

Attachment I

This page intentionally left blank.

RANCHO SAN CARLOS FOREST MANAGEMENT PLAN

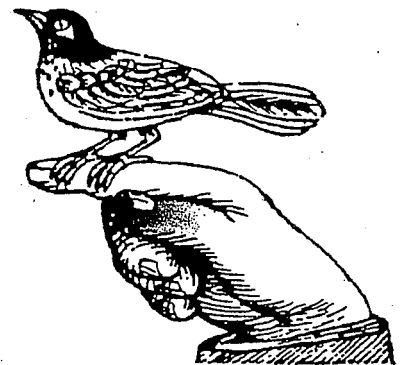
Prepared for:

**Rancho San Carlos Partnership
Carmel, California**

Prepared by:

**Ralph Osterling Consultants, Inc.
San Mateo, CA**

February 18, 1994



printed on recycled paper

**RALPH OSTERLING
CONSULTANTS, INC.
PHONE (415) 573-8733
1650 BOREL PLACE SUITE 204
SAN MATEO, CA 94402**

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
SITE DESCRIPTION	2
Introduction	2
Topography	2
Existing Access	2
Soils	2
Vegetation	3
PROJECT DESCRIPTION	4
IMPACTS	5
TABLE 1	8
Road and Driveway Tree Removal by Species	
TABLE 2	8
Road and Driveway Health of Trees to be Removed	
TABLE 3	9
Road and Driveway Health of Landmark Trees to be Removed	
TABLE 4	9
Road and Driveway Tree Removal by Diameter Class	
TABLE 5	10
Road and Driveway Landmark Tree Removal by Diameter Class	
TABLE 6	10
Building Sites Tree Removal by Species	
TABLE 7	11
Building Sites Tree Removal by Diameter Class	
TABLE 8	11
Tree Removal for All Areas by Species and Diameter Class	

REFORESTATION PLAN	12
Timing	12
Site Selection Criteria	13
Reforestation Sites	14
PROJECT ASSESSMENT	14
TREE PROTECTION GUIDELINES	15
Landmark Trees	17
FOREST IMPROVEMENT	17
HOMEOWNER OAK TREE MAINTENANCE GUIDELINES	18
BIBLIOGRAPHY	19
TRANSFER OF RESPONSIBILITY	20

MAP POCKET

Potential Reforestation Area Map

LIST OF APPENDICES

APPENDIX A

List of Major Woody Plant Species

APPENDIX B

Tree Removal Summaries for Roads and Driveway/Building
Sites

APPENDIX C

Tree Protection Detail Drawings:

Typical Aeration and Irrigation System
Root Loss Diagram Due to Excavation and Trenching
Typical Dry Well Installation
Typical Retaining Wall

APPENDIX D

Road and Driveway Tree Survey Data

FOREST MANAGEMENT PLAN

RANCHO SAN CARLOS

Prepared by

Ralph Osterling Consultants, Inc.

February 18, 1994

**RALPH OSTERLING
CONSULTANTS, INC.**

EXECUTIVE SUMMARY

The Forest Management Plan for Rancho San Carlos addresses the impacts of the proposed project and recommends mitigation and preservation measures. The sensitive and thorough design process for the project has minimized the impacts on the forest resources primarily through avoidance and sound siting practices. Special attention was directed to preservation of Landmark Trees as defined in the Monterey County Tree Preservation Ordinance (Chapter 16.60, Monterey County Code). A total of 1480 trees are projected to be removed for the entire project. Of the trees scheduled for removal, coast live oak is the predominate species and accounts for 71 percent of the total. Approximately 90 percent of the trees are less than 24 inches in diameter. The remaining 10 percent are over 24 inches in diameter and are classified as landmark trees. Of an estimated 550,000 trees on the ranch, only 0.27 percent will be removed or impacted. Overall the forest is healthy with only minor incidents of pests or disease.

Like most California oak woodlands, Rancho San Carlos woodlands contain very few reproduction or seedling size trees. A comprehensive mitigation plan including a replacement program with a five year guarantee is proposed. Replacement will be at a ratio of 3:1 (replacement:removal) for non landmark (trees less than 24" in diameter) plus a replacement ratio of 5:1 for all landmark trees. Replacement sites were selected based on soil type, aspect, slope and existing cover types. The mitigation program, when implemented, will assure the reestablishment of lost woodland habitat values. Monitoring and maintenance will assure survival and growth. Siting of the reforestation areas in sufficiently large blocks will provide meaningful habitat values.

Tree protection measures address grading and construction impacts on the tree resources. Safeguards for the existing root systems are included within the "Tree Protection Guidelines." Specific measures address grade control, equipment exclusion, aeration, drainage, thinning and pruning.

