1-1/2 × 9-1/4	13.88	21.39	98.93	3.469	2.602	2.409	2.891	3.372	3.854	4.336	4.818
2 × 12	1-1/2 × 11-1/4	16.88	31.64	178.0	4.219	3.164	2.930	3.516	4.102	4.688	5.273	5.859
2 × 14	1-1/2 × 13-1/4	19.88	43.89	290.8	4.969	3.727	3.451	4.141	4.831	5.521	6.211	6.901
3 × 4	2-1/2 × 3-1/2	8.750	5.104	8.932	3.646	4.557	1.519	1.823	2.127	2.431	2.734	3.038
3 × 5	2-1/2 × 4-1/2	11.25	8.438	18.98	4.688	5.859	1.953	2.344	2.734	3.125	3.516	3.906
3 × 6	2-1/2 × 5-1/2	13.75	12.60	34.66	5.729	7.161	2.387	2.865	3.342	3.819	4.297	4.774
3 × 8	2-1/2 × 7-1/4	18.13	21.90	79.39	7.552	9.440	3.147	3.776	4.405	5.035	5.664	6.293
3 × 10	2-1/2 × 9-1/4	23.13	35.65	164.9	9.635	12.04	4.015	4.818	5.621	6.424	7.227	8.030
3 × 12	2-1/2 × 11-1/4	28.13	52.73	296.6	11.72	14.65	4.883	5.859	6.836	7.813	8.789	9.766
3 × 14	2-1/2 × 13-1/4	33.13	73.15	484.6	13.80	17.25	5.751	6.901	8.051	9.201	10.35	11.50
3 × 16	2-1/2 × 15-1/4	38.13	96.90	738.9	15.89	19.86	6.619	7.943	9.266	10.59	11.91	13.24
4 × 4	3-1/2 × 3-1/2	12.25	7.146	12.51	7.146	12.51	2.127	2.552	2.977	3.403	3.828	4.253
4 × 5	3-1/2 × 4-1/2	15.75	11.81	26.58	9.188	16.08	2.734	3.281	3.828	4.375	4.922	5.469
4 × 6	3-1/2 × 5-1/2	19.25	17.65	48.53	11.23	19.65	3.342	4.010	4.679	5.347	6.016	6.684
4 × 8	3-1/2 × 7-1/4	25.38	30.66	111.1	14.80	25.90	4.405	5.286	6.168	7.049	7.930	8.811
4 × 10	3-1/2 × 9-1/4	32.38	49.91	230.8	18.89	33.05	5.621	6.745	7.869	8.993	10.12	11.24
4 × 12	3-1/2 × 11-1/4	39.38	73.83	415.3	22.97	40.20	6.836	8.203	9.570	10.94	12.30	13.67
4 × 14	3-1/2 × 13-1/4	46.38	102.4	678.5	27.05	47.34	8.051	9.661	11.27	12.88	14.49	16.10
4 × 16	3-1/2 × 15-1/4	53.38	135.7	1034	31.14	54.49	9.266	11.12	12.97	14.83	16.68	18.53
5 × 5	4-1/2 × 4-1/2	20.25	15.19	34.17	15.19	34.17	3.516	4.219	4.922	5.625	6.328	7.031
6 × 6	5-1/2 × 5-1/2	30.25	27.73	76.26	27.73	76.26	5.252	6.302	7.352	8.403	9.453	10.50
6 × 8	5-1/2 × 7-1/2	41.25	51.56	193.4	37.81	104.0	7.161	8.594	10.03	11.46	12.89	14.32
6 × 10	5-1/2 × 9-1/2	52.25	82.73	393.0	47.90	131.7	9.071	10.89	12.70	14.51	16.33	18.14
6 × 12	5-1/2 × 11-1/2	63.25	121.2	697.1	57.98	159.4	10.98	13.18	15.37	17.57	19.77	21.96
6 × 14	5-1/2 × 13-1/2	74.25	167.1	1128	68.06	187.2	12.89	15.47	18.05	20.63	23.20	25.78
6 × 16	5-1/2 × 15-1/2	85.25	220.2	1707	78.15	214.9	14.80	17.76	20.72	23.68	26.64	29.60
6 × 18	5-1/2 × 17-1/2	96.25	280.7	2456	88.23	242.6	16.71	20.05	23.39	26.74	30.08	33.42
6 × 20	5-1/2 × 19-1/2	107.3	348.6	3398	98.31	270.4	18.62	22.34	26.07	29.79	33.52	37.24
6 × 22	5-1/2 × 21-1/2	118.3	423.7	4555	108.4	298.1	20.53	24.64	28.74	32.85	36.95	41.06
6 × 24	5-1/2 × 23-1/2	129.3	506.2	5948	118.5	325.8	22.44	26.93	31.41	35.90	40.39	44.88
8 × 8	7-1/2 × 7-1/2	56.25	70.31	263.7	70.31	263.7	9.766	11.72	13.67	15.63	17.58	19.53
8 × 10	7-1/2 × 9-1/2	71.25	112.8	535.9	89.06	334.0	12.37	14.84	17.32	19.79	22.27	24.74
8 × 12	7-1/2 × 11-1/2	86.25	165.3	950.5	107.8	404.3	14.97	17.97	20.96	23.96	26.95	29.95
8 × 14	7-1/2 × 13-1/2	101.3	227.8	1538	126.6	474.6	17.58	21.09	24.61	28.13	31.64	35.16
8 × 16	7-1/2 × 15-1/2	116.3	300.3	2327	145.3	544.9	20.18	24.22	28.26	32.29	36.33	40.36
8 × 18	7-1/2 × 17-1/2	131.3	382.8	3350	164.1	615.2	22.79	27.34	31.90	36.46	41.02	45.57
8 × 20	7-1/2 × 19-1/2	146.3	475.3	4634	182.8	685.5	25.39	30.47	35.55	40.63	45.70	50.78
8 × 22	7-1/2 × 21-1/2	161.3	577.8	6211	201.6	755.9	27.99	33.59	39.19	44.79	50.39	55.99
8 × 24	7-1/2 × 23-1/2	176.3	690.3	8111	220.3	826.2	30.60	36.72	42.84	48.96	55.08	61.20
10 × 10	9-1/2 × 9-1/2	90.25	142.9	678.8	142.9	678.8	15.67	18.80	21.94	25.07	28.20	31.34
10 × 12	9-1/2 × 11-1/2	109.3	209.4	1204	173.0	821.7	18.97	22.76	26.55	30.35	34.14	37.93
10 × 14	9-1/2 × 13-1/2	128.3	288.6	1948	203.1	964.5	22.27	26.72	31.17	35.63	40.08	44.53
10 × 16	9-1/2 × 15-1/2	147.3	380.4	2948	233.1	1107	25.56	30.68	35.79	40.90	46.02	51.13
10 × 18	9-1/2 × 17-1/2	166.3	484.9	4243	263.2	1250	28.86	34.64	40.41	46.18	51.95	57.73
10 × 20	9-1/2 × 19-1/2	185.3	602.1	5870	293.3	1393	32.16	38.59	45.03	51.46	57.89	64.32
10 × 22	9-1/2 × 21-1/2	204.3	731.9	7868	323.4	1536	35.46	42.55	49.64	56.74	63.83	70.92
10 × 24	9-1/2 × 23-1/2	223.3	874.4	10270	353.5	1679	38.76	46.51	54.26	62.01	69.77	77.52

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Appendix B (Non-mandatory) Load Duration

B.1 Adjustment of Design Values for Load duration

B.1.1 Normal Load Duration. The tabulated design values in this Specification are for normal load duration. Normal load duration contemplates fully stressing a member to its allowable design value by the application of the full design load for a cumulative duration of approximately ten years and/or the application of 90% of the full design load continuously throughout the remainder of the life of the structure, without encroaching on the factor of safety.

B.1.2 Other Load Durations. Since tests have shown that wood has the property of carrying substantially greater maximum loads for short durations than for long durations of loading, tabulated design values for normal load duration shall be multiplied by load duration factors, C_D, for other durations of load (see Figure B1). Load duration factors do not apply to modulus of elasticity design values, E, nor to compression design values perpendicular to grain, $F_{c\perp}$, based on a deformation limit.

(a) When the member is fully stressed to the allowable design value by application of the full design load permanently, or for a cumulative total of more than 10 years, tabulated design values for normal load duration (except E and $F_{c\perp}$ based on a deformation limit) shall be multiplied by the load duration factor, $C_D = 0.90$.

(b) Likewise, when the duration of the full design load does not exceed the following durations, tabulated design values for normal load duration (except E and $F_{c\perp}$ based on a deformation limit) shall be multiplied by the following load duration factors:

C_D	Load Duration
1.15	two months duration
1.25	seven days duration
1.6	ten minutes duration
2.0	impact

(c) The two month load duration factor, $C_D = 1.15$, is applicable to design snow loads based on ANSI/ASCE 7-95 (Reference 5). Other load duration factors shall be permitted to be used where such adjustments are referenced to the duration of the design snow load in the specific location being considered.

(d) The ten minutes load duration factor, $C_D = 1.6$, is applicable to design earthquake loads and design wind loads based on ANSI/ASCE 7-95 (Reference 5).

(e) The impact load duration factor, $C_D = 2.0$, shall not apply when the member has been pressure-treated with water-borne preservatives to the heavy retentions required for "marine" use (see Reference 29), nor when the member has been pressure-treated with fire retardant chemicals. The impact load duration factor shall not apply to connection design values.

B.2 Combinations of Loads of Different Durations

When loads of different durations are applied simultaneously to members which have full lateral support to prevent buckling, the design of structural members and connections shall be based on the critical load combination determined from the following procedures:

(a) Determine the magnitude of each load that will occur on a structural member and accumulate subtotals of combinations of these loads. Design loads established by applicable building codes and standards may include load combination factors to adjust for probability of simultaneous occurrence of various loads (see Appendix B.4). Such load combination factors should be included in the load combination subtotals.

(b) Divide each subtotal by the load duration factor, C_D, for the shortest duration load in the combination of loads under consideration.

Shortest Load Duration in the Combination of Loads	Load Duration Factor, C_D
Permanent	0.9
Normal	1.0
Two Months	1.15
Seven Days	1.25
Ten Minutes	1.6
Impact	2.0

(c) The largest value thus obtained indicates the critical load combination to be used in designing the structural member or connection.

EXAMPLE: Determine the critical load combination for a structural member subjected to the following loads:

DL = dead load established by applicable building code or standard

LL = live load established by applicable building code or standard

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Table 2.3.1 Applicability of Adjustment Factors

	Load Duration Factor	Wet Service Factor	Temperature Factor	Beam Stability Factor [1]	Size Factor [2]	Volume Factor [1,3]	Flat Use Factor [4]	Incising Factor	Repetitive Member Factor [5]	Curvature Factor [6]	Form Factor	Column Stability Factor	Shear Stress Factor [7]	Buckling Stiffness Factor [8]	Bearing Area Factor
$F_b' = F_b$	C_D	C_M	C_t	C_L	C_F	C_V	C_{fu}	C_i	C_r	C_c	C_f	–	–	–	–
$F_t' = F_t$	C_D	C_M	C_t	–	C_F	–	–	C_i	–	–	–	–	–	–	–
$F_v' = F_v$	C_D	C_M	C_t	–	–	–	–	C_i	–	–	–	–	C_H	–	–
$F_{c\perp}' = F_{c\perp}$	–	C_M	C_t	–	–	–	–	C_i	–	–	–	–	–	–	C_b
$F_c' = F_c$	C_D	C_M	C_t	–	C_F	–	–	C_i	–	–	–	C_P	–	–	–
$E' = E$	–	C_M	C_t	–	–	–	–	C_i	–	–	–	–	–	C_T	–
$F_g' = F_g$	C_D	–	C_t	–	–	–	–	–	–	–	–	–	–	–	–

1. The beam stability factor, C_L, shall not apply simultaneously with the volume factor, C_V, for glued laminated timber bending members (see 5.3.2). Therefore the lesser of these adjustment factors shall apply.
2. The size factor, C_F, shall apply only to visually graded sawn lumber members and to round timber bending members (see 4.3.2).
3. The volume factor, C_V, shall apply only to glued laminated timber bending members (see 5.3.2).
4. The flat use factor, C_{fu}, shall apply only to dimension lumber bending members 2" to 4" (nominal) thick (see 4.3.3) and to glued laminated timber bending members (see 5.3.3).
5. The repetitive member factor, C_r, shall apply only to dimension lumber bending members 2" to 4" thick (see 4.3.4).
6. The curvature factor, C_c, shall apply only to curved portions of glued laminated timber bending members (see 5.3.4).
7. Shear design values parallel to grain, F_v, for sawn lumber members shall be permitted to be multiplied by the shear stress factors, C_H, specified in Tables 4A, 4B, 4C and 4D.
8. The buckling stiffness factor, C_T, shall apply only to 2" × 4" or smaller sawn lumber truss compression chords subjected to combined flexure and axial compression when 3/8" or thicker plywood sheathing is nailed to the narrow face (see 4.4.3).

2.3.2 Load Duration Factor, C_D

2.3.2.1 Wood has the property of carrying substantially greater maximum loads for short durations than for long durations of loading. Tabulated design values apply to normal load duration. Normal load duration represents a load that fully stresses a member to its allowable design value by the application of the full design load for a cumulative duration of approximately ten years. When the cumulative duration of the full maximum load does not exceed the specified time period, all tabulated design values except modulus of elasticity, E, and compression perpendicular to grain, $F_{c\perp}$, based on a deformation limit (see 4.2.6) shall be multiplied by the appropriate load duration factor, C_D, from Table 2.3.2 or Figure B1 (see Appendix B) to take into account the change in strength of wood with changes in load duration.

2.3.2.2 The load duration factor, C_D, for the shortest duration load in a combination of loads shall apply for that load combination. All applicable load combinations shall be evaluated to determine the critical load combination. Design of structural members and connections shall be based on the critical load combination (see Appendix B.2).

2.3.2.3 The load duration factors, C_D, in Table 2.3.2 and Appendix B are independent of load combination factors, and both shall be permitted to be used in design calculations (see 1.4.4 and Appendix B.4).

Table 2.3.2 Frequently Used Load Duration Factors, C_D [1]

Load Duration	C_D	Typical Design Loads
Permanent	0.9	Dead Load
Ten years	1.0	Occupancy Live Load
Two months	1.15	Snow Load
Seven days	1.25	Construction Load
Ten minutes	1.6	Wind/Earthquake Load
Impact[2]	2.0	Impact Load

1. Load duration factors shall not apply to modulus of elasticity, E, nor to compression perpendicular to grain design values, $F_{c\perp}$, based on a deformation limit.
2. Load duration factors greater than 1.6 shall not apply to structural members pressure-treated with water-borne preservatives (see Reference 29), or fire retardant chemicals. The impact load duration factor shall not apply to connections.

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Table 4A Adjustment Factors

2 - 4" WIDE

Repetitive Member Factor, C_r

Bending design values, F_b, for dimension lumber 2" to 4" thick shall be multiplied by the repetitive member factor, $C_r = 1.15$, when such members are used as joists, truss chords, rafters, studs, planks, decking or similar members which are in contact or spaced not more than 24" on centers, are not less than 3 in number and are joined by floor, roof or other load distributing elements adequate to support the design load.

Wet Service Factor, C_M

When dimension lumber is used where moisture content will exceed 19% for an extended time period, design values shall be multiplied by the appropriate wet service factors from the following table:

Wet Service Factors, C_M

F_b	F_t	F_v	$F_{c\perp}$	F_c	E
0.85*	1.0	0.97	0.67	0.8**	0.9

* when $(F_b)(C_F) \le 1150$ psi, $C_M = 1.0$
** when $(F_c)(C_F) \le 750$ psi, $C_M = 1.0$

Flat Use Factor, C_{fu}

Bending design values adjusted by size factors are based on edgewise use (load applied to narrow face). When dimension lumber is used flatwise (load applied to wide face), the bending design value, F_b, shall also be multiplied by the following flat use factors:

Flat Use Factors, C_{fu}

Width (depth)	Thickness (breadth)	
	2" & 3"	4"
2" & 3"	1.0	—
4"	1.1	1.0
5"	1.1	1.05
6"	1.15	1.05
8"	1.15	1.05
10" & wider	1.2	1.1

NOTE
To facilitate the use of Table 4A, shading has been employed to distinguish design values based on a 4" nominal width (Construction, Standard and Utility grades) or a 6" nominal width (Stud grade) from design values based on a 12" nominal width (Select Structural, No.1 & Btr, No.1, No.2 and No.3 grades).

Size Factor, C_F

Tabulated bending, tension, and compression parallel to grain design values for dimension lumber 2" to 4" thick shall be multiplied by the following size factors:

Size Factors, C_F

		F_b		F_t	F_c
		Thickness (breadth)			
Grades	Width (depth)	2" & 3"	4"		
Select Structural, No. 1 & Btr, No. 1, No. 2, No. 3	2", 3" & 4"	1.5	1.5	1.5	1.15
	5"	1.4	1.4	1.4	1.1
	6"	1.3	1.3	1.3	1.1
	8"	1.2	1.3	1.2	1.05
	10"	1.1	1.2	1.1	1.0
	12"	1.0	1.1	1.0	1.0
	14" & wider	0.9	1.0	0.9	0.9
Stud	2", 3" & 4"	1.1	1.1	1.1	1.05
	5" & 6"	1.0	1.0	1.0	1.0
	8" & wider	Use No. 3 Grade tabulated design values and size factors			
Construction & Standard	2", 3" & 4"	1.0	1.0	1.0	1.0
Utility	2", 3" & 4"	1.0	1.0	1.0	1.0
		0.4	—	0.4	0.6

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Shear Stress Factor, C_H

Tabulated shear design values parallel to grain have been reduced to allow for the occurrence of splits, checks and shakes. Tabulated shear design values parallel to grain, F_v, shall be permitted to be multiplied by the shear stress factors specified in the following table when length of split, or size of check or shake is known and no increase in them is anticipated. When shear stress factors are used for Redwood, a tabulated design value of $F_v = 80$ psi shall be assigned for all grades of Redwood dimension lumber. Shear stress factors shall be permitted to be linearly interpolated.

Shear Stress Factors, C_H

Length of split on wide face of 2" (nominal) lumber	C_H	Length of split on wide face of 3" (nominal) and thicker lumber	C_H	Size of shake* in 2" (nominal) and thicker lumber	C_H
no split	2.00	no split	2.00	no shake	2.00
1/2 × wide face	1.67	1/2 × narrow face	1.67	1/6 × narrow face	1.67
3/4 × wide face	1.50	3/4 × narrow face	1.50	1/4 narrow face	1.50
1 × wide face	1.33	1 × narrow face	1.33	1/3 × narrow face	1.33
1-1/2 × wide face or more	1.00	1-1/2 × narrow face or more	1.00	1/2 × narrow face or more	1.00

*Shake is measured at the end between lines enclosing the shake and perpendicular to the loaded face.

Table 4A Base Design Values for Visually Graded Dimension Lumber

(All species except Southern Pine — see Table 4B) (Tabulated design values are for normal load duration and dry service conditions. See NDS 2.3 for a comprehensive description of design value adjustment factors.)

USE WITH TABLE 4A ADJUSTMENT FACTORS

Species and commercial grade	Size classification	Design values in pounds per square inch (psi) Bending F_b	Tension parallel to grain F_t	Shear parallel to grain F_v	Compression perpendicular to grain $F_{c\perp}$	Compression parallel to grain F_c	Modulus of Elasticity E	Grading Rules Agency
ASPEN								
Select Structural		875	500	60	265	725	1,100,000	
No.1	2"-4" thick	625	375	60	265	600	1,100,000	
No.2		600	350	60	265	450	1,000,000	NELMA
No.3	2"& wider	350	200	60	265	275	900,000	NSLB
Stud		475	275	60	265	300	900,000	WWPA
Construction	2"-4" thick	700	400	60	265	625	900,000	
Standard		375	225	60	265	475	900,000	
Utility	2"-4" wide	175	100	60	265	300	800,000	
BEECH-BIRCH-HICKORY								
Select Structural		1450	850	100	715	1200	1,700,000	
No.1	2"-4" thick	1050	600	100	715	950	1,600,000	
No.2		1000	600	100	715	750	1,500,000	
No.3	2"& wider	575	350	100	715	425	1,300,000	NELMA
Stud		775	450	100	715	475	1,300,000	
Construction	2"-4" thick	1150	675	100	715	1000	1,400,000	
Standard		650	375	100	715	775	1,300,000	
Utility	2"-4" wide	300	175	100	715	500	1,200,000	
COTTONWOOD								
Select Structural		875	525	65	320	775	1,200,000	
No.1	2"-4" thick	625	375	65	320	625	1,200,000	
No.2		625	350	65	320	475	1,100,000	
No.3	2"& wider	350	200	65	320	275	1,000,000	NSLB
Stud		475	275	65	320	300	1,000,000	
Construction	2"-4" thick	700	400	65	320	650	1,000,000	
Standard		400	225	65	320	500	900,000	
Utility	2"-4" wide	175	100	65	320	325	900,000	

SHT 16

Table 4A Base Design Values for Visually Graded Dimension Lumber (Cont.)

(All species except Southern Pine — see Table 4B) (Tabulated design values are for normal load duration and dry service conditions. See NDS 2.3 for a comprehensive description of design value adjustment factors.)

USE WITH TABLE 4A ADJUSTMENT FACTORS

Species and commercial grade	Size classification	Design values in pounds per square inch (psi)						Grading Rules Agency
		Bending F_b	Tension parallel to grain F_t	Shear parallel to grain F_v	Compression perpendicular to grain $F_{c\perp}$	Compression parallel to grain F_c	Modulus of Elasticity E	
DOUGLAS FIR-LARCH								
Select Structural		1500	1000	95	625	1700	1,900,000	
No.1 & Btr	2"-4" thick	1200	800	95	625	1550	1,800,000	
No.1		1000	675	95	625	1500	1,700,000	
No.2	2"& wider	900	575	95	625	1350	1,600,000	WCLIB
No.3		525	325	95	625	775	1,400,000	WWPA
Stud		700	450	95	625	850	1,400,000	
Construction	2"-4" thick	1000	650	95	625	1050	1,500,000	
Standard		575	375	95	625	600	1,400,000	
Utility	2"-4" wide	275	175	95	625	300	1,300,000	
DOUGLAS FIR-LARCH (NORTH)								
Select Structural	2"-4" thick	1350	825	95	625	1900	1,900,000	
No.1/No.2		850	500	95	625	1400	1,600,000	
No.3	2"& wider	475	300	95	625	825	1,400,000	NLGA
Stud		650	400	95	625	900	1,400,000	
Construction	2"-4" thick	950	575	95	625	1500	1,500,000	
Standard		525	325	95	625	850	1,400,000	
Utility	2"-4" wide	250	150	95	625	500	1,300,000	
DOUGLAS FIR-SOUTH								
Select Structural		1350	900	90	520	1600	1,400,000	
No.1	2"-4" thick	925	600	90	520	1450	1,300,000	
No.2		850	525	90	520	1350	1,200,000	
No.3	2"& wider	500	300	90	520	775	1,100,000	WWPA
Stud		675	425	90	520	850	1,100,000	
Construction	2"-4" thick	975	600	90	520	1650	1,200,000	
Standard		550	350	90	520	1400	1,100,000	
Utility	2"-4" wide	250	150	90	520	900	1,000,000	
EASTERN HEMLOCK-BALSAM FIR								
Select Structural		1250	575	70	335	1200	1,200,000	
No.1	2"-4" thick	775	350	70	335	1000	1,100,000	
No.2		575	275	70	335	825	1,100,000	
No.3	2"& wider	350	150	70	335	475	900,000	NELMA
Stud		450	200	70	335	525	900,000	NSLB
Construction	2"-4" thick	675	300	70	335	1050	1,000,000	
Standard		375	175	70	335	850	900,000	
Utility	2"-4" wide	175	75	70	335	550	800,000	
EASTERN HEMLOCK-TAMARACK								
Select Structural		1250	575	85	555	1200	1,200,000	
No.1	2"-4" thick	775	350	85	555	1000	1,100,000	
No.2		575	275	85	555	825	1,100,000	
No.3	2"& wider	350	150	85	555	475	900,000	NELMA
Stud		450	200	85	555	525	900,000	NSLB
Construction	2"-4" thick	675	300	85	555	1050	1,000,000	
Standard		375	175	85	555	850	900,000	
Utility	2"-4" wide	175	75	85	555	550	800,000	
EASTERN SOFTWOODS								
Select Structural		1250	575	70	335	1200	1,200,000	
No.1	2"-4" thick	775	350	70	335	1000	1,100,000	
No.2		575	275	70	335	825	1,100,000	
No.3	2"& wider	350	150	70	335	475	900,000	NELMA
Stud		450	200	70	335	525	900,000	NSLB
Construction	2"-4" thick	675	300	70	335	1050	1,000,000	
Standard		375	175	70	335	850	900,000	
Utility	2"-4" wide	175	75	70	335	550	800,000	

SHT 17

SH 1 OF 2

BY BEZ

CK. BY

Penfield & Smith
ENGINEERS • SURVEYORS

101 EAST VICTORIA STREET, SANTA BARBARA, CA 93102
805-963-9532 • FAX 805-966-9801

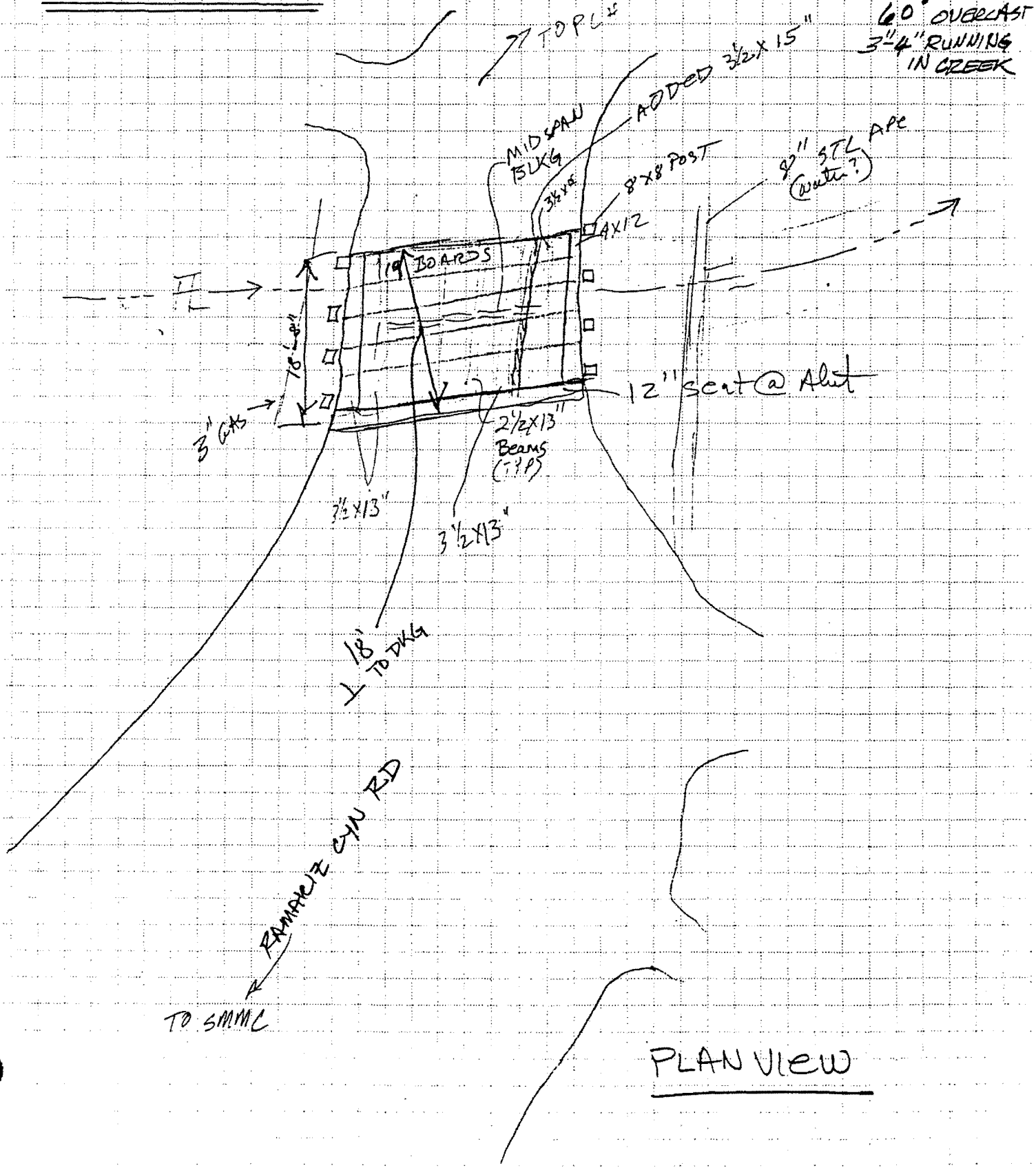
SMMC
SANTA MONICA CA

DATE 2/22/00

W.O. NO. 13638.01

SITE VISIT SKETCHES

11:30 AM
60° OVERCAST
3"-4" RUNNING IN CREEK



PLAN VIEW

BY

CK. BY

Penfield & Smith
ENGINEERS • SURVEYORS

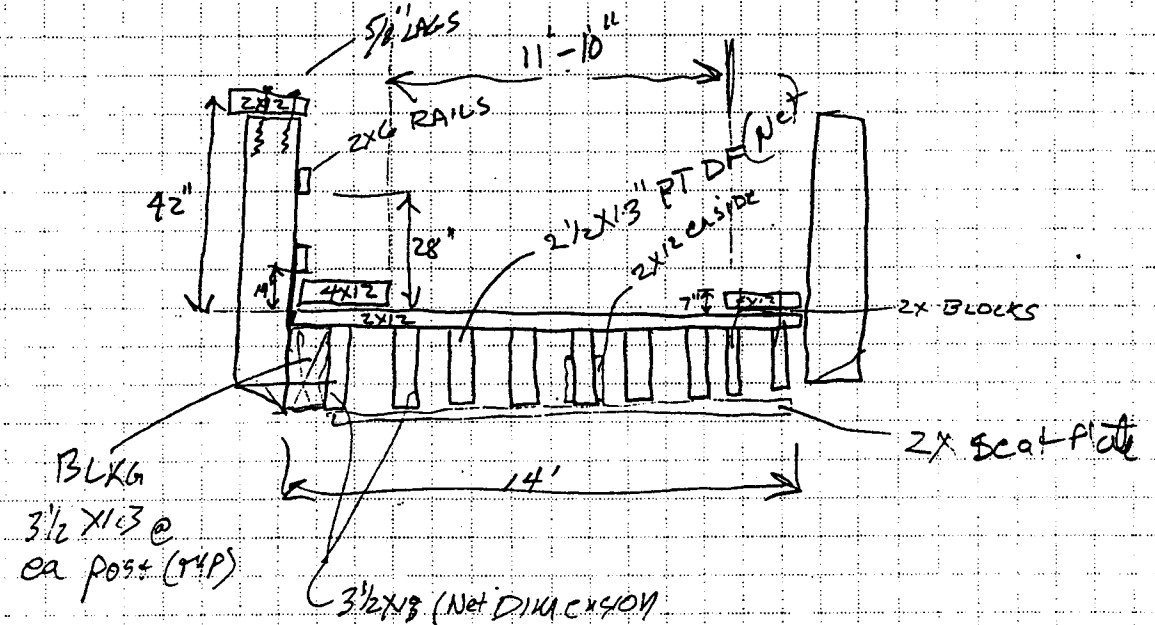
101 EAST VICTORIA STREET, SANTA BARBARA, CA 93102
805-963-9532 • FAX 805-966-9801

SMMC

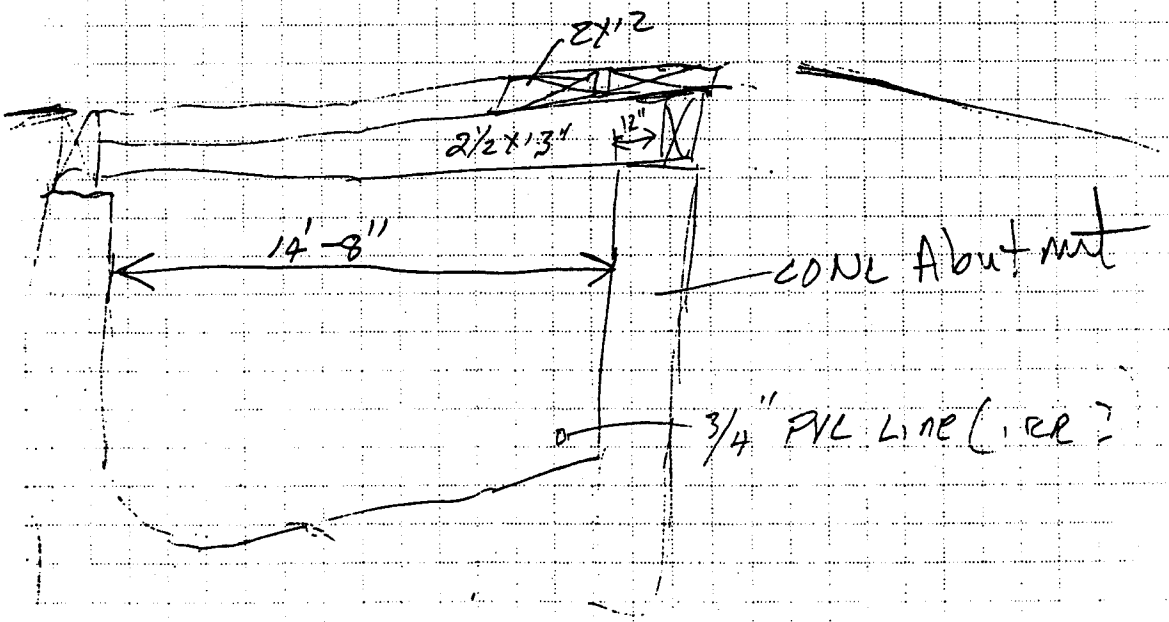
DATE 2/22/0

W.O. NO. 13638

SITE VISIT SKETCHES



SECTION



PROFILE

Memo

To: Amy Lethbridge, Deputy Executive Officer
From: Walt Young, Chief Ranger
Date: March 6, 2000
Subject: Emergency closure notification procedure for staff and guests of Ramirez Canyon Park

In response to your questions regarding the operating procedures for emergency closure of Ramirez Canyon Park, the following will apply:

The emergency conditions that dictate closure of the park to public access are Red Flag Warnings, Flash Flood/Flood warning and Urban/Small Stream Flood Advisories.

These emergency conditions are determined by the National Weather Service, a division of the National Occanic Atmospheric Administration (NOAA). This service is monitored around the clock by MRCA Rangers.

In the event that an emergency condition is declared, the event coordinator will immediately contact the person who has scheduled to use the park. All individuals or groups will be required to leave a point of contact and information on how to contact that person 24 hours a day as part of the special use permit. In addition a ranger will be posted at the intersection of Delaplane and Winding Way to prohibit entry of any participants who did not receive notification.

You also asked regarding advanced notification of such emergency declarations. The National Weather Service is generally able to predict a Red Flag Warning 12 to 18 hours in advance. This time frame is adequate to notify the event coordinator prior to an event. During brush fire season, (August through December) MRCA Rangers not only monitor the Fire Weather forecast issued to all Wildland firefighting agencies, but contact the Los Angeles City Fire Department (LAFD) each day to confirm the latest Fire Weather forecast. Additionally, the LAFD has always notified the MRCA when a Red Flag warning is issued..

Flash Flood/Flood warning and Urban/Small Stream Flood advisories are issued as conditions dictate. While there is sometimes much less official notice of a these conditions being declared, staff is able to anticipate and prepare for such a declaration given weather conditions. For example, if it has been raining hard for several days, or there is a particularly intense storm, I may advise the scheduling coordinator to give a warning call to the user even before there is official notification from NOAA. Each building on site is being equipped with a NOAA alert radio

EXHIBIT NO. 5 (2 pages)
APPLICATION NO. SMMC
4-98-334
Hazard Warnings

which activates when these alerts are issued. This information is also available on the National Weather Service's website, which can be checked 24 hours a day should conditions suggest it is wise to do so.

In the event that declaration of an emergency condition takes place while a group is already on site, Rangers will escort guests from the park.

As you know, we have developed internal, informal procedures during the rain that have been extremely helpful for determining when the site should be evacuated. A pipe that is at the Arizona Crossing just inside the gate is monitored and used as a guide to determine how much the creek has risen and how fast the creek is rising. This is done by regular checks by on-site staff and direct communication with the Chief Ranger. While difficult to formalize this system, it has been used to determine when staff should and should not come in to work, when people (staff and guests) should leave the site, and whether or not groups should be notified and cancelled. In four and a half years no one has ever been stranded on site or unable to pass through Ramirez Creek using this system, which I recommend we continue to use in addition to the above, formal process.

SEPTIC IMPROVEMENT NOTES

(1) SEPTIC TANK TO BE ABANDONED.

(2) LEACH FIELD TO BE ABANDONED.

(3) BIOTUBE EFFLUENT FILTER & GASKETED, BOLT-DOWN LID ORENCO 30"DIAM PUMP BASIN W/EFFLUENT PUMP & FLOATS.

(4) 1000 GAL ST TO SEALED WATERTIGHT W/SEALED RISERS TO THE SURFACE & W/ GASKETED BOLT-DOWN LIDS & BIOTUBE EFFLUENT FILTER.

(5) SEWER FORCE MAIN. SEALED PURPLE PVC EFFLUENT TRANSFER LINE.

(6) CONSTRUCT 2000 GAL FIBERGLASS SEPTIC TANK W/SEALED RISERS TO THE SURFACE, GASKETED BOLT-DOWN LIDS. OVERFLOW TEE W/ BIOTUBE EFFLUENT FILTER. OSI PUMP VAULT INSERT W/PUMP, BIOTUBE EFFLUENT FILTER & FLOAT SWITCHES.

(7) CONSTRUCT 2000 GAL FIBERGLASS RECIRCULATION TANK W/ RISERS TO THE SURFACE, GASKETED BOLT-DOWN LIDS. ISO PUMP VAULT INSERT W/ PUMPS, BIOTUBE EFFLUENT FILTER FLOAT SWITCHES.

(8) 4-OSI ADVANTEX RECIRCULATING TEXTILE FILTER MODULES \ WOODEN BENCH FACADE.

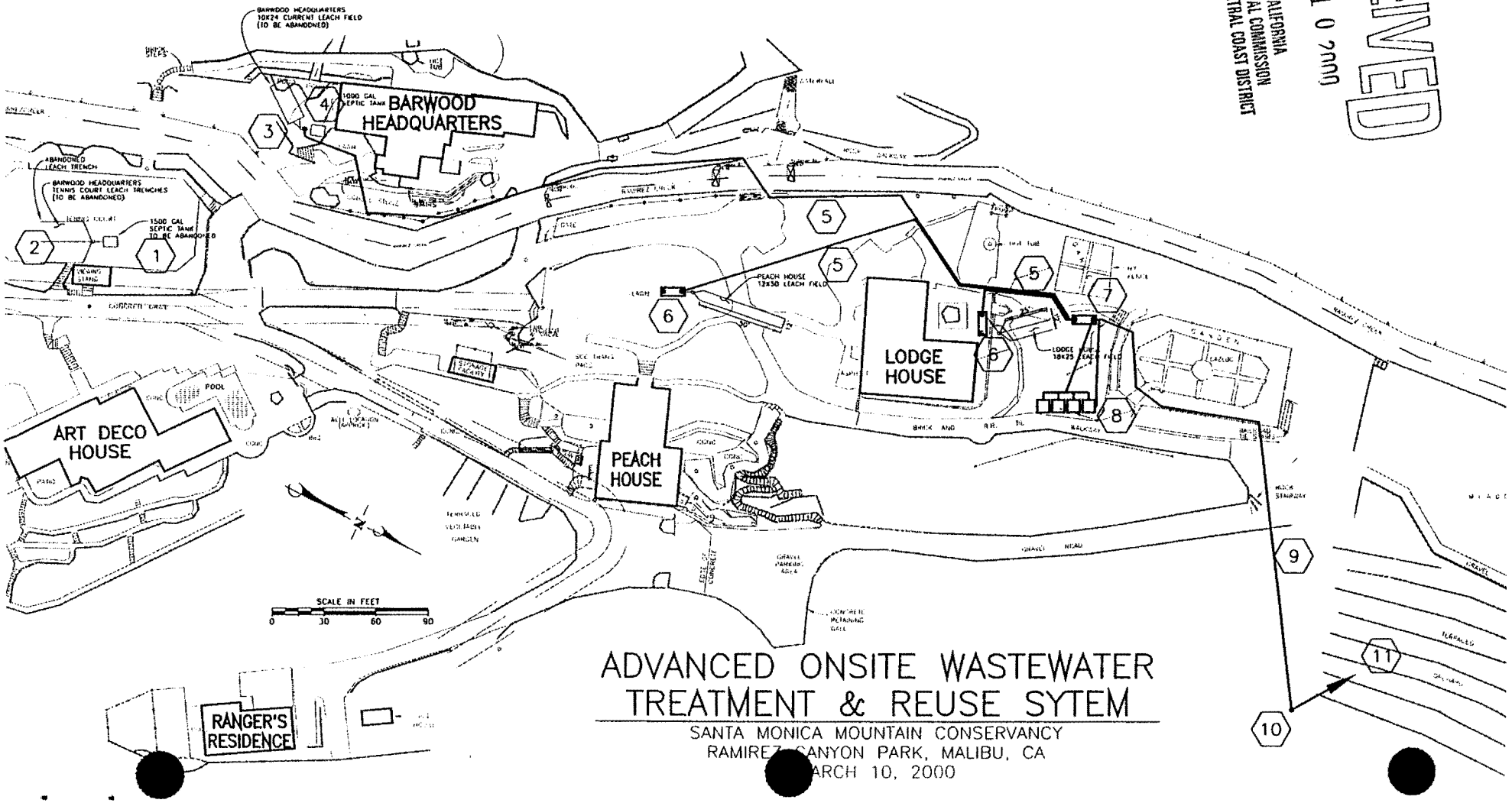
(9) SEALED PURPLE PVC EFFLUENT DOSING LINE.

(10) HYDROTEK ZONE VALVE.

(11) OUT TO ZONES IRRIGATION AREA, APPROX. 15,000 SF.

EXHIBIT NO. 6A
APPLICATION NO. 5-MNO-98-334
New Wastewater Treatment Plan

RECEIVED
MAR 10 2000
CALIFORNIA COASTAL COMMISSION SOUTH CENTRAL COAST DISTRICT



ADVANCED ONSITE WASTEWATER TREATMENT & REUSE SYTEM

SANTA MONICA MOUNTAIN CONSERVANCY
RAMIREZ CANYON PARK, MALIBU, CA
MARCH 10, 2000

SEPTIC SYSTEM ANALYSIS

RAMIREZ CANYON PARK

Santa Monica Mountains Conservancy
5810 Ramirez Canyon Road
Malibu, CA 90265

March 9, 2000

CLIENT CONTACT: Rhett Robb, Project Analyst
Mountains Recreation and Conservation Authority
Franklin Canyon Park
2600 Franklin Canyon Drive
Beverly Hills, CA 90210

PREPARED BY: Penfield & Smith
101 East Victoria Street
Santa Barbara, California 93101
(805) 963-9532

WORK ORDER NO.: 13,638.01

PROJECT ENGINEER: Bret Foster, P.E.
PROJECT MANAGER: Hady Izadpanah, P.E.

PURPOSE OF REPORT

The Santa Monica Mountains Conservancy operates facilities at Ramirez Canyon Park, in the mountains above Malibu, California. Three of the buildings, Peach House (Mediterranean), Barn (Lodge) and Barwood Headquarters have been converted from residential use to office space. These facilities are served by their own individual septic tanks and leach fields or trenches. The purpose of this report is to analyze each system, check the capacity for the proposed use and recommend upgrades to increase capacity, provide highly-treated effluent and enhance the disposal techniques in order to protect both public and environmental health.

LOCATION

The City of Malibu is located along Highway 1, near the Pacific Ocean about 15 miles west of the City of Santa Monica. Figure A indicates the general location of the community. The project site is located just north of Point Dume and Highway 1 in Ramirez Canyon, about 6 miles west of the City of Malibu. The general layout of the project site is depicted on the full size map attached to this report.

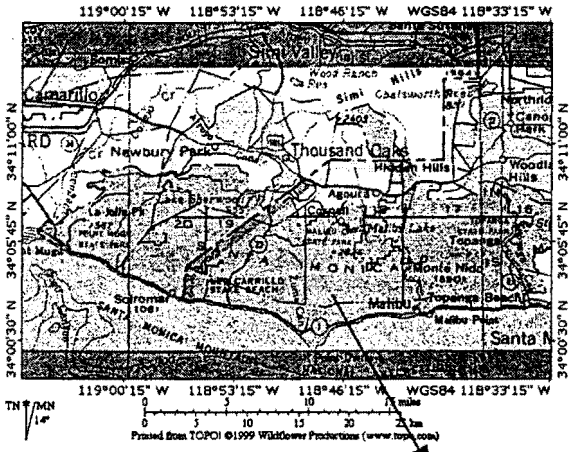


Figure A - Area Map

BASIS OF ANALYSIS

This report is based upon a site plan prepared by Aguilar Engineering, Incorporated, dated February 7, 1995. Septic tank, junction box, septic field and trench locations, and sizes were provided by Darrell A. Roy, General Engineering Contractor. This septic information was gathered during site visits in December 1999 and the results are outlined in their letter dated, December 20, 1999 (copy attached). Percolation tests were performed near the Peach house in a report by Lawrence Young, dated December 12, 1994. Due to the lack of percolation tests at Barwood and the Barn, and based on the geologic map of the Point Dume Quadrangle by Thomas Dibblee Map dated 1993 for the site soil classification, it is assumed that the tests at the Peach House are generally representative of the area. It is also assumed that the original septic systems generally conform to the guidelines set forth in the 1994 Uniform Plumbing Code (UPC). Reference is also made to the Regional Water Quality Control Board (RWQCB), Basin Plan, concerning leachfield loading rates, page IV-61.

Per UPC, a sewage flow of 20 gallons per day per person has been used for occupants and staff. It is assumed that these facilities will be used during the day only. The number and type of plumbing fixtures for each building were provided by the Owner and the fixture units were calculated using the UPC. When special events or activities occur that would exceed the maximum capacity of the system, the Owner plans to provide portable toilets.

PEACH HOUSE

The septic system was originally sized based upon a one-bedroom residence. The building has been converted to offices. The size of the septic tank is 1,250 gallons. (Please note that this number differs from Darrell Roy's report. In a telephone conversation on December 27, Darrell indicated the tank was manufactured by M. C. Nottingham and the capacity is 1,250 gallons.) The existing plumbing facilities are as follows:

4 Toilets	(at 6 FU per toilet = 24FU)
5 Sinks	(at 2 FU per sink = 10FU)
4 Showers	(at 2 FU per shower = 8FU)
1 Tub	(at 2 FU per tub = 2FU)
2 Kit. Sinks	(at 2 FU per sink = 4FU)
2 Dish Washers	(at 2 FU per washer = 4FU)
1 Laundry Room	(at 2 FU per washer = 2FU)
1 Wet Bar	(at 1 FU per sink = 1FU)

Total Fixture Units = 55

This building will be utilized for special conferences with up to 50 people. The required size of the septic tank is as follows:

Peak Flow = 50 people x 20 gpd = 1000 gpd
Septic Tank Size (per UPC)= 1000 x 1.5 = 1,500 gallons **Use: 2,000-gallon Tank**
The existing septic tank shall be removed and replaced with a 2,000-gallon tank.

For this facility to be in compliance with the current UPC for a 2,000-gallon tank, a total of 10 fixture units need to be kept from discharging into the system. The Owner is expected to make recommendations as to which fixtures should be disconnected from the system.

The septic tank will provide primary treatment of the wastewater. Refer to Exhibit "A" (Onsite Wastewater Treatment System Upgrade) for the proposed secondary treatment, filtering and disposal of the effluent for reuse in subsurface landscape irrigation.

The existing leachfield consists of a 50 feet long by 12 feet wide (600 square feet) leach bed with two leach pipes at 6 feet apart. This field is in good condition and as described in Exhibit "A" shall remain in place and act as an overflow during emergency power outages.

BARN (Lodge)

The septic system was originally sized based upon a three-bedroom residence. The building has been converted to offices. The size of the septic tank is 1,000 gallons. The existing plumbing facilities are as follows:

3 Toilets	(at 6 FU per toilet = 18FU)
3 Sinks	(at 2 FU per sink = 6FU)
2 Showers	(at 2 FU per shower = 4FU)
1 Kit. Sink	(at 2 FU per sink = 2FU)
1 Dish Washers	(at 2 FU per washer = 2FU)

Total Fixture Units = 32

This building will be utilized for special events and visitors with up to 50 people. The required size of septic tank is as follows:

Peak Flow = 50 people x 20 gpd = 1000 gpd
Septic Tank Size (per UPC)= 1000 x 1.5 = 1,500 gallons **Use: 2,000-gallon Tank**
The existing septic tank shall be removed and replaced with a 2,000-gallon tank.
No. of allowable fixture units for 2,000-gallon tank = 45 FU > 32 FU OK

The septic tank will provide primary treatment of the wastewater. Refer to Exhibit "A" (Onsite Wastewater Treatment System Upgrade) for the proposed secondary treatment, filtering and disposal of the effluent for reuse in subsurface landscape irrigation.

The existing leachfield consists of a leach bed, 25 feet long by 18 feet wide (450 square feet) with three leach pipes, 6 feet apart. This field is also in good condition and as described in Exhibit "A" shall remain in place and act as an overflow during emergency power outage.

BARWOOD HEADQUARTERS

The septic system was originally sized based upon a three-bedroom residence. The building has been converted to offices. This facility has two separate septic systems. The one that is currently in use is located near the building and consists of a 1,000-gallon septic tank with a 10 feet by 24 feet leach bed (see the Site Plan attached to this report). As investigated by Darrell Roy, the Contractor, the system is in good working condition, however it does not meet the 50 foot setback requirements from the Creek, as set forth by the UPC. This system will need to be abandoned.

The other system is located under the existing tennis court and consists of a 1,500-gallon septic tank and three trenches, 12 feet apart. As indicated in the report by Darrell Roy, the septic tank is in good working condition structurally. However, the disposal area has been evaluated recently and contains collapsed leach pipes and is not usable. Based on these findings, the system under the tennis court shall be completely abandoned per UPC requirements. The current leachfield near the building will also be abandoned properly. The current 1,000-gallon septic tank, as described in Exhibit "A", will be pumped, cleaned and sealed to insure water-tightness. A transfer pump basin with a capacity of 500 gallons shall be constructed adjacent to the septic tank.

The building shall be utilized by a maximum of 8 staff. For a 1,000-gallon septic tank and 500-gallon pump basin, the UPC allows a maximum of 33 fixture units (FU). The existing plumbing facilities are as follows:

5 Toilets	(at 6 FU per toilet = 30FU)
5 Sinks	(at 2 FU per sink = 10FU)
3 Showers	(at 2 FU per shower = 6FU)
1 Kit. Sink	(at 2 FU per sink = 2FU)
1 Dish Washers	(at 2 FU per washer = 2FU)
1 Laundry Room	(at 2 FU per washer = 2FU)

Total Fixture Units = 52

For this facility to be in compliance with the current UPC, a total of 19 fixture units need to be kept from discharging into the system. The Owner is expected to make recommendations as to which fixtures should be disconnected from the system.

DISPOSAL SYSTEM

As outlined in Exhibit "A", the effluent from all three buildings will be transferred, with a pump or by gravity, to a proposed centrally located 2,000-gallon recirculation and irrigation tank which will collect and recirculate the treated effluent from the septic tanks through a textile filter array to achieve secondary treatment. Then, the highly treated effluent will be pumped-dosed to a terraced orchard area onsite for subsurface irrigation.

Total Peak Flow = Peach (50 x 20) + Lodge (50 x 20) + Barwood (8 x 20) = 2,160 gpd
Required area for subsurface Irrigation @ 0.25 gpd/s.f. = 2,160 / 0.25 = 8,640 Sq. Feet
Available area at terraced orchard = 15,000 Sq. Feet > 8,640 Sq. Feet OK

CONSTRUCTION ACTIVITIES

The overall construction activities for the proposed wastewater treatment and disposal upgrade shall be conducted in a way to minimize the impact at the site and the environment. Light-weighted materials such as fiberglass and PVC tanks shall be used to avoid using big trucks and equipment for installation. The trench excavation for the transfer lines, from septic tanks to the recirculating tank and terraced orchard area, will be done by hand to maneuver around trees, landscaped areas and brick walkways as much as possible and to minimize the impact. The transfer pipes will be 1 1/2" in diameter. The trench for the pipes will be approximately 4" wide and maximum 18" deep. The system will be designed so that the pipes share trenches as much as possible (see attached preliminary plan.) The irrigation lines at the orchard area will be from 1" to 2" in diameter. The trench will be 4" wide and 6" deep.

Barwood Headquarters

The construction at this location shall include 2 to 3 feet of excavation at the inlet and outlet of existing septic tank in order to replace the inlet and outlet tees with watertight flexible grommets and then backfill to original grade. A PVC watertight effluent pump basin, 3' in diameter and 8' deep, shall be installed adjacent to the existing septic tank. The excavation work for the septic tank repair and the pump basin shall be done either by hand or by small backhoe depending on the access. The basin shall be backfilled

with the excavated dirt on site. The trench for the transfer line from the pump basin to the recirculating tank shall be constructed as described above.

Peach House

The construction at this location shall include demolishing and removing the existing septic tank and installing a new 2,000-gallon fiberglass tank. There will be minimum excavation at this site since the new tank will replace the existing tank at the same location. The transfer pump for this system will be placed inside the septic tank and therefore no additional excavation is needed. The trench for the transfer line from the pump at the septic tank to the recirculating tank shall be constructed as described above.

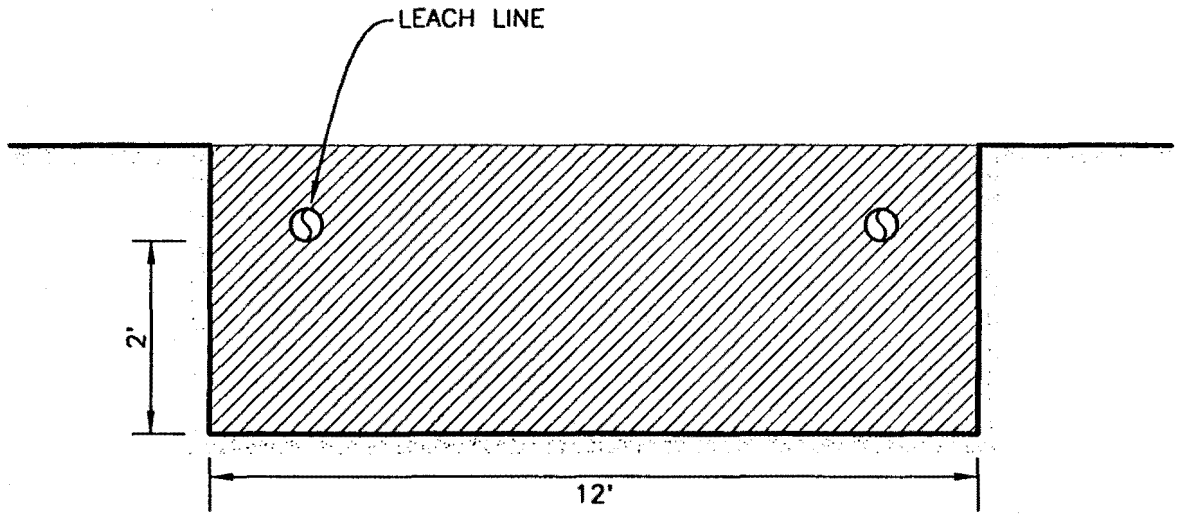
Barn (Lodge House)

The construction at this location shall also include demolishing and removing the existing septic tank and installing a new 2,000-gallon fiberglass septic tank. There will be minimum excavation at this site since the new tank will replace the existing tank at the same location. The effluent from the tank will drain to the recirculating tank by gravity and therefore, a transfer pump is not required. The trench for the gravity line from the septic tank to the recirculating tank shall be constructed as described above.

The recirculating tank with the pump vault insert and the textile filter modules will be located near the Lodge House as shown on the attached plan. The tank shall require an excavation pit of 17' long x 5' deep x 6' wide. The filters will require a pit of 13' long x 4' deep x 4' wide. The excavation shall be performed either by hand or by a small backhoe. The excavated material, approximately 27 cubic yards, could be spread around the area for disposal. The selected area contains minimum landscaping and it is an ideal site for the collection and treatment facilities due to its centralized location between the septic systems and distribution lines at the orchard area.

- END OF REPORT -

EXISTING SEPTIC SYSTEM EXHIBIT



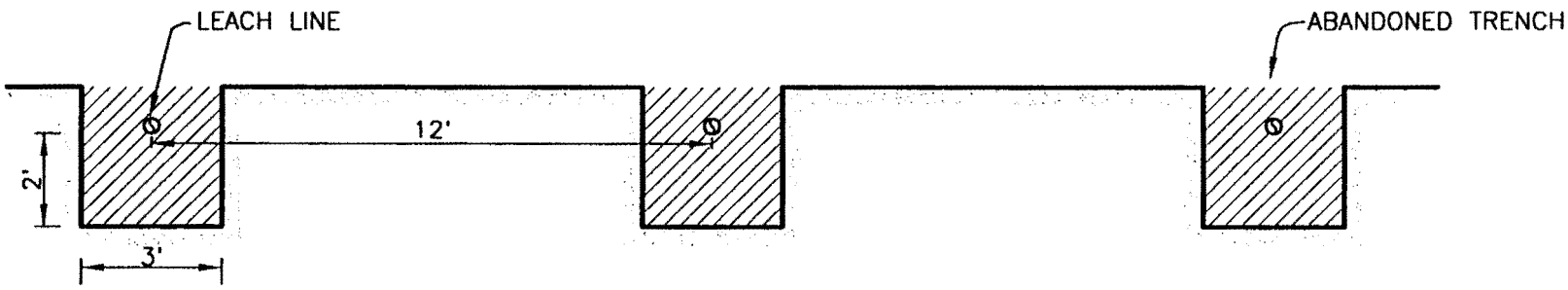
FIELD LENGTH = 50'
ABSORPTION AREA = 12'X50' = 600 SF

LEACH FIELD
PEACH HOUSE

MOUNTAIN CONSERVANCY

Penfield & Smith
ENGINEERS • SURVEYORS

13638.01 13638LEACH.DWG NOT TO SCALE



TRENCH LENGTH = 25'
ABSORPTION AREA = 2'X25'X5' = 250 SF

LEACH TRENCHES
BARWOOD HEADQUARTERS

MOUNTAIN CONSERVANCY

Penfield & Smith
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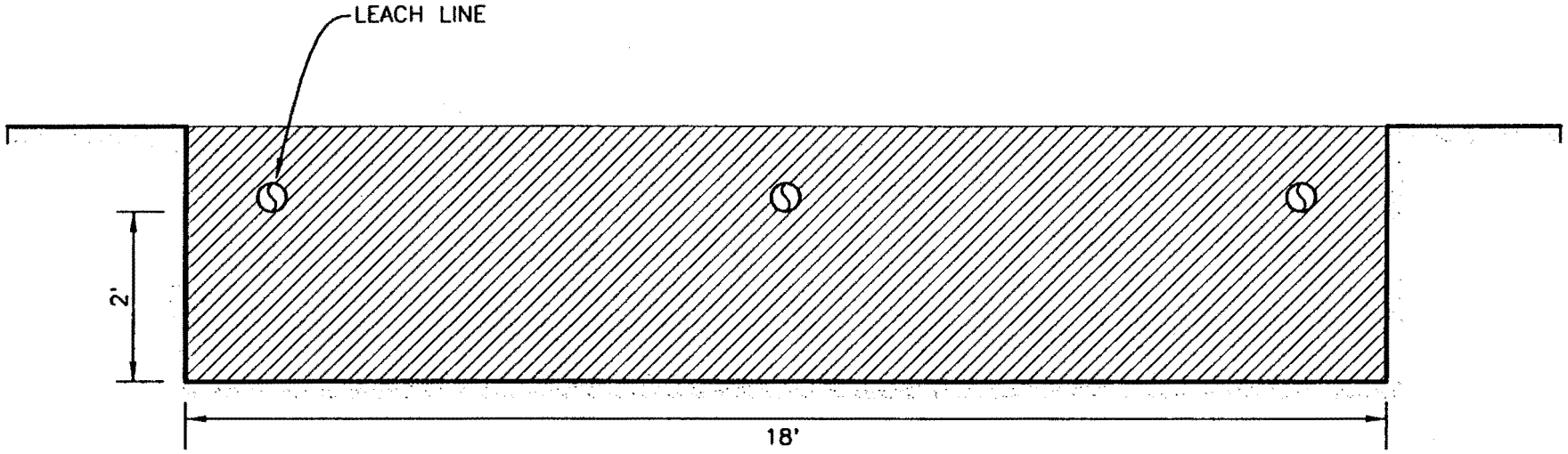
13638.01 13638LEACH.DWG NOT TO SCALE



FIELD LENGTH = 25'
ABSORPTION AREA = 18'X25' = 450 SF

LEACH FIELD
LODGE HOUSE

MOUNTAIN CONSERVANCY

Penfield & Smith
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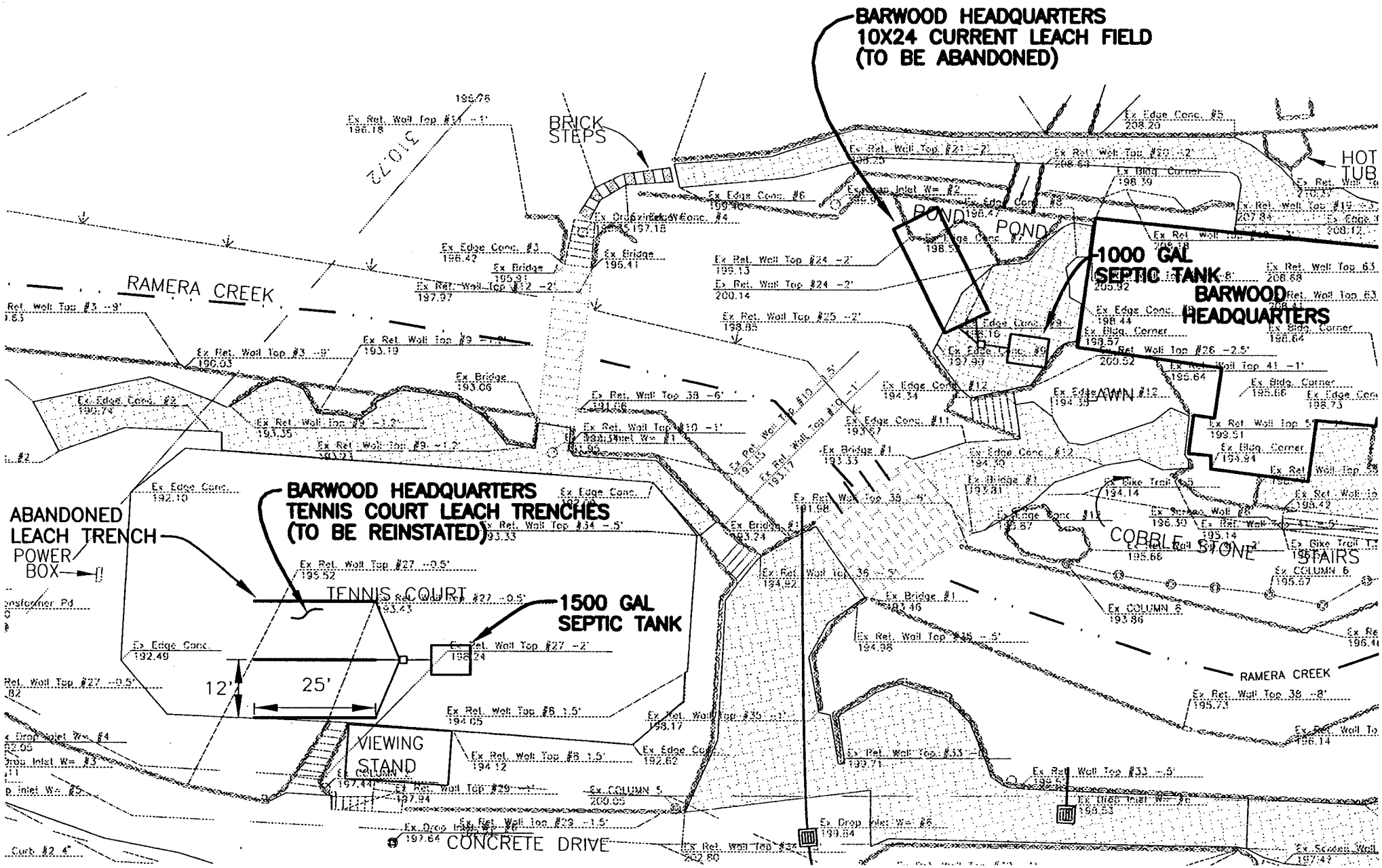
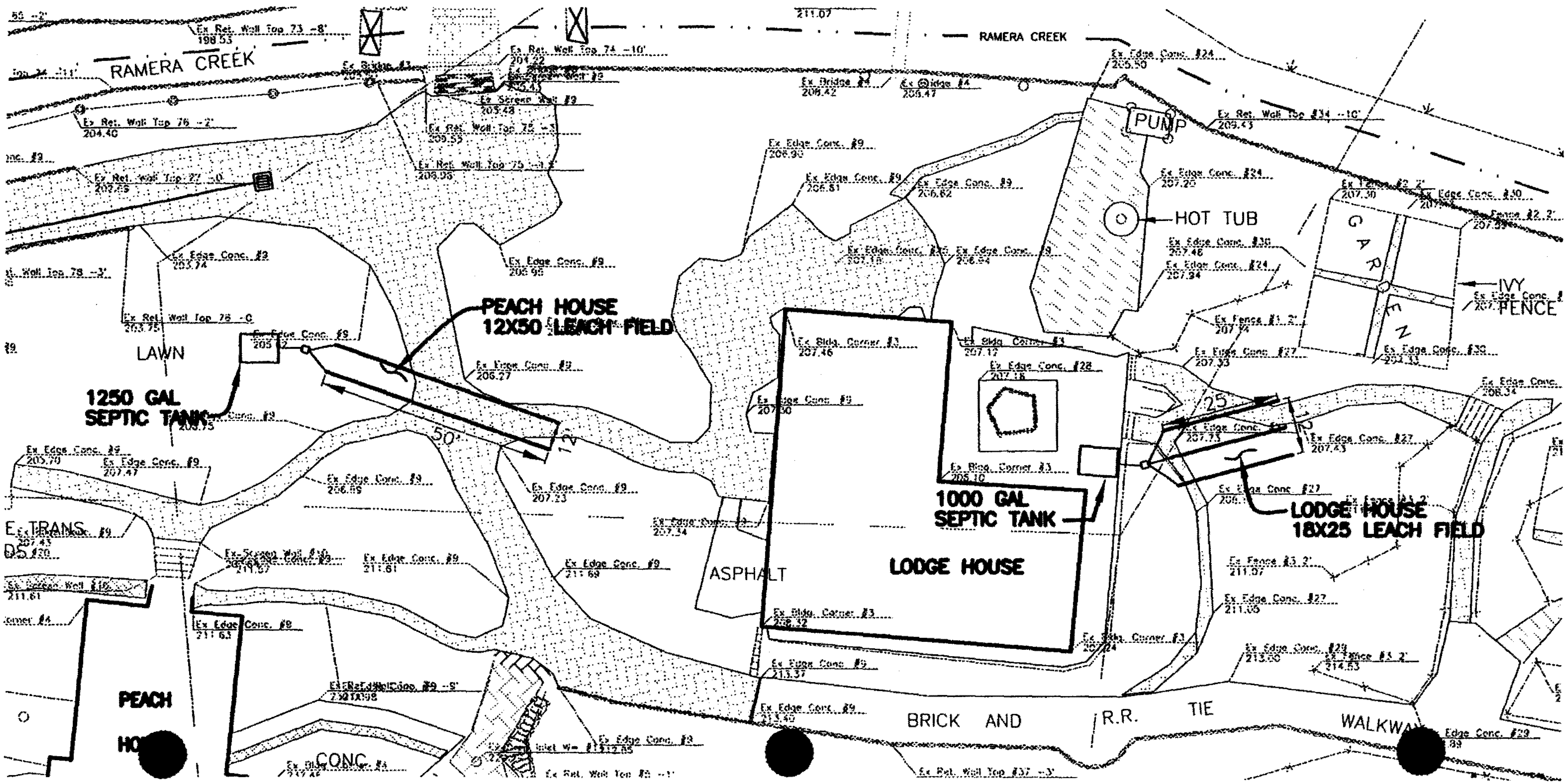
13638.01 13638LEACH.DWG NOT TO SCALE


BARWOOD HEADQUARTERS
10X24 CURRENT LEACH FIELD
(TO BE ABANDONED)
BRICK STEPS
HOT TUB
POND
POND
1000 GAL SEPTIC TANK
BARWOOD HEADQUARTERS
RAMERA CREEK
ABANDONED LEACH TRENCH
POWER BOX
BARWOOD HEADQUARTERS
TENNIS COURT LEACH TRENCHES
(TO BE REINSTATED)
TENNIS COURT
1500 GAL SEPTIC TANK
12'
25'
VIEWING STAND
CONCRETE DRIVE
LAWN
COBBLE STONE
STAIRS
RAMERA CREEK



RAMERA CREEK
RAMERA CREEK
PUMP
HOT TUB
GARDEN
IVY
FENCE
PEACH HOUSE
12X50 LEACH FIELD
1250 GAL
SEPTIC TANK
LAWN
50'
12
1000 GAL
SEPTIC TANK
LODGE HOUSE
ASPHALT
25
LODGE HOUSE
18X25 LEACH FIELD
BRICK AND R.R. TIE WALKWAY
CONC
PEACH

ATTACHMENTS

Lawrence Young
Registered Environmental Health Specialist *Cal. Reg. #3738*
P.O. Box 973 • Malibu, California 90265 (310) 392-2011
(818) 883-8585

December 12, 1994

Ruth Kilday
Streisand Center for Conservancy Studies
5750 Ramirez Canyon Rd.
Malibu, CA 90265

Project: **Peach House and Barn,**
5750 Ramirez Canyon Rd.,
Malibu, CA 90265

Dear Ms. Kilday:

At your request, I conducted a subsurface soil percolation test for a leach trench/drainfield type private sewage disposal system on July 26, and July 27, 1994 in two (2) test holes previously excavated on subject property.

The cubic foot test holes were presoaked on July 26, 1994, and refilled for testing on July 27, 1994. The following percolation rates were established as a result of this test:

Test Hole #1..... 30 minutes/inch
Test Hole #2..... 17 minutes/inch

Please note that this report relates only to the minimum requirements of the Uniform Plumbing Code, and does not include an evaluation of any geological conditions, or other potential problems, which may require an alternative method of wastewater disposal.

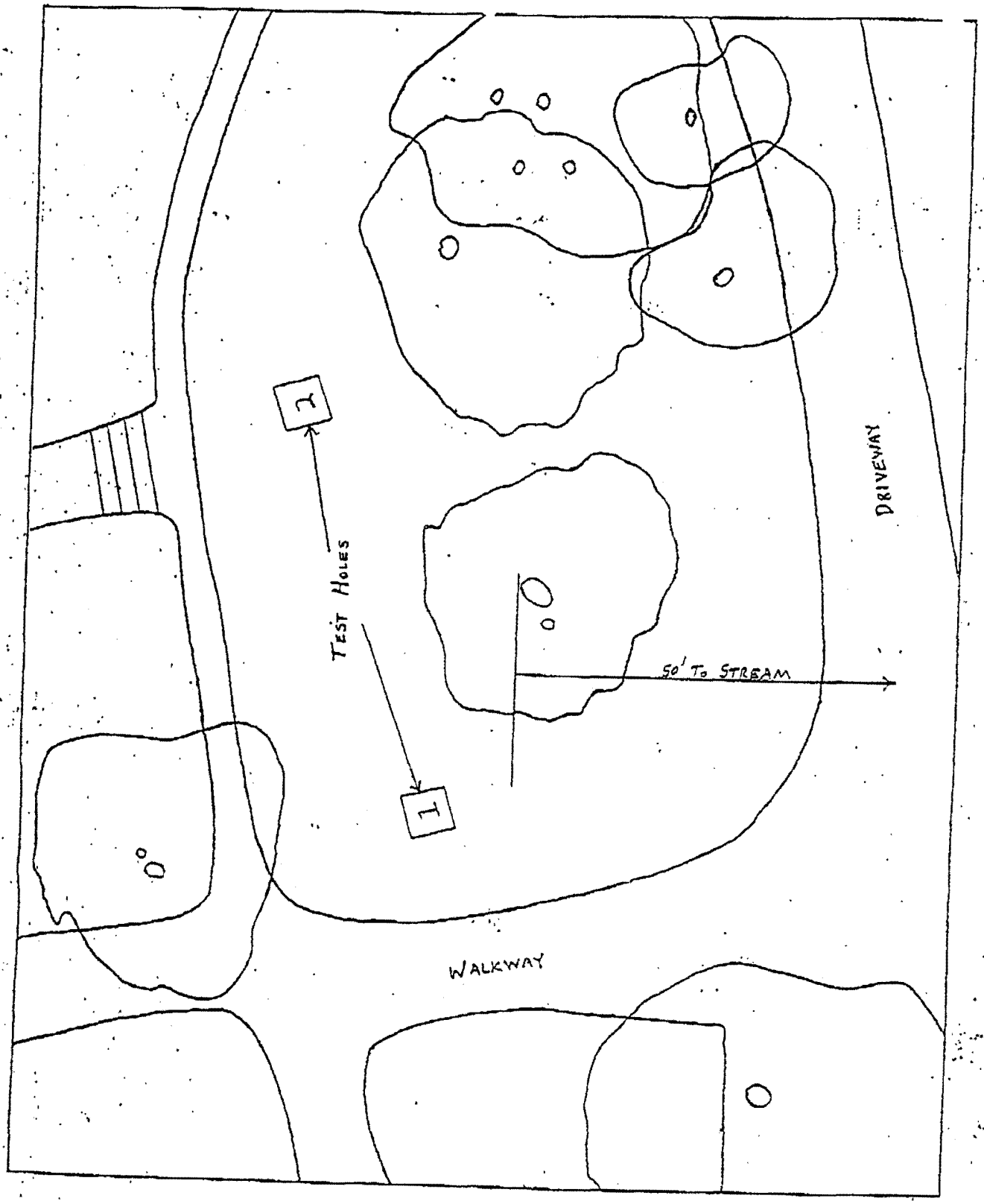
Thank you for this opportunity to be of service. If you have any questions regarding this report, please contact me at your earliest convenience.

Sincerely,

L Young

Lawrence Young

cc:file


2
TEST HOLES
1
DRIVEWAY
50' TO STREAM
WALKWAY

DARRELL A. ROY
GENERAL ENGINEERING CONTRACTOR
Ca. State License # 651852
P.O.Box 2615
Camarillo, Ca. 93011
805 389-1860

D.J.

December 20, 1999

Re: 5810 Ramirez Cyn. Rd.

To Whom It May Concern:

A visual inspection of four private sewage disposal system located on the subject property were performed. The systems were electronically located and exposed. The layout of the systems are plotted on a site plan provided by the Mountains Conservancy.

The Mediterranean house system consists of one ~~1200~~ 1250 gallon septic tank and one 600 square foot leachfield. The septic system is in good working condition. The septic tank and leachfield installation exceed the 50' setback requirement from the creek.

The barn system consists of one 1000 gallon septic tank and one 450 square foot leachfield. The septic system is in good working condition. The septic tank and leachfield exceed the 50' setback requirement from the creek.

The barwood building system consists of one 1000 gallon septic tank and one 250 square foot leachfield. The septic system is in good working condition. The septic tank and leachfield do not meet the setback requirement from the creek.

An additional septic system was located in the tennis court adjacent to the barwood building. The system in the tennis court consists of one 1500 gallon septic tank and three leachlines. The septic system is in good working condition. The septic tank and two of the leachlines exceed the 50' setback requirement from the creek.

Please contact this office with any questions regarding this letter.

Sincerely,

Darrell A. Roy

Santa Monica Mountains Conservancy
SOOKY GOLDMAN NATURE CENTER
FRANKLIN CANYON PARK
2600 FRANKLIN CANYON
BEVERLY HILLS, CA 90210
(310) 858-7272
(310) 858-7212 FAX

FAX TRANSMITTAL SHEET

Date: 12.14.99

To: HADY IZADPANAH

Fax#: 805-966-9801

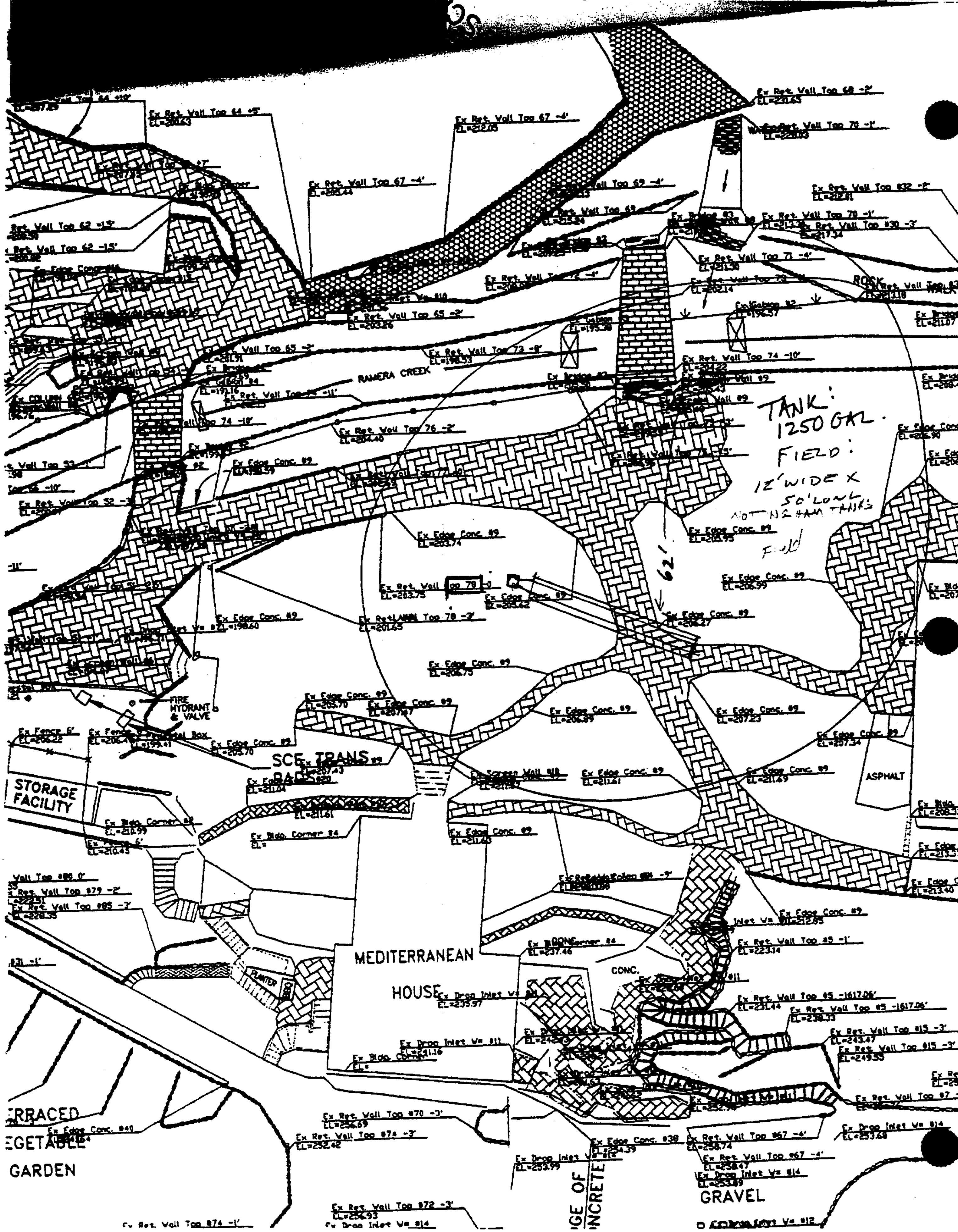
From: LISA SOGHOR

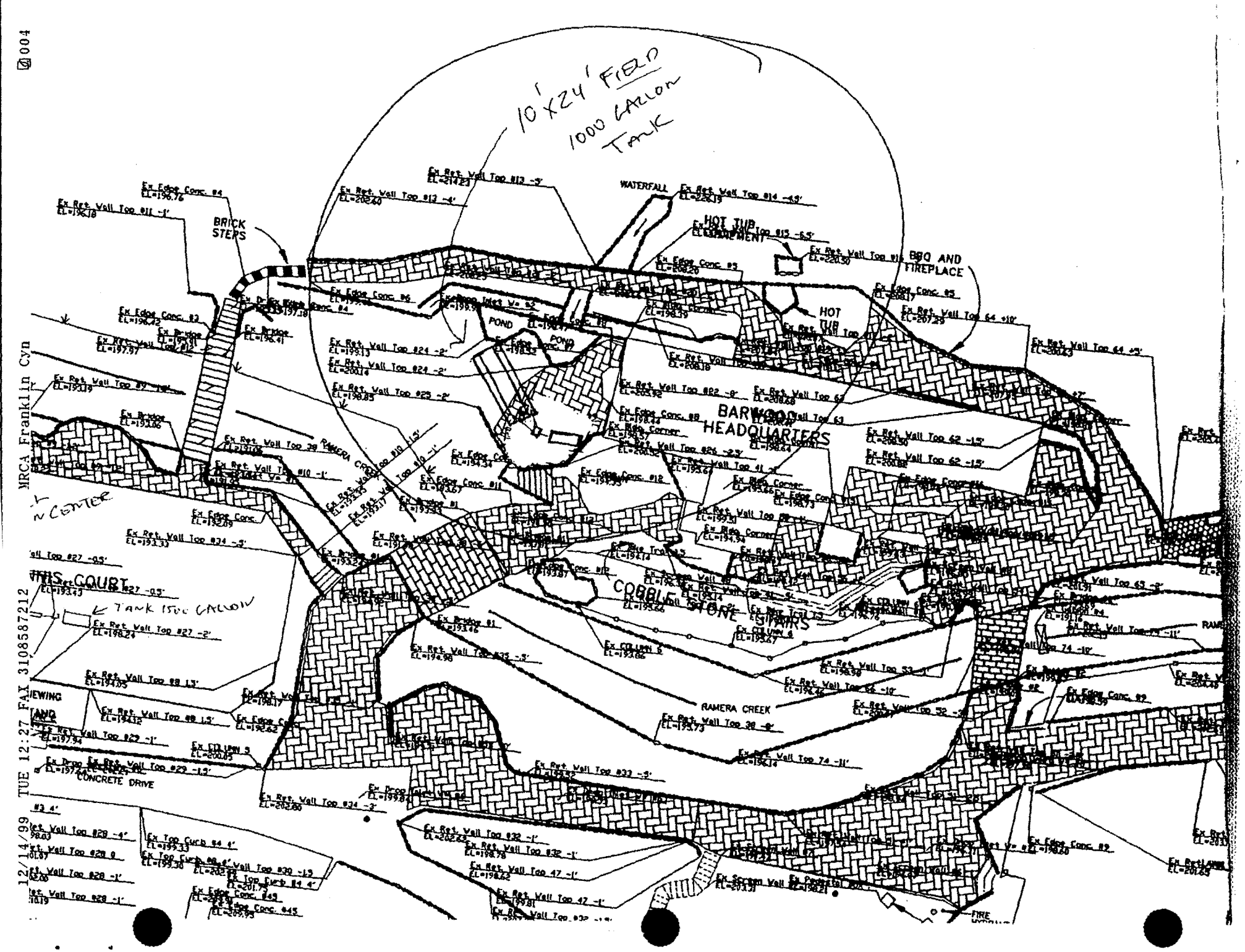
Re: SEPTIC LAYOUT

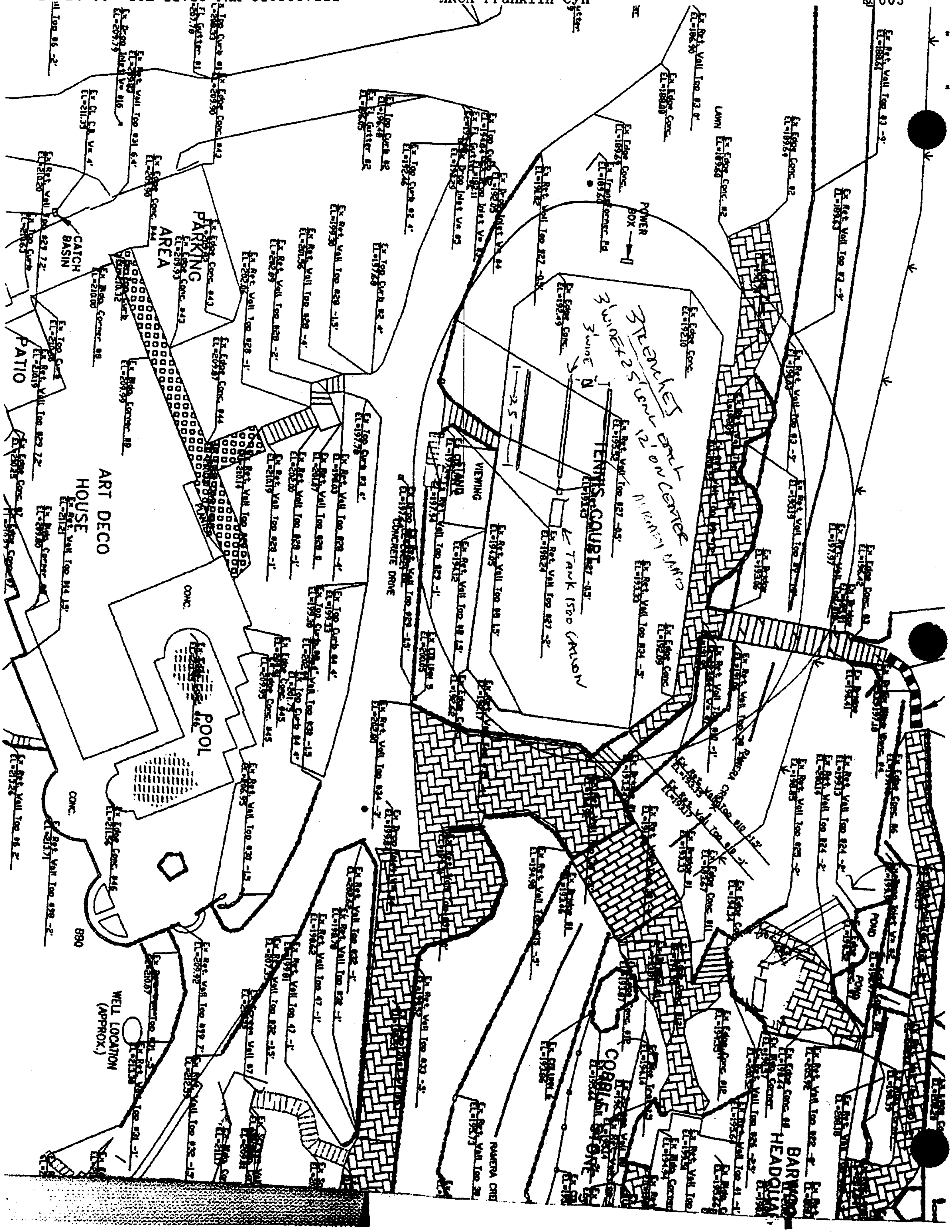
Number of pages to follow: 4

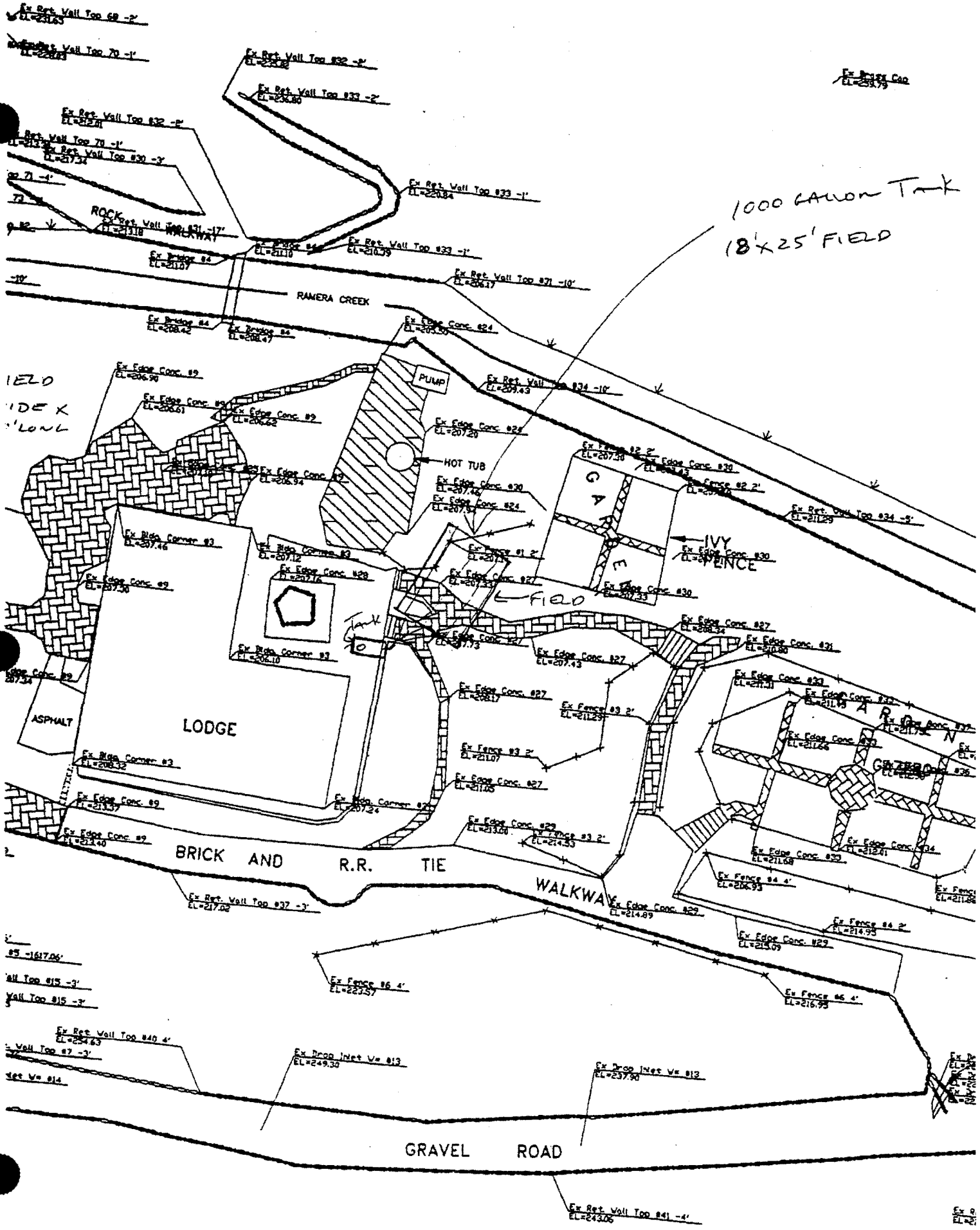
In case of error, please call: 310 858-7272 x 108

COMMENTS:


RAMERA CREEK
TANK:
1250 GAL.
FIELD:
12' WIDE X
50' LONG
62'
FIRE HYDRANT & VALVE
SCE TRANS PAD
STORAGE FACILITY
ASPHALT
MEDITERRANEAN HOUSE
CONC.
PLANTER
TERRACED VEGETABLE GARDEN
GRAVEL
ROCK


10' X 24' FIELD
1000 GALLON
TANK
WATERFALL
HOT TUB
BRICK
STEPS
BBQ AND
FIREPLACE
HOT
TUB
POND
BARWOOD
HEADQUARTERS
RAMERA CREEK
COBBLE STONE STAIRS
CONCRETE DRIVE
FIRE


PARKING AREA
CATCH BASIN
PATIO
ART DECO HOUSE
POOL
CONC.
BBQ
WELL LOCATION (APPROX.)
TENNIS COURT
POWER BOX
VIEWING
CONCRETE DRIVE
LAWN
POND


1000 GALLON TANK
18'x25' FIELD
RAMERA CREEK
ROCK WALKWAY
PUMP
HOT TUB
GAME
IVY
FENCE
FIELD
LODGE
ASPHALT
BRICK AND R.R. TIE WALKWAY
GRAVEL ROAD

VIII.D.3.a. SITE SUITABILITY

Prior to permit approval, site investigation should determine on-site system suitability:

1. At least one soil boring or excavation per on-site system should be performed to determine soil suitability, depth to ground water, and depth to bedrock or impervious layer. Soil borings are particularly important for seepage pits. Impervious material is defined as having a percolation rate slower than 120 minutes per inch or having a clay content 60 percent or greater. The soil boring or excavation should extend at least 10 feet below the drainfield[1] bottom at each proposed location.

2. An excavation should be made to detect mottling or presence of underground channels, fissures, or cracks. Soils should be excavated to a depth of 4-5 feet below drainfield bottom.

3. For leachfields, at least three percolation test locations should be used to determine system acceptability. Tests should be performed at proposed subsurface disposal system sites and depths.

4. If no restrictive layers intersect, and geologic conditions permit surfacing, the setback distance from a cut, embankment, or steep slope (greater than 30 percent) should be determined by projecting a line 20 percent downgradient fromthe sidewall at the highest perforation of the discharge pipe. The leachfields should be set-back far enough to prevent this projected line from intersecting the cut within 100 feet, measured horizontally, of the sidewall. If restrictive layers intersect cuts, embankments or steep slopes, and geologic conditions permit surfacing, the setback should be at least 100 feet measured from the top of the cut.

5. Natural ground slope of the disposal area should not exceed 20 percent.

6. For new land divisions, lot sizes less than one acre should not be permitted.

VIII.D.3.b. SYSTEM DESIGN

On-site systems should be designed according to the following recommendations:

1. Septic tanks should be designed to remove nearly 100 percent of settleable solids and should provide a high degree of anaerobic decomposition of colloidal and soluble organic solids.

2. Tank design must allow access for inspection and cleaning. The septic tank must be accessible for pumping.

3. If curtain drains discharge diverted ground water to subsurface soils, the upslope separation from a leachfield or pit should be 20 feet and the downslope separation should be 50 feet.

4. Leachfield application rate should not exceed the following:

Percolation Rate min./in	Loading Rate g.p.d./sq.ft.
1 - 20	0.8
21 - 30	0.6
31 - 60	0.25
61 - 120	0.10

5. Seepage pit application rate should not exceed 0.3 gpd/sq. ft.

6. Drainfield[1] design should be based only upon usable permeable soil layers.

7. The minimum design flow rate should be 375 gallons per day per dwelling unit.

8. In clayey soils, systems should be constructed to place infiltrative surfaces in more permeable horizons.

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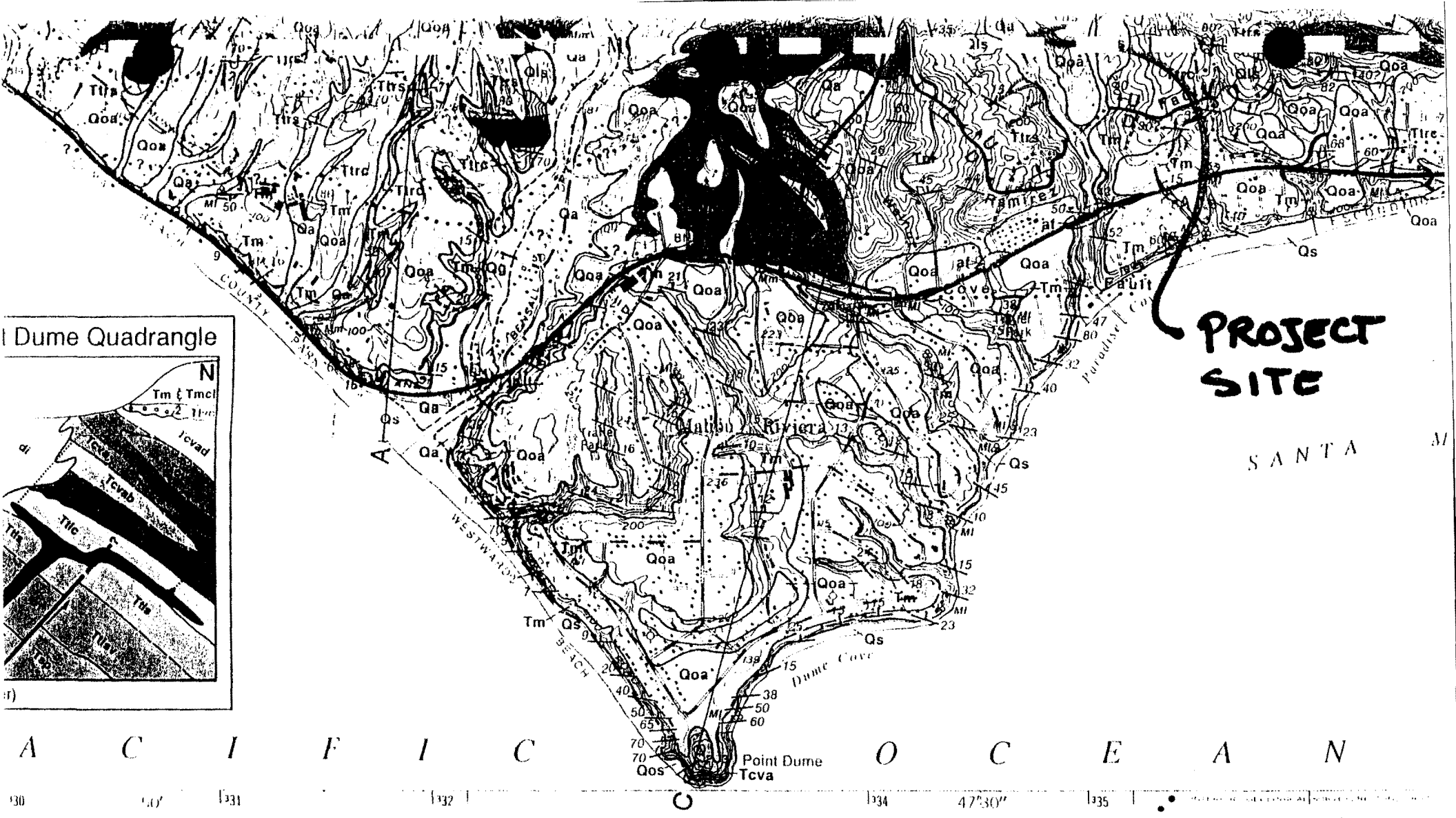
[1] "Drainfield" refers to either a leachfield or seepage pit.



GEOLOGIC MAP OF THE
POINT DUME QUADRANGLE
LOS ANGELES AND VENTURA COUNTIES, CALIFORNIA

BY THOMAS W. DIBBLEE, JR.,
AND HELMUT E. EHRENSPECK 1993

SCALE

1000 0 1000 2000

CONTOUR IN
NATIONAL GEODETIC
SHORELINE SHOWN REPRESENTS THE

ACKNOWLEDGMENTS FOR THE POINT
Executive Committee: *Arthur O. Spaulding, P*
William E. Kennett, Vice President; John R. Pos

EXHIBIT A

PROPOSED ON-SITE WASTEWATER TREATMENT SYSTEM UPGRADE

Bill Wilson~Environmental Planning & Design
PO Box 2958 Beverly Hills, California 90213
Phone/Fax (310) 207-0352

**ONSITE WASTEWATER TREATMENT SYSTEM UPGRADE,
RAMIREZ CANYON PARK
SANTA MONICA MOUNTAINS CONSERVANCY**

I. SYSTEM GOALS AND BENEFITS

Following is a brief description of the proposed system for upgrading the existing arrangement of individual septic systems and providing highly treated recycled water for reuse in subsurface landscape irrigation at the Ramirez Canyon Park, Santa Monica Mountains Conservancy Center. The augmented system will provide the benefits listed below:

1. All components of the wastewater handling system will be water-tight, eliminating the incidental leakage of wastewater into adjacent soils and the formation of plumes that may short-circuit to groundwater or the drainage without sufficient retention time or treatment.

2. All components of the wastewater treatment system will be readily accessible for maintenance and monitoring.

3. All septic tanks will be equipped with effluent filters, insuring the retention of solids and significantly improving the quality of the septic tank effluent prior to advanced treatment.

4. Treatment will be upgraded from simple primary levels attained with conventional septic tanks to advanced secondary levels through the use of the AdvanTex aerobic fixed media filter, described below and in the accompanying specifications.

5. Conventional plug-flow leach fields will be reserved for rare overflow conditions should they occur, such as during power outages. Instead, intermittent pressure dosed subsurface laterals will make the highly treated clear effluent available to the root zone of landscape plants for final complete polishing and uptake. The frequent micro-dosing will eliminate the formation of a clogging mat and failure of the leach field, a common problem with conventional disposal-type leach fields.

6. Both the water and nutrient resources embodied in the treated effluent will be recovered and reused rather than discharged to the environment. The irrigation rate will be regulated to be below the daily evapotranspiration rate, even during rainfall.

II. SYSTEM UPGRADE COMPONENTS AND DESCRIPTION

The proposed improvements to the existing collection of septic systems consist of the following, organized by building:

1. The Barwoood House:

   Two separate septic systems are in place to serve this unit, which acts as the administrative office of the Center. The first system was installed under the tennis court on the other side of the creek from the building. This system has been excavated and evaluated, and contains a collapsed leach field under the tennis courts, and has been previously abandoned. It will now be demolished according to the UPC, with the tank filled with backfill.

   The second system, which is currently in use, consists of an approximately 1000 gallon concrete septic tank immediately adjacent to the building, as shown on the plot plans. The tank is to be excavated to below the inlet and outlet openings and lid seam, pumped, cleaned, and sealed with a hydraulic cement sealant especially designed for this purpose. The inlet and outlet tees will be repaired and replaced, with flexible grommets fitted to the openings to insure water-tightness. An effluent filter will be installed in the outlet tee. Sealed risers will be bonded to the access ports in the top of the tank, extending to the surface, and odor and water-tight bolt-down gasketed lids will be installed prior to backfilling. Thus the tank will be made easily accessible for inspection and service, will be completely water-tight, and will produce a filtered, clear effluent.

   An Orenco effluent pump basin is to be installed adjacent to the rehabilitated tank, containing an effluent transfer pump, splice box, discharge assembly, an additional effluent filter, and float control switches. The effluent pump will transfer the clear effluent that it receives from the septic tank via an effluent transfer line to the new recirculation and irrigation tank that is to be installed on the east side of the creek, at the location just north of the Lodge building, as shown on the accompanying plot plan. The transfer line will consist of sealed purple PVC pipe buried below grade. The line crossing the creek will be attached to the bridge that links the Barwood building to the Peach building, and encased in a steel pipe sleeve. A control panel will be installed on the building side.

2. The Peach House

The existing septic system at the Peach House consists of a concrete tank and conventional buried leach bed. The septic tank is to be demolished and replace with a water-tight traffic-rated fiberglass tank that meets all UPC rating specifications, manufactured by Fiber Enterprises in Redding, California. The capacity of the tank is to be 2000 gallons, providing 2 days retention time under peak conditions and considerable longer retention times under normal use.

The new fiberglass tank will be equipped with sealed risers to the ground surface at each access port and gasketed, bolt-down lids. The PVC corrugated storm-pipe risers will be epoxy bonded to the top of the tank via a manufacturer-installed adapter collar, making the tank completely water-tight. The inlet and outlet ports will include manufacturer-installed flexible grommets, protecting the tank inlet and outlet pipes from damage during settling or seismic movement. An effluent filter will be installed in the outlet tee.

An Orenco pump vault will be inserted into the distal end of the new tank via the access riser. The pump vault insert will contain an effluent filter, splice box, discharge assembly, pump, and float control switches. The control panel will be located nearby, in a convenient location on the building exterior.

The pump will transfer clarified effluent to the new recirculation and irrigation dosing tank located to the north of the Lodge House. The existing conventional leach bed can be left in place and act as an overflow for clarified effluent during emergencies and power outages. The long periods of rest between uses should restore the capacity of this leach bed, should it ever be necessary to discharge water to it in the future.

3. The Lodge House

The existing system at the Lodge House consists of a concrete septic tank and conventional leach bed. The tank is to be abandoned and replaced with a Fiber Enterprises 2000 gallon septic tank, equipped in a manner similar to that described above in connection with the Peach House. The existing leach field can also be left dormant, to be used if necessary during a prolonged power outage.

4. The Recirculation and Irrigation

   A Fiber Enterprises 2000 gallon capacity underground storage tank is to be buried in the area to the north of the Lodge House, as indicated on the plot plan. This tank will serve two purposes. It will collect the clarified, filtered effluent from the three upgraded systems at the Barwood House, the Peach House, and the Lodge House and recirculate the water over an array of advanced treatment modules located adjacent to the tank site; and it will provide pump-dosed irrigation water to the irrigation zones that will be installed in the terraced orchard to the east of the tank location.

5. The Recirculating AdvanTex Textile Filter Array

   Advanced treatment of the clarified effluent is to be attained via recirculation of intermittent sprays over racks of geotextile material hanging inside fiberglass containments. Specifications of the modules have been provided. The geotextile supports the growth of nitrifying and other types of bacteria and aerobic and anaerobic micro-sites that have been shown to be effective high-rate polishers of clarified effluent. Coliform levels are also greatly reduced via attenuation and predation.

   Effluent to be treated to advanced levels is intermittently dosed over the racks of hanging geotextile, where it forms micro-films and coats the fibers until the next dose. After moving through the fibers and interacting physically and biologically, the reacted water re-collects in the pan of the sealed module and drains back to the dosing tank.

   Nitrification and denitrification take place in the textile filters via micro-sites within the material that exchange biological processes. Further denitrification takes place when nitrified recirculated water drains back to the dosing tank, which still contains some residual biochemical oxygen demand (BOD). Use of the AdvanTex filter will result in a final recycled water with BOD, suspended solids (SS), and nitrate, generally from non-detectable limits to very low levels in the 2-5ppm range.

6. The Intermittent Pressure-Dosed Subsurface Evapotranspiration Irrigation System.

Recycled water is to be distributed via a hydraulically engineered irrigation delivery system consisting of small-diameter PVC laterals with 1/8" orifice holes drilled in the top at set intervals. The orifice holes are covered with plastic caps called orifice shields to prevent blockage by soil or mulch. A common interval is one hole every 2 linear feet.

The area to be irrigated is divided into zones, and the zones are alternately dosed via a mechanical zone valve designed specifically for such applications using effluent. The zones act as an additional balance in the system. Because the zone valve is typically dosed once every hour for forty seconds to one minute, an eight zone area would see each zone being watered every eight hours or until the dosing tank level dropped below the discharge control float. Under unusually heavy use, each zone might only see water once every four hours until flow rates returned to normal, an application rate twice the usual but still many times less than the capacity of the soil to absorb moisture and treat it effectively.

Evapotranspiration-based irrigation systems in the Malibu Coastal Plain and surrounding areas have been designed and operated successfully in poorer soil types than those found at the Ramirez Canyon Park at application rates of 0.25 gallons per square foot per day, peak. Actual normal use will be considerably less than this application rate, assuring complete uptake of the treated effluent under all weather conditions, since plants continue to transpire even during periods of precipitation.

For example, if peak flow for all three combined systems that will supply the recirculation tank is calculated at 2500 gallons per day based on the more conservative fixture count method, 10,000 square feet of landscape would be set up for irrigation with subsurface laterals. The areas that are used are also covered with a heavy mulch made up of recycled municipal green waste, which helps stabilize and spread soil moisture via an even, capillary action, provide a biofilter cap to the entire soil area, and contribute to a thriving soil ecology that also transpires a significant amount of water. Actual loading rates may only amount to 0.1 gallons per square foot per day under normal conditions, lending a high degree of conservatism to the inherently hydraulically design of the system. Approximately 15,000 square feet of irrigation area have been designated in the terraced orchard and vicinity.

III. DESIGN CONSIDERATIONS IN THE OPERATION OF EVAPOTRANSPIRATION-BASED SUBSURFACE LANDSCAPE IRRIGATION SYSTEMS USING MICRO-DOSES OF TREATED EFFLUENT

Typical landscape irrigation systems utilize an irrigation control panel to activate solenoid valves and activate designated zones made up of various types of surface equipment, including sprinklers, micro sprinklers, bubblers, micro tubing, and drip line. A normal irrigation pattern might be for a given sprinkler zone to be activated for 20 minutes three times per week, or for a drip line zone to be activated for one hour three times per week. Many controllers now available incorporate a rain shut-off feature to prevent unnecessary watering during periods of precipitation.

Subsurface application of treated effluent in stand-alone developments differs from this conventional irrigation model in several significant respects. First, to avoid the extra cost of large storage tanks, the design flow of treated effluent must be able to be applied every day, even during periods of precipitation. Secondly, the final disposition of the treated effluent via subsurface application in the soil system is the final polishing step in the treatment of the wastewater. It is important to keep in mind that soil systems, unlike delicate aquatic systems, are uniquely qualified to treat wastes, under the right conditions. Thirdly, while conventional systems commonly over-irrigate in an attempt to move water downward into the soil via saturated flow and gravity, subsurface irrigation systems utilize frequent micro-doses to maintain conditions of unsaturated flow and capillary movement of water through soil.

The key feature of modern subsurface micro-dosing irrigation systems is the use of numerous short bursts of water, with relatively long periods of rest in-between. In a typical system using subsurface drip line with built-in emitters, such as that manufactured by Netafim or Geoflow, or subsurface dosing laterals using small-diameter PVC pipe with orifice holes and orifice shields, such as that supplied by Orenco Systems, the dosing pump will come on for 40 seconds to 1 minute, once an hour, and just 6 inches or so below grade. Just about the time that it is starting to get wet around the emitter or orifice, the pump shuts off and the water disperses via capillary action in a semi-spherical pattern through the soil, coating each soil particle with a thin film of moisture that has a relatively long residence time.

With treated effluent, this unsaturated flow characteristic makes the water and nutrients available to a thriving and diverse soil ecology consisting of microbes and infauna (nematodes, earthworms, insect larva, protozoans, et al), and to the root systems of landscape plants. In poorly conductive soils such as heavy clays, the bloom in soil ecology that takes place from the application of small packets of effluent containing nutrients improves the fertility and conductivity of the soil. This is especially true when a thick mulch cover is placed over the irrigated area to help even out the moisture content, prevent drying of the soil surface, and supply humus to the soil system.

To limit the migration of treated effluent downward through the soil to groundwater, as would be the case with a conventional saturated leach field, application rates are held to below 0.25 gallons per square foot per day based on peak flow calculations found in the UPC and related codes. By contrast, the long term application rate for a conventional leach field is typically 0.6 gallons per square foot per day or more.
The actual daily application rate may be quite a bit less than this peak design allowance. At this low rate, applied by numerous micro-doses, no clogging mat forms and aerobic conditions in the upper part of the soil profile are maintained. It is important to remember that 90% of the living organisms found in soil occupy the upper few inches of the soil profile, and that over 60% of the moisture uptake by plant roots takes place in the top two feet.

During periods of precipitation, the soil may become saturated. When this occurs, micro-dosing at these low rates can still take place without negative affect. As the soil becomes saturated, runoff of rain water may take place. This happens as the soil porosity is filled and new rain water is blocked from entering the soil and runs off instead. However, this does not affect effluent. Effluent that is micro-dosed below grade still enters a conditioned soil structure and ecology and is contained and receives treatment, and constitutes only a small percentage of the total water in the soil system under saturated conditions during heavy rains.

Evapotranspiration by landscape plants does not cease during rainy periods. Thus, as rain falls, a percentage is 'going back up' as water vapor released by plants. The extreme example of this takes place in the Amazon rainforest, where as much as 75% of the rainfall returns immediately as water vapor due to evapotranspiration. For example, during the winter of 1999, evapotranspiration and rain gauges on Malibu Road in Malibu measured 0.75 inches of rain, and 0.35 inches of evapotranspiration during one significant rain event in March.

On the coastal frontage of Los Angeles, Ventura, and Santa Barbara Counties, the periods of highest evapotranspiration take place immediately following rains, when clear skies and north winds take up increased amounts of moisture and plant stomata are opened to take advantage of the uncharacteristic availability of excess water. Additional evapotranspiration not measured by CIMIS or other conventional meteorological services takes place in the myriad hydrolytic reactions of microbial respiration going on in the thriving soil ecology engendered by the micro-dosing of nutrients to the soil system.

Great capabilities for purifying water are found in the watershed processes used by nature, including deceleration, sedimentation, filtration, infiltration, and interaction with biological processes. These are the processes incorporated into current designs for shallow subsurface micro-dosed evapotranspiration landscape irrigation systems utilizing treated effluent, which must be capable of operating every day, rain or shine. By taking into account all of the aspects of the soil and plant ecology, and incorporating advances in modern soil science as well as in the fields of agriculture, soil fertility, and bioremediation,

systems can be designed that both recover the valuable water and nutrient resource embodied in treated effluent, and insure public and environmental health.

IV. CONCLUSION

Rehabilitation of the various septic systems at the Ramirez Canyon Park will provide a watertight advanced treatment and reuse system that would actually serve as one of the attractions at the Park. At the same time, the treatment and recycling of the wastewater as low-rate, intermittently micro-dosed irrigation water, well removed from the drainage, will obviate any future problems that might be incurred with failing conventional systems, as well as ultimately protecting both public and environmental health.

AdvanTex™ Treatment Systems - Overview

Orenco Systems® Incorporated
1-800-348-9843

Orenco's AdvanTex™ Treatment System is an innovative technology for onsite treatment of wastewater. The heart of the System is the AdvanTex™ Filter, a sturdy, watertight fiberglass basin filled with an engineered textile material. This lightweight, highly absorbent textile material treats a tremendous amount of wastewater in a small space. For example, the AX10 model has more than 20,000 square feet of surface area for biological breakdown of wastewater components, yet has a footprint of only 10 sq. ft!

System Performance

Orenco Systems® has been researching, designing, and testing a variety of textile filters for more than 5 years. Orenco's textile filters have been installed throughout the United States on hundreds of sites, including federal demonstration projects, university testing facilities, single-family homes, commercial properties, and community systems.

Unlike other wastewater treatment technologies, the AdvanTex™ Treatment System provides consistent, reliable wastewater treatment, even during "peak flow" conditions. The AdvanTex™ Treatment System includes a storage tank and a control panel with a programmable dosing timer. So it discharges small amounts of treated wastewater, regularly, throughout the day.

AdvanTex™ treats waste to better than "secondary" standards. Effluent can be used for drip or subsurface irrigation, or discharged to shallow, inconspicuous trenches. It can also be discharged to fine-grained polishing filters for coliform removal and water reuse.

System Benefits

Small Sites — The AdvanTex™ Treatment System requires very little space. So it is ideal for new installations or system upgrades where there is limited land area or where additional pretreatment of waste is required. The AdvanTex™ Filter comes in sizes that start at 4' x 2.5' x 2.5' (for residential applications). This is small enough to fit in the back of a pick-up, along with a pumping package, too. The AdvanTex™ Filter is so compact, it can be hidden under a deck or installed right over a primary treatment tank.

Complete, Carefully Engineered Package — The AdvanTex™ Treatment System comes as a totally pre-manufactured package, ensuring a high-quality installation.

Easy Installation — The AdvanTex™ Treatment System is simple to install, reducing costs, construction errors, and the potential for downtime. The AdvanTex™ Treatment System can be installed on most lots in less than a day.

Low Cost — The AdvanTex™ Treatment System is one of the lowest-cost wastewater treatment products currently on the market...as low as $2,500, not including the tank. Plus, thanks to easy installation and low maintenance, installed costs and lifetime costs are very affordable, too.

Low Power Costs — AdvanTex™ uses very little power . . . an average of $5 per month (based on the national average of eight cents per kilowatt hour.) Compare that to power costs of up to $20-$60 per month for many "activated sludge" aerobic treatment units.

System Benefits

The AdvanTex™ Treatment System is ideal for . . .

- New construction
- System upgrades and repairs
- Pretreatment of moderately high-strength waste
- Where typical NSF Standard 40 requirements suffice

AdvanTex™ Filters Overview, cont.

System Maintenance

Like any advanced technology, the AdvanTex™ Treatment System should be serviced regularly. AdvanTex™ is easy to service, easy to clean, and generates virtually no troublesome activated sludge. Orenco Systems, Inc. provides a comprehensive, two-year warranty on all components.

The AdvanTex™ Treatment System comes with an audible alarm to signal maintenance or high water conditions. And it's sized to allow for a minimum of 24 hours of wastewater storage (at average daily flows). That means an operator can provide service to the system during normal working hours, regardless of when the alarm occurs.

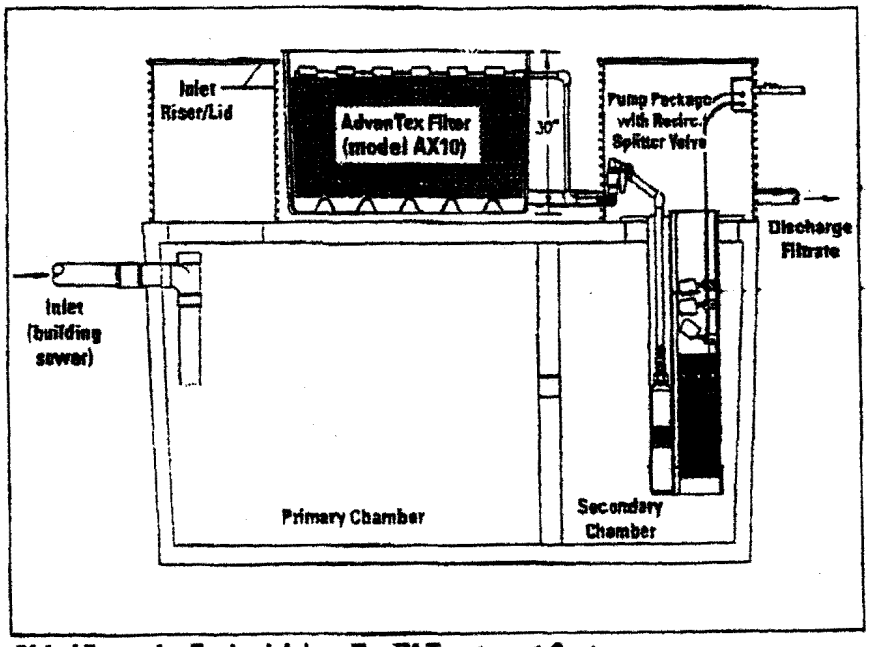
Treatment Methodology

The AdvanTex™ Treatment System works just like a recirculating sand filter: a reliable, proven technology that Orenco's engineers have helped to perfect over the past 20 years. While the treatment process is the same, the treatment media is more efficient.

In an AdvanTex™ Treatment System, wastewater percolates both through and between the textile media, whose complex fiber structure offers an extremely large surface area for biomass attachment (20,000 sq. ft. for model AX10). In terms of treatment, a key factor is the water-holding capacity (field moisture capacity) of the textile material. A visible biological film normally develops on the filter medium within a few days. BOD_5 and TSS reductions occur almost immediately.

Design Criteria

The AdvanTex™ (model AX10) Treatment System is capable of treating 450 gallons of residential strength effluent that meets the following parameters:



Side View of a Typical AdvanTex™ Treatment System

- Based on typical average daily flows (e.g., 50 gpcd).
- Residential peak weekly average flows are typically 2 times normal average daily flows (i.e., $Q_{pwa} \approx 2Q_a$. Peak weekly average flows meet typical regulations governing gpd-to-bedroom ratios)
- Typical average residential septic tank effluent characteristics with an effluent filter: BOD = 130 mg/L, TSS = 40 mg/L, TN = 65 mg/L, O & G = 20 mg/L

Final effluent quality will vary depending on influent waste strength. For commercial systems, please contact Orenco's Application Engineering Department.

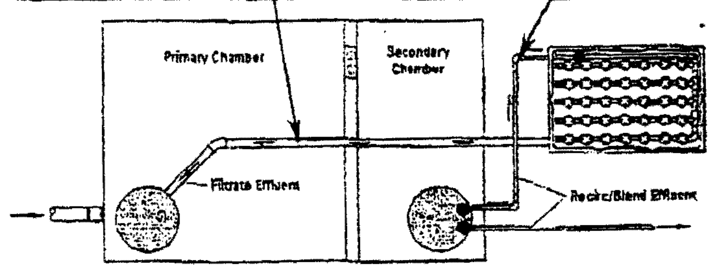
Performance Summary-AX Mode 4

AdvanTex™ Treatment Systems: AX10 Recirculating Textile Filter, Mode 4 Configuration

AdvanTex™ Treatment Systems produce effluent that typically meets or exceeds Secondary Treatment Standards. AX10 Mode 4 does a particularly good job of reducing nitrogen. The following chart shows average test results for effluent samples taken from a number of Orenco's AdvanTex™ Treatment System installations. The samples were taken from two key points: "Filtrate Effluent"[1] and "Recirc-Blend Effluent."[2] All the installations are for single-family residences, except the last one, which was installed on Orenco's own manufacturing facility.

			Filtrate Effluent[1]						Recirc/Blend Effluent[2]					
State (Install Date) (System I.D. #)	City	Address (Prop. Type)	BOD5 mg/L	TSS mg/L	TKN mg/L	NH3 mg/L	NO3 mg/L	TN mg/L	BOD5 mg/L	TSS mg/L	TKN mg/L	NH3 mg/L	NO3 mg/L	TN mg/L
AK[3] 5/21/98 0012	Anchorage	[illegible] Ave Residence	[illegible]	[illegible]	13		[illegible]	13.5	28.2	18.8	18.6		0.2	20
AK[3] 5/18/98 0061	Anchorage	12840 Saunders Rd Residence	<5	<5	<2		2±	1.7	6	7	3		0.7	3.7
AZ[3] 11/4/98 0039	Ft. Mohave	1393 San Saba Residence			0.7		22.3	22.9					20	21
AZ[3] 6/1/98 0052	Bullhead City	1402 Stony Dr Residence	12	2	4	1	4.1	8.2	27	7	11.7	5.6	3.6	15
AZ[3] 6/1/98 0050	Bullhead City	1490 Stony Dr Residence	9	15	3	1.6	4.1	4.9	24	8	3.4	6	7.2	12.1
AZ[3] 6/1/98 0055	Ft. Mohave	1839 Gunther Residence			2	1	7.9	8.9			7.5	1.7	6.9	14.4
AZ[3] 6/1/98 0056	Bullhead City	1843 Corwin Residence				0.6	2.0	3.3			7	3.9	1.8	8.5
OR[4] 9/21/99 0007	Sutherlin	814 Airway Mfr. Facility	19		58	46	14.6	73.6			75	68	3.6	79

Mode 4 Schematic In this Mode 4 configuration, the AdvanTex™ Filtrate returns to the primary chamber for discharge from a second dedicated pump out of the secondary chamber.



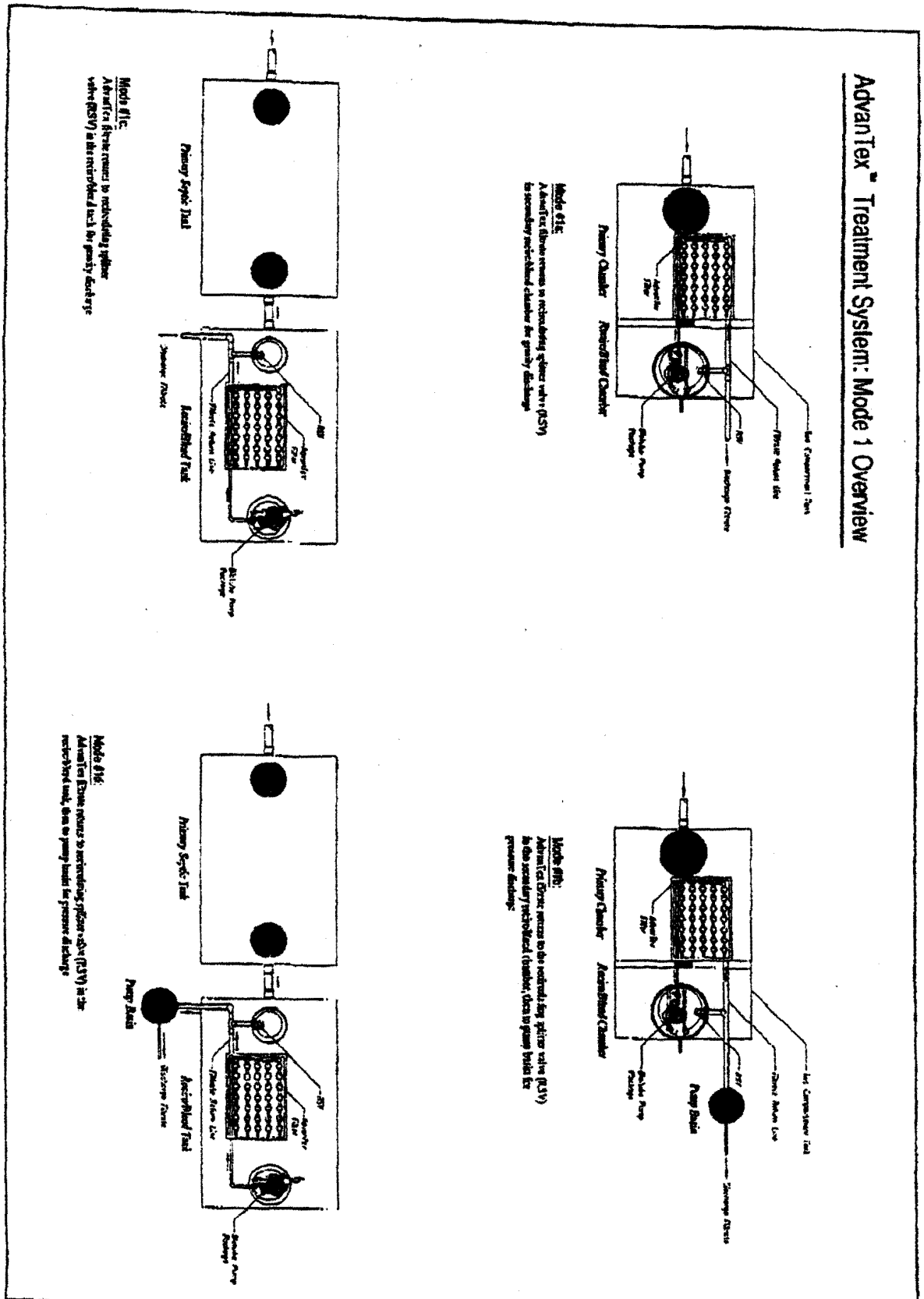
[1] **Filtrate Effluent:** The effluent exiting directly from the textile filter module. These results are indicative of typical effluent quality obtained by Modes 1 and 3 textile filter configurations, in which the filtrate is not blended with septic tank effluent prior to discharge.

[2] **Recirc-Blend Effluent:** The effluent exiting from the septic tank, after the textile filtrate has recirculated back into the tank. These results are indicative of typical effluent quality obtained by Modes 2 and 4 textile filter configurations, in which the filtrate is blended with septic tank effluent prior to discharge.

[3] Currently, most of the single family units reporting data from Alaska and Arizona are only required to measure the Recirc-Blend discharge. The filtrate values shown for these units have been calculated based on a typical screened septic tank effluent strength of BOD 130 mg/L, TSS 40 mg/L, TKN 65 mg/L, NH3-N 55 mg/L, and NO3-N <1 mg/L.

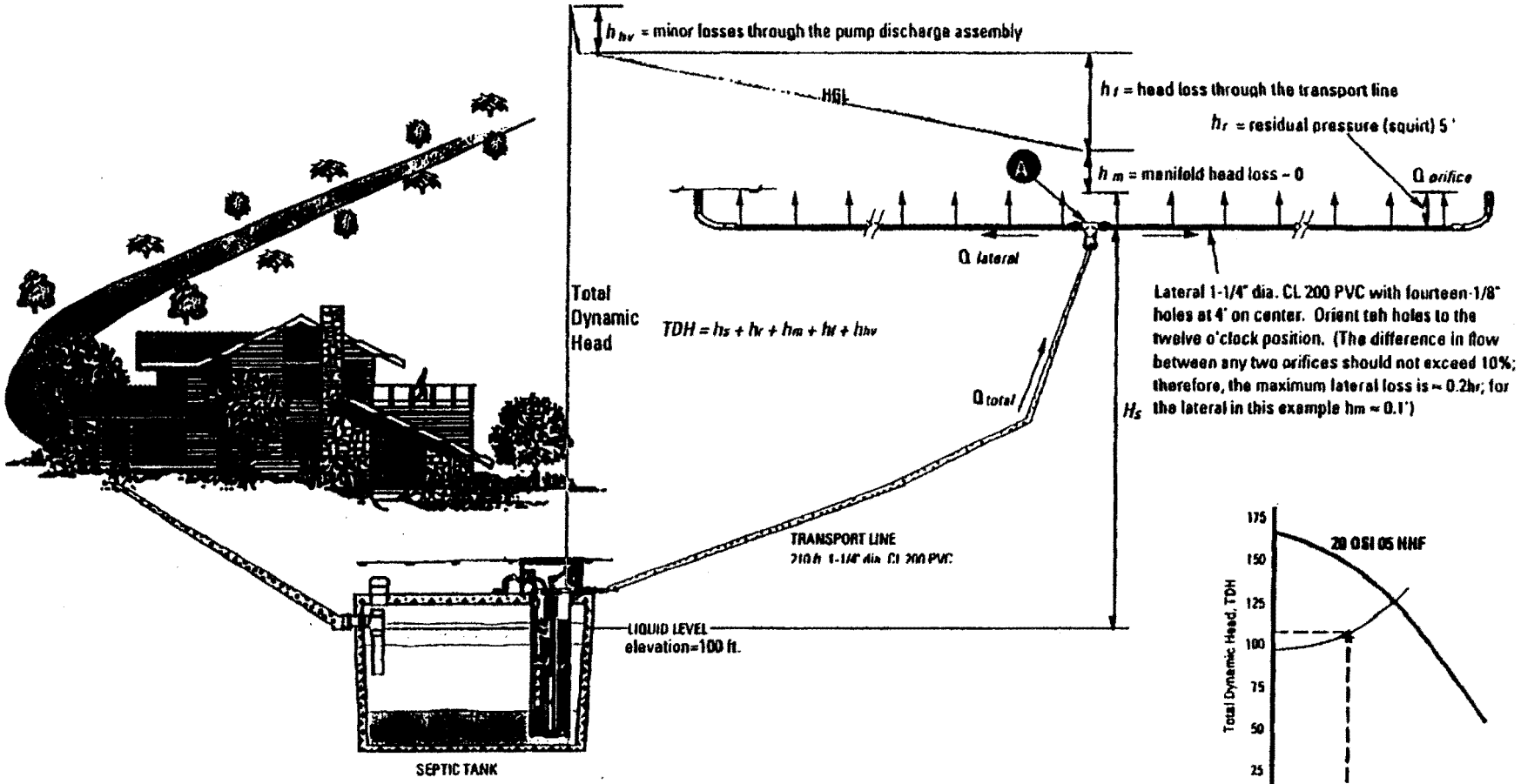
[4] This system's typical waste strength prior to the date of installation of the AdvanTex™ treatment unit was BOD 192 mg/L, TSS 54 mg/L, TKN 132 mg/L, NH3-N 132 mg/L, NO3-N 2 mg/L.

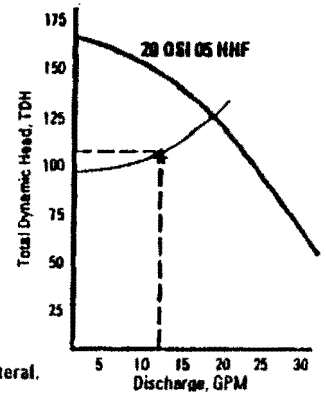
AdvanTex™ Treatment System: Mode 1 Overview



U.S. Patents 4,439,323 and 5,492,635 Other Patents Pending © 1998 Orenco Systems® Inc.	Designed By: TB	Drawn By: CHRIS JORDAN	Title: AdvanTex™ Mode 1 Overview		Orenco Systems® Incorporated
	Approved By:	Drawing: 1 OF 1	Drawing No.		
	Date Approved:	Revision:	Date: 8/16/99	Scale: 1" = 1'-0"	

Pump Selection for Pressurized Drainfields





The required flow rate for an effluent pump when discharging into a pressurized drainfield is determined by the number of orifices in the drainfield lateral.

Example: The elevation of the tank liquid level is 100 ft., the elevation of the lateral is 188 ft. The transport line is 210 ft. from the tank to point *A*; the Hazen-Williams coefficient is 150; the pump

(A) The rate at which effluent is discharged through each orifice in a lateral is computed using the orifice equation, where *d* = diameter of orifice in inches (typically 1/8") and *h* = feet of pressure head at the orifice (A minimum of 5' is required).

$$Q_o = 12.4d^2\sqrt{h} = 12.4\,(0.125)^2\,\sqrt{5'} = 0.433\ gpm/orifice$$

(B) The noiminal flow into each lateral may be calcuated by multiplying the number of orifices (*n*) times the discharge rate of each orifice.

$$Q_l = (n)(Q_o) = (14\ orifices/lateral)(0.433\ gpm/orifice) = 6.06\ gpm/lateral$$

(C) The total flow, or discharge, is calculated by multiplying the number of laterals times the nominal discharge rate to each lateral.

$$Q_t = 2(6.06\ gpm/lateral) = 12.1\ gpm$$

(D) The hydraulic grade line is established by the elevation of the pressure residual (h_r) of the highest lateral. The manifold and lateral head loss may range from 0 to 0.2h_r, for this example h_m ≈ 0.1' *(refer to drawing 29 and or lateral sizing chart).*

$$TDH = h_s + h_r + h_m + \frac{4.727\,l}{D^{4.87}}\left(\frac{Q}{C}\right)^{1.85} + 0.023\,Q^2$$

$$= (188'-100') + 5' + 0.1 + \frac{0.000995\,(210')}{(1.189')^{4.87}}(12.1\ gpm)^{1.85} + 0.023\,(12.1 gpm)^2 = 105.5$$

The pump selection for this application is a 1/2 Hp Model 20 OSI 05 HHF *(refer to document ETD-PU-PC-2 of OSI's pump curves).* Completing the system curve shows that the pump will actually operate at about 20 gpm.

Orenco Systems • Incorporated

Distributing Valves

Submittal Data Sheet

Orenco Systems Incorporated

814 AIRWAY AVENUE
SUTHERLIN, OREGON
97479

TELEPHONE:
(541) 459-4449
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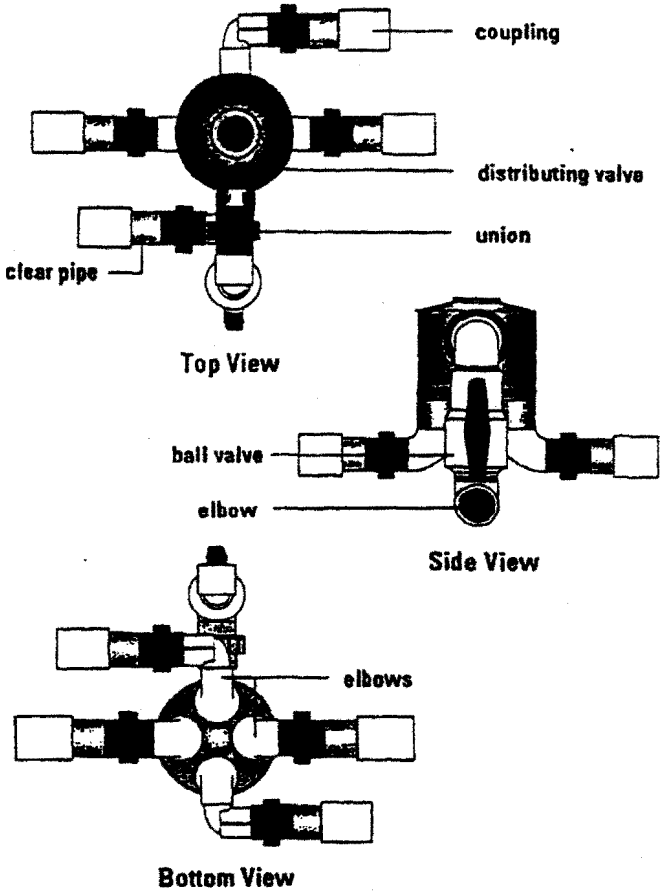

General

Orenco Automatic Distributing Valve Assemblies are pre-assembled for customer convenience. Each kit includes a Hydrotek® Distributing Valve, a section of clear pipe for each lateral, a ball valve, and the necessary elbows, unions, and couplings required for complete assembly.

Applications

Automatic Distributing Valve Assemblies are used to pressurize multiple zone distribution systems including sand filters and drainfields.

Standard Models

V4402A, V4403A, V4404A, V4605A, V4606A, V5807A, V5808A, V6402A, V6403A, V6404A, V6605A, V6606A.

VXX0XA

- Number of active outlet zones
- Number of available outlet zones
- Model series

Specifications

Materials of Construction

All Fittings:	Sch. 40 PVC per ASTM specification
Unions:	Sch. 80 PVC per ASTM specification
Ball Valve:	Sch. 40 PVC per ASTM specification
Clear Pipe:	Sch. 40 PVC per ASTM specification
V4XXX Distributing Valves:	High-strength non-corrosive ABS polymer and stainless steel
V5XXX Distributing Valves:	High-strength non-corrosive ABS polymer, stainless steel, and die cast metal
V6XXX Distributing Valves:	High-strength non-corrosive ABS polymer, stainless steel, and die cast metal

Assemblies used to pressurize drainfields at a higher elevation require check valves in the transport lines (check valves sold separately). Other configurations may vary depending upon system. Contact Orenco for more information.

DETAILS FOR PRESSURIZED DRAINFIELD LATERALS

Orenco Systems® Incorporated
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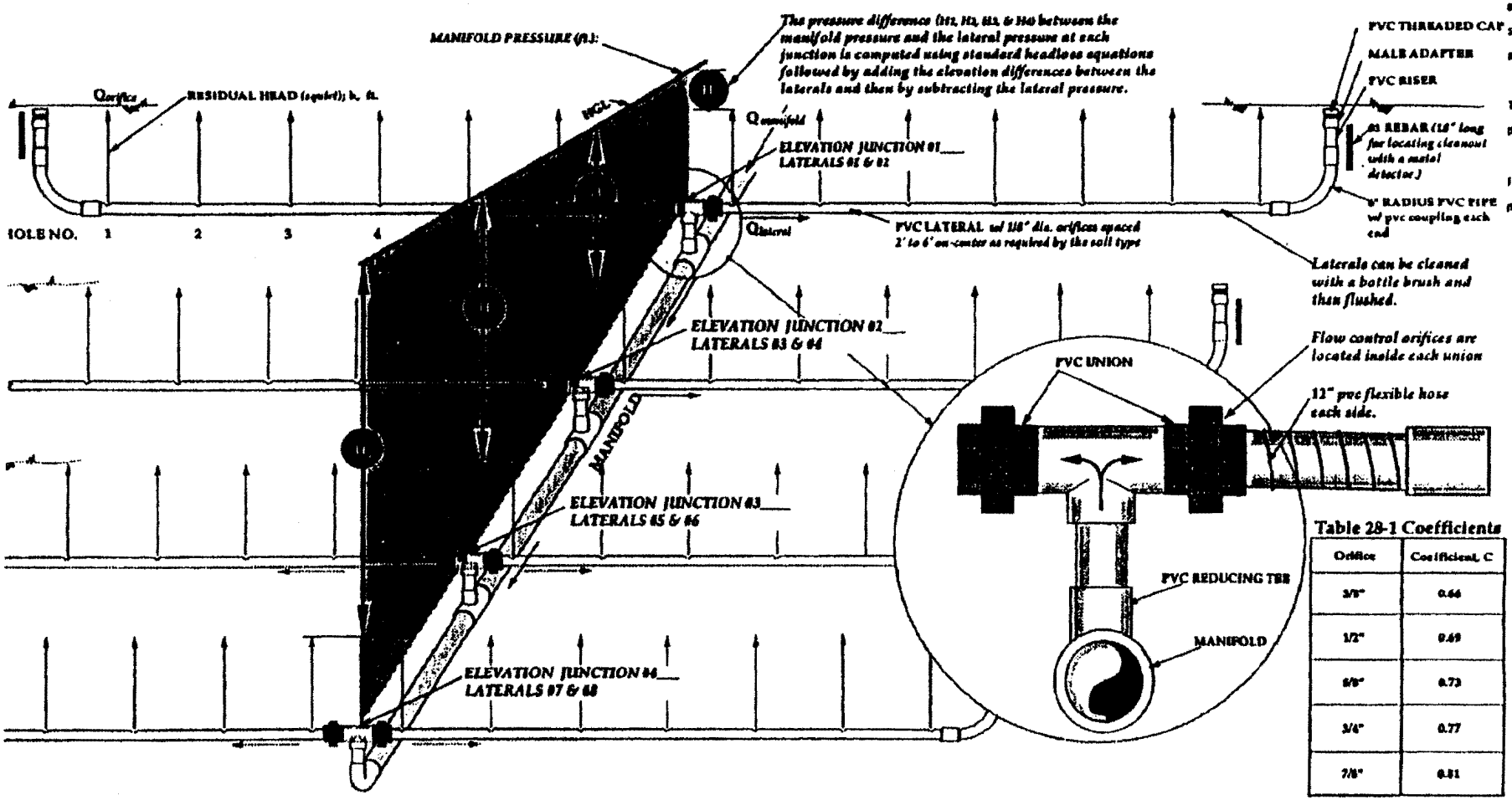

Table 28-1 Coefficients

Orifice	Coefficient, C
3/8"	0.66
1/2"	0.69
5/8"	0.73
3/4"	0.77
7/8"	0.81

(A) The rate at which effluent is discharged through each hole in a lateral is computed using the orifice equation;

$$Q_h = 12.38\, d^2\sqrt{h}$$

Where; Q_h = GPM;
d = diameter of orifice in inches;
h = feet of pressure head at the orifice.

(B) Next, the total flow into each lateral is calculated by multiplying the number of holes times the discharge rate of each hole.

$$Q = n\,Q_h$$

Where; Q_t = lateral flow in GPM;
n = number of orifices in the lateral.

(C) Then finally the flow control orifice for each lateral is sized by using

$$D = \left[\frac{Q}{19.65C\sqrt{H}}\right]^{\frac{1}{2}}$$

Where; D = diameter of flow control orifice in inches;
C = coefficient for flow control orifice, refer to table of coefficients;
H = is the difference between the manifold pressure and the lateral pressure head at each intersection, in feet.

OST's engineers will gladly review plans and provide orifice sizing calculations at no charge

Bill Wilson~Environmental Planning & Design
PO Box 2958 Beverly Hills, California 90213
Phone/Fax (310) 207-0352

EXECUTIVE SUMMARY

RAMIREZ CANYON PARK
STREAM CHARACTERIZATION STUDY

March 6, 2000

During November and December, 1999, field samples prepared by FGL Environmental seemed to indicate elevated levels of indicator coliform and the nutrient *nitrate* in Ramirez Canyon stream as it passed through Ramirez Canyon Park, Malibu. In response to this, an inspection of the entire watershed and follow-up stream water sampling was performed in late February and early March, 2000. The septic system and landscaping at the Park were also examined for evidence of a negative contribution to stream water quality.

The results of the overall testing program are somewhat inconclusive, and while showing some spikes, there is no clear pattern. Septic systems at the Park did not show evidence of short-circuiting to the stream. A wide range of variables having to do with development, human activity, wildlife, and geological factors in the overall watershed were identified that could have an impact on water quality and on the reliability of the grab sampling in pinpointing the source of indicator coliform at various points in the stream. Nonetheless, a complete replacement of the onsite wastewater system at the Park is planned, making the system completely watertight and treating the water to recycled water standards, then reusing it in a subsurface irrigation system well away from the stream, where it will be taken up by evapotranspiration.

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Hady Izadpanah, PE
Penfield & Smith
101 East Victoria Street
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Phone (805) 963-9532, ext. 138 Fax (805) 966-9801

Rhett Robb
Mountains Recreation &
Conservation Authority
2600 Franklin Canyon Dr.
Beverly Hills, California 90210
Phone (310) 858-7272

March 6, 2000

RAMIREZ CANYON PARK
STREAM CHARACTERIZATION STUDY

Introduction

This report consists of observations, findings, and results from water samples taken from the perennial steam that occupies Ramirez Canyon, Malibu, California, performed under contract to the Santa Monica Mountains Conservancy, Ramirez Canyon Park, and the firm of Penfield & Smith, consulting engineers. Site visits and sampling took place during February and early March, 2000, with samples analyzed by a certified lab, FGL Environmental, located in Santa Paula, California.

The purpose of this investigation of the upper watershed of Ramirez Canyon is to establish the general characteristics of the watershed, assess levels of development that might influence water quality in the stream at various points in the drainage, and to form a snapshot of coliform levels as a continuum as the stream descends through the area encompassed by the Ramirez Canyon Park Center. Of particular interest to this analysis is whether or not there are any indications that existing septic systems at the Ramirez Park Center are contributing to elevated coliform levels in the stream.

As with any limited sampling program, the water samples taken on February 25 at six points along the Ramirez Canyon Creek provide only a picture of conditions at that time. This testing, which began at a point near the top of the stream and took measurements at regular intervals, can be viewed in context with previous sampling which took place on November 9, November 18, November 23, November 30, December 9, and December 16, 1999, by Peter Munoz and the Santa Monica Mountains Conservancy, and which measured coliform and nitrate levels as the stream passes through the Ramirez Canyon Park site.

Site Location and Setting

The Ramirez Canyon watershed consists of a limited and well-defined drainage basin including and to the immediate east of Kanan Dume Road, as Kanan Dume Road

descends north to south towards Pacific Coast Highway in western Malibu. A divide demarcated by Upper Ramirez Mountainway separates flows north and south, with southward flows entering the Ramirez Canyon drainage. A tunnel on Kanan Dume Road passes through the ridge that forms the divide and opens out on the side facing the Pacific Ocean. Headwall peaks show elevations of 1802 feet and 1919 feet above sea level.

The upper watershed itself consists of a steep headwall and canyon, with two forks feeding into it from the headwall. An additional branch enters from the north, crossing Kanan Dume Road, to form the Main Branch of the drainage. The stream maintains flows for sustained periods of time, apparently from springs and seeps located in the headwall and vicinity. After rising rapidly during rainfall events and picking up significant amounts of sediment, the stream returns to low flow rates and clarity quickly once precipitation has ended.

The Main Branch is joined by a significant tributary, termed the East Branch. These two forks come together at a point just below a residential housing compound accessed via a gated drive at 23000/28900 Kanan Dume Road, 0.75 miles below the tunnel. The confluence itself is approximately 0.8 miles south of the Kanan Dume Road tunnel and watershed headwall. Two other large rifts feed into the Main Branch from the east, approximately 1.8 miles south of the tunnel and headwall area, in the vicinity of Dume Canyon Mountainway. These drainages appear limited, however, and only sustain flows during and immediately after rainfall events. Other tributaries join Ramirez Canyon below Ramirez Canyon Park and downstream of the study area covered by this report, and the stream itself discharges into the Pacific Ocean at Paradise Cove.

In the area between Ramirez Canyon Park and the Kanan Dume tunnel and watershed headwall, development and anthropogenic influences are quite limited, due to the steepness of the canyon. For the same reason, development that has occurred is tightly perched in the available terrain. Below Ramirez Canyon Park, both sides of the stream are developed with single-family homes, and the roadway follows the stream bed closely, including several Arizona crossings. At Pacific Coast Highway, the stream flows through a tunnel and crosses an open area and the parking lot for the restaurant at Paradise Cove before emptying into the ocean.

For several years, high contamination levels had been recorded during regular sampling by health officials and Heal the Bay and Surfrider Foundation at Paradise Cove. The complete redesign of the septic system at the restaurant was accomplished during the summer of 1998, and the problem has subsided.

Development Features & Sampling Points

Several homes and accompanying landscapes occupy the ridge above the upper headwall that marks the beginning of the Ramirez Canyon watershed. These residences are accessed by Upper Ramirez Mountainway, a paved drive located on the northern side of the Kanan Dume Road tunnel, at 29000/29300 Kanan Dume Road. The homes are on

individual septic systems, utilizing conventional leach fields and seepage pits for bulk wastewater disposal. It should be noted that such effluent disposal systems, if not carefully sited, can short-circuit and discharge effluent to the drainage. These homes also feature irrigated landscapes and orchards, including citrus orchards located on steeply sloping ground on the upper part of the headwall. Fertilizers, including animal manure used on these landscapes and orchards, are susceptible to producing run-off that could impact the creek.

Sampling points 1 & 2

Descending from the headwall, a cluster of large residences is located in cleared and benched areas on 200 acres immediately adjacent to, and on both sides of, the stream. One residential compound, consisting of a large house and pool and 2500 square foot guest house, is located between Kanan Dume Road and the stream on 40 acres that comprises one of the 5 forty-acre parcels in the development. A second 5000 square foot home and pool and 500 square foot guest house are located in the area defined by the fork of the Main Branch and the East Branch of the stream. This residential compound is accessed via a paved drive at 23000/28900 Kanan Dume Road, approximately 0.75 miles south of the tunnel.

These units are all on conventional septic systems. There are several areas in which banks have been cut or which contain unpaved, cut access roads, and extensive fuel reduction clearing has been done for fire protection. Though no other livestock is evident, there are also two burros on the site.

A sample was taken from the Main Branch in a section of fairly uniform, gravely channel, and flow rate was estimated. The East Branch was sampled at the upper end of a section of galvanized steel corrugated culvert passing under a section of unpaved service road, within a few feet of the point at which the two tributaries converge to contribute to Ramirez Creek. The galvanized storm pipe was used like a flume to estimate stream flow.

Sampling point 3

Proceeding down the watershed, the adjacent parcel to the south consists of 90 undeveloped acres, with 4 legal lots allowed, approximately 1.3 miles down Kanan Dume Road from the tunnel. A dirt road, installed by the State transportation agency, descends to and crosses the stream on this parcel, and several Caltrans storm drains empty to the stream from Kanan Dume Road. The unpaved road itself drains to the stream, and contributes some sediment when accelerated runoff occurs. Animal scats of several types were observed on the unpaved road and throughout this heavily wooded parcel, including that from skunk, rabbit, squirrel, and deer. In one 100 foot strip in the lower portion of the unpaved road, draining into the stream, over 30 coyote scats were counted.

A water sample was taken from the stream in an area of fairly uniform width, depth, and flow, and the flow rate estimated.

Sampling point 4

Approximately 1.8 miles below the Kanan Dume Road tunnel, a single-lane asphalt road winds to the east through the canyon. This paved road, known as Dume Canyon Mountainway, crosses the stream via an eight-foot diameter corrugated galvanized steel storm pipe, then rises up the east side of the canyon through a heavily overgrown chaparral community. The large tributary drainage that this access road skirts is too steep to maintain flows for sustained periods after a rainfall event. Homes located on the ridge top are on septic systems, but are far from the drainage and stream, and no credible impact could be inferred from these dwellings.

A water sample was taken from the stream just above the road, and the galvanized steel corrugated storm pipe used to measure stream flows.

Sampling point 5

A very steep and somewhat inaccessible canyon descends from the stream crossing at Dume Canyon Highway to the area just above the Ramirez Canyon Park site. Sampling point 5 is at the area just above the Park, at a point approximately 2.9 miles below the Kanan Dume Road tunnel and drainage headwall. A water sample was taken from a point in the stream just above the 'bone yard', where unused construction materials are stored and greenwaste is stockpiled. A fairly uniform section of stream bed was used to estimate flow rates.

Areas of concern within the Ramirez Canyon Park property that were inspected included existing septic systems at three of the buildings that face the stream: The Barwood Headquarters, the Peach House, and the Barn (also known as the Lodge House). In conjunction with stream sampling, a careful examination of the septic tanks was made, as well as the areas containing leach fields, and adjacent and down-gradient sections of the stream itself. This was done to determine whether or not short circuiting was occurring, either through surfacing of effluent that could produce runoff into the stream, or through seeps along the stream bank.

Sampling point 6

The final water sample was taken at Sampling point 6 in the stream, just outside the gates of the Ramirez Canyon Park in the area adjacent to the wooden foot bridge. A fairly uniform stretch of stream bed was used to estimate flow rates.

Methods & Materials

In preparation for the survey of the watershed and in order to chose sampling points, a review of maps was undertaken, followed by a drive through the area by car. Property owners or their agents were contacted, and access was gained to properties when necessary. Rainfall in the area was monitored, along with visual observation of turbidity and flow levels in the Ramirez Canyon stream for two weeks prior to the February 25 sampling date. Steady rains and heavy cloudbursts occurred during the

observation period. A goal of the study was to sample the stream during low or medium velocities, and with low turbidity, to more accurately duplicate normal conditions.

On February 25, skies were overcast and there was a light drizzle, but no significant rainfall had occurred for two days. Stream level was not elevated, and the water was clear and without settleable sediment, as measured in a standard 1 liter Imhoff cone. The stream was accessed by walking or driving down to it from Kanan Dume Road, then inspecting each section and the surrounding slopes on foot.

When each sampling and stream flow rate measurement location had been selected, a water sample was taken by directly dipping a standard Bacti plastic sampling bottle in the stream and carefully filling it. Sampling bottles were provided by the examining certified lab, FGL Environmental in Santa Paula, California. Following sampling, a tape measure was used to lay out a section of stream bed to serve as a makeshift flow measuring flume in order to estimate stream velocity. A section of stream at each sampling point was marked, and ping pong balls were used to mark velocity between two given points. Time was marked with a stop watch.

Four of the points had a fairly uniform bottom area approximating a trapezoidal cross section (1, 3, 5, & 6). The other two sampling points (2 & 4) were near galvanized steel culverts, which were used as rate measurement flumes. After marking the number of seconds at which a ping pong ball traversed the measured segment, cross section was computed and the results presented in cubic feet per second (cfs).

Sampling times were noted, and each sample was checked for Total Dissolved Solids (TDS) with an electronic hand-held TDS meter. After completing sampling, samples were driven to Santa Paula and signed into the certified lab at FGL Environmental for analysis for Total Coliform and Fecal Coliform. In addition, Samples 5 & 6 were analyzed for Total Dissolved Solids (TDS) and chloride.

Results

Results of the laboratory analysis are presented below, along with stream flow rates and TDS meter readings. Locations of sample gathering are presented in miles below the tunnel on Kanan Dume Road corresponding to the parallel location in the stream. Total Coliform and Fecal Coliform are presented as Most Probable Number (MPN)/100mL. TDS and Chloride are presented as mg/L. Temperature at time of sampling was 13°C.

Sample	Location	Flow	TC	FC	TDS(meter)		TDS(lab)	Chloride
Sample 1	0.8M		0.25	500	50	1610		
Sample 2	0.8M		0.17	1600	11	1520		
Sample 3	1.3M		0.65	500	17	1520		
Sample 4	1.8M		0.90	>1600	8	1550		
Sample 5	2.9M		1.04	900	17	1480	1490	65
Sample 6	3.1M		1.16	500	9	1510	1520	69

Previous Sampling Results

Following are the results of a previous sampling study conducted by Peter Munoz and the Santa Monica Mountains Conservancy. Nitrate level is reported as mg/L, while Total Coliform and Fecal Coliform are presented as Most Probable Number (MPN)/100mL.

Site #1 approximately corresponds to Sampling Point 5 in the above study.
Site # 4 approximately corresponds to Sampling Point 6 in the above study.

Date	Location	Nitrate	TC	FC
11/09/1999	Site #1 Upstream	0.4	500	50
	Site # 2 Below Barn	2.3	900	130
	Site #3 Below Barwood	2.2	1600	500
	Site #4 Downstream	2.1	>1600	>1600
11/18/1999	Site #1 Upstream	ND	300	50
	Site # 2 Below Barn	0.4	300	30
	Site #3 Below Barwood	1.0	>1600	17
	Site #4 Downstream	1.0	>1600	130
11/23/1999	Site #1 Upstream	ND	300	27
	Site # 2 Below Barn	ND	300	300
	Site #3 Below Barwood	1.1	900	30
	Site #4 Downstream	0.8	>1600	130
11/30/1999	Site #1 Upstream	ND	300	8
	Site # 2 Below Barn	ND	15	17
	Site #3 Below Barwood	0.5	1600	30
	Site #4 Downstream	0.6	>1600	30
12/09/1999	Site #1 Upstream	ND	300	50
	Site # 2 Below Barn	0.6	900	8
	Site #3 Below Barwood	0.9	900	23
	Site #4 Downstream	0.6	1600	4
12/16/1999	Site #1 Upstream	ND	2400	2400
	Site # 2 Below Barn	ND	70	50
	Site #3 Below Barwood	0.6	2200	14
	Site #4 Downstream	0.5	800	4

Discussion

Many factors can influence the presence and detection of coliform as indicators of pathogen presence in stream water. Disturbed soil, such as that found in unpaved road cuts, embankments, building pads, agriculture, erosion scars, and trails, are capable of relinquishing considerable amounts of coliform to the drainage during rainfall events. A similar phenomenon takes place with soil nitrogen forms, and in particular nitrate, which can be present in significant amounts in soil and is somewhat readily mobilized in water.

Animal wastes, agricultural fertilizers, and effluent from wastewater conveyance systems associated with development within a given watershed are also commonly associated with elevated levels of indicator coliform and nitrate in streams. Fecal coliform is indicative of wastes from warm-blooded animals, including sewage.

Less well-known is the association between indicator coliform and pathogens and sediment load and sedimentation within a drainage and receiving body of water. Through sorption, coliform and pathogenic microorganisms may become bound to the suspended particulates carried by the stream and deposited in pockets and quiet areas when relative flow rates drop and sedimentation occurs.

Once deposited in these sandy banks and pockets, the microorganisms may form micro-environments in which they are able to survive, either as active colonies with low metabolic rates or in dormancy. Factors such as the opportune presence of nutrients, trace elements, temperature increase, or turbulence may subsequently stimulate the release of organisms back into the water body. This factor or set of factors is one reason that studies of water quality in streams can register a wide ranging and seemingly conflicting set of data.

Attenuation of pathogens and indicator coliform also takes place in a natural watershed, which is a generally hostile environment for microorganisms that are adapted to life cycles inside the body of an animal or human. The ability of buffer strips of planted areas, vegetated bio-swales, riparian habitats, and wetlands to remove pollutants is well-known, and landscape systems incorporating such constructed features are used as Best Management Practices (BMPs) in many management districts.

Compounding these factors is sampling method. Grab samples are at best a snapshot of the particular section of water used to fill the lab container at a given moment. Choice of location, stream level, activity level in the stream or watershed at the time of sampling, and temperature can all affect the applicability of the grab sample to the overall stream's ambient conditions. The presence or absence of turbidity, or a particle of organic matter containing indicator organisms, can greatly affect the levels detected at the lab, but not be indicative of general levels in the stream itself.

Activity in the watershed should be determined to the best degree possible, and any factors that may affect water quality should be noted. In this study, which involved

an inspection of the drainage as a whole, the presence of agriculture, highway runoff, upstream development. domestic animals, wild animals, and disturbed areas all constituted factors which might influence levels of indicator coliform or nutrients detected in the stream water during the sampling period. Flow rate, recent rainfall, the presence of settleable solids, and turbidity were also noted, since they are factors which might influence the suspension and deposit of pathogens and nutrients.

An important aspect of activity is the presence of animals within the drainage. In many cases involving stream contamination, onsite wastewater system are frequently suspected of causation. Subsequent investigation may determine that animal compounds such as dog kennels or horse corrals are actually the source of both elevated levels of nutrients and indicator coliform. Concentrated coyote activity, and the presence of two mules, were noted in the upper part of the Ramirez Canyon watershed.

Total dissolved solids (TDS) and a subset, Chloride, were also tested. This was done to look for any change in typical levels, especially as the stream flows through the Ramirez Canyon Park site. A sudden spike in TDS or Chloride might indicate an input of runoff containing fertilizers or of wastewater effluent, independent of the incidental influence of a chance organic particulate on indicator coliform levels.

The sampling data produced by FGL Environmental from the specimens delivered to them by Peter Munoz in November and December, 1999, show quite a bit of variation, some of which can be viewed in the context of the above discussion of the variables that may affect grab sampling in determining stream water quality. However, a pattern does emerge over the six sampling dates that seems to indicate some sort of input into the section of stream passing in front of the Barwood Headquarters, especially in the early part of the sampling series. In the latter part of the sampling study performed by Munoz, levels detected showed a reversal, with higher numbers entering the site and low levels at the point just outside the gates.

An examination of the stream side and adjacent areas for seeps or possible sources of runoff and contamination on February 25 and on February 29, 2000, failed to identify any. Fertilizer use at the site was questioned, and it was noted that an application of steer manure had been made to the lawns just above the stream as it passes through the Park had been made in the early Fall of 1999.

The possible influence of onsite wastewater systems at the Park was also investigated. Two septic systems service the Barwood Headquarters building. One system, which has been abandoned, is located under a cement tennis court on the east side of the stream. The other is located on the west side of the stream, in the lawn area to the west of the building. The systems were excavated and examined via video camera to look for flaws that might cause leaks and short circuiting.

The tennis court system was found to consist of an unsealed tank and collapsed leach field, and had been discontinued for a considerable period of time. No

groundwater was noted moving through the site at elevations that might intersect the discontinued septic system, and the entire system is under a paved area. The newer system adjacent to the Barwood Headquarters was in good working order, but the tank itself is not well-sealed. Usage is light, and no evidence of ponding or seepage was discovered. Throughout the Park, usage affecting septic systems is light, with a reliance on portable tank toilets (porta-potties) for events and guests above the few staff members normally present.

To eliminate any future involvement of septic systems in stream contamination at the Park site, a comprehensive upgrading of the systems is planned. At the Barwood Headquarters, the tank will be sealed and made completely watertight, and the leach field discontinued. Instead, effluent from the tank will be conveyed in a sealed small-diameter PVC pipe to a large holding tank on the north side of the Barn House (or Lodge House), where it will be commingled with clarified effluent from the Barn House and Peach House and recirculated through an aerobic treatment filter until advanced levels of treatment are attained. It will then be applied via a micro-dosing subsurface landscape irrigation system to the orchard area, well away from the stream. The tanks at the Barn and Peach House will also be replaced with watertight tanks.

The final grab samples done as part of this study on February 25, 2000, show a vaguely defined decreasing continuum of coliform levels as one descends the watershed from the first two sampling points, just below the residential compound at 23000/28900 Kanan Dume Road, to the final sampling point (Sample 6), just outside the gates of Ramirez Canyon Park. TDS levels are consistent throughout the study area, and no jump in chloride levels occurred between Sample 5, just before the stream enters the Park, and Sample 6, just outside the Park. A sudden elevation in chloride might have indicated a wastewater or fertilizer input to any elevated levels of indicator coliform or TDS.

Conclusion

A survey of the Ramirez Canyon watershed and testing of grab samples from the stream in an effort to determine whether or not runoff and septic systems at the Ramirez Canyon Park have a negative impact on stream water quality is inconclusive. This is probably due to the number of factors that can influence water quality as determined by grab sampling, and which may occur both on and off the site, but still show up in samples obtained at the site. These include stream flow rate, turbidity, suspended sediment levels, and recent rainfall, animal activity, disturbed earth, agriculture, fuel reduction programs, landscape practices and irrigation, and development, housing, wastewater systems, and human activity.

A detailed inspection of the onsite wastewater systems at the Ramirez Canyon Park failed to turn up any evidence of seeps or discharges, or any features that might impact the stream at the current low level of use. Nonetheless, a complete revamping of the septic systems at the Park is planned that will make the entire system watertight, and to treat the effluent to advanced levels. The recycled quality water will then be applied

in a subsurface irrigation system at rates that do not exceed background evapotranspiration for the Malibu coastal area, well removed from the riparian corridor.

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

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PHONE (310) 858-7272
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March 27, 2000

Mr. Peter Douglas
Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA, 94105

Operating Expenses For Ramirez Canyon Park

Dear Mr. Douglas:

I appreciate the opportunity to discuss the issue of the number of revenue generating events versus the number of non-revenue generating events proposed at Ramirez Canyon Park. Attached, per your request, is a breakdown of our existing and expected revenues/costs. As you can see, our actual expected use should just barely cover the newly incurred expenses for the additional public access programs proposed.

In any event, the Conservancy intends to commit, and therefore agrees to commit, any revenue generated over and above the actual operating expenses of the site to the outreach program we propose.

Should you or your staff have any questions regarding the attached information, please contact Rhett Robb of my staff at (310) 858-7272 ext. 105.

Sincerely,

JOSEPH T. EDMISTON AICP
Executive Director

cc: Melanie Hale

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EXHIBIT NO. 8 (2 pages)
APPLICATION NO. SMMC
4-98-334
Revenues/Costs Ramirez Canyon Park

Ramirez Canyon Park Revenue/Cost Breakdown

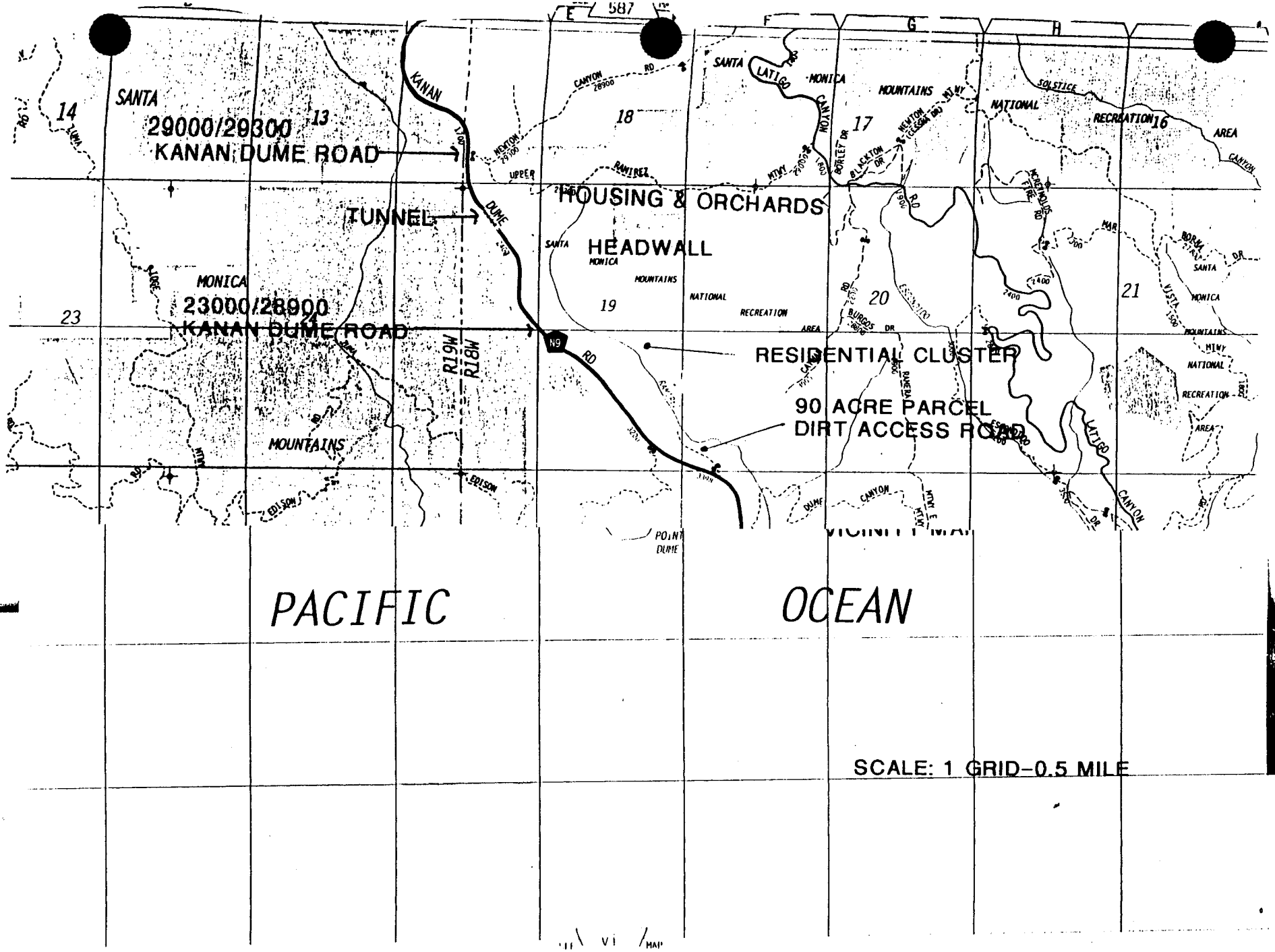
Description of Expenses	Existing Costs	Expected New Costs
Personnel Expenses		
Maintenance/Landscaping Staff	$92,000.00	$0.00
Scheduling Coordinator	$14,000.00	$11,000.00
Housekeeping Services	$11,000.00	$2,750.00
Ranger/Interpretive Staff	$0.00	$22,424.00
Sub total Personnel	$117,000.00	$36,174.00
Operational Expenses		
Landscaping Materials	$2,000.00	$500.00
Grounds Maintenance Equipment	$4,000.00	$1,100.00
Water	$14,000.00	$0.00
Gas	$2,000.00	$0.00
Electrical	$10,000.00	$1,000.00
Sanitation Services	$15,000.00	$2,000.00
Program Materials	$0.00	$15,000.00
Transportation Charges	$0.00	$20,000.00
Sub total Operations	$47,000.00	$39,600.00
Grand Total	$164,000.00	$75,774.00

Current Revenue Generation	No. of Events per month	Revenue Per Event*	Total Annual Revenue
Special Events (March - Oct)	2.75	$4,500.00	$99,000.00
Garden Tours (12 months)	6.4	$864.00	$66,355.20
Grand Total	9.15		$165,355.20

Proposed Increase in Events	No. of New Events per month	Revenue Per Event*	Expected New Annual Revenue
Special Events (March-Oct)	1.25	$4,500.00	$45,000.00
Garden Tours (12 months)	1.6	$864.00	$16,588.80
Small Group Gatherings** (12 months)	1.7	$750.00	$15,300.00
Grand Total	4.55		$76,888.80

* For Garden Tours this is based on an avg. of 32 participants per tour at a cost of $27 per person
For Small Group Gatherings we charge $500 or $1000 depending on group size

** This number does not represent the maximum number of events we are proposing but, for purposes of addressing anticipated revenue, it is the minimum number we expect to schedule.


29000/29300
KANAN DUME ROAD
TUNNEL
23000/28900
KANAN DUME ROAD
HOUSING & ORCHARDS
HEADWALL
RESIDENTIAL CLUSTER
90 ACRE PARCEL
DIRT ACCESS ROAD
SANTA MONICA MOUNTAINS
NATIONAL RECREATION AREA
PACIFIC OCEAN
SCALE: 1 GRID-0.5 MILE