SITE DESCRIPTION

Introduction

Rancho San Carlos (RSC) is an historic 20,000 acre ranch located in the Northern reach of the Santa Lucia mountain range in Monterey County. The ranch is located immediately south of the Monterey Peninsula, approximately two miles east of Highway 1 and one-half mile south of Carmel Valley Road. Rancho San Carlos Road is the primary access into the project. It provides the primary access to the historic ranch facility that is located in the center of the ranch. The existing land use consists of grazing within the grasslands and oak savanna woodland areas. Wildlife habitat and watershed values dominate in the upland areas. Overall existing land use is generally passive except for the developed area including the horse complex and the ranch house center.

Topography

Topography is generally rolling to steep and dissected. The primary drainages formed within the ranch include Potrero and Robinson Canyons on the northeast side and San Jose Creek. Drainage from San Jose Creek flows northwesterly and generally forms the southwesterly and the westerly side of the ranch. Las Garzas Creek, San Clemente Creek and Hitchcock Creeks form the major drainage basins in the easterly portion of the property. The ranch consists of primarily narrow drainage basins formed by perennial and ephemeral streams which lead uphill onto forested and brush covered slopes of sixty (60) percent or more gradient. The central area of the ranch consists of an open flat grassland area where the existing ranch complex is located.

Existing Access

Access into the ranch is via Rancho San Carlos Road, a private road located approximately two miles west of Highway 1 and via Robinson Canyon Road, a County road located approximately eight miles east of Highway 1 off Carmel Valley Road. These roads provide a circuitous route through the dissected topography of the property. Dirt access roads were historically developed for ranching operations and are found throughout most of the ranch and provide existing management and emergency access beyond the improved Rancho San Carlos and Robinson Canyon Roads. Some of these dirt roads will be upgraded to all weather roads for internal circulation.

Soils

Soils found on RSC vary widely depending upon parent material, weathering, and slope position. Parent materials are generally of sedimentary or granitic origin. Soils developed over the sediments are generally finer textured and higher in clay. Soils developed over granitic materials are generally coarser textured and well drained. Mixtures of soils may be found in the colluvial and alluvial areas. Plant communities

often follow soil types (e.g., clay, sands). At RSC, the Soil Conservation Service (SCS) has mapped and classified the soil complex. The oak woodland and forest vegetation types are found on the Chular, Elder, Elkhorn, Gorgonia, Junipero, Lockwood, Los Osos, Pfeiffer, San Andreas, Santa Inez and Sheridan types (Soil Conservation Service, 1978).

Vegetation

Vegetation has been inventoried and classified by BioSystems, Inc. Methodology used follows that of Munz (1959), Cheatham and Haller (1975), and Holland (1986) procedures. Primary forest cover within the development area consists of a broad mix of oak communities.

BioSystems biologists identified forty-one vegetation types on RSC. The general cover types consist of open grasslands, grassland-oak savannas, and woodlands dominated by a variety of oak species including coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*) and black oak (*Quercus kelloggii*). Besides the oak forest complexes, open brushfields are dominated by chamise (*Adenostoma fasciculatum*) and/or manzanita. Grasslands consist of a mixture of introduced species and California native grasses. The understory and the oak savannas consist of a variety of grasses, forbes, and in many areas, poison oak (*Toxicodendron diversilobum*). A list of the major woody plant species is included in Appendix A.

The oak types are described generally by the dominant oak species listed above. Coast live oak mixes include coast live oak-California bay, coast live oak-black oak woodland, coast live oak-valley oak woodland, coast live oak-brush, and coast live oak savannas. The valley oak types include valley oak savanna, valley oak-mixed oak savanna, and valley oak-mixed oak woodlands. Black oak types are generally found on the upper slopes where types include black oak woodland, black oak savanna, and black oak-valley oak-manzanita. Mixtures and intergrades occur with many of the above types. Isolated inclusions, located primarily in the canyon bottom areas, consist of coast redwood (*Sequoia sempervirens*). Narrow corridors of riparian communities dominated by the oak complex, sycamore, and willow species are found in the canyon bottoms with higher moisture levels.

The overall condition of the forest on the ranch can be summarized as generally healthy and vigorous. Most areas have been subject to past wildfires as evidenced by char and typical stump sprouting regrowth. The brush is generally old, often very dense and decadent. The oak woodlands are generally mature with few or no oak seedlings or saplings. This absence of reproduction is not unique to RSC. It is a statewide problem. Wild fires and a variety of factors acting independently or jointly including grazing (cattle and pig), wildlife browse, avian and rodent predation, and annual

grasses depleting soil moisture have been identified as the major causes (Pavlik, Muick, Johnson and Popper, 1991). No serious outbreaks of diseases or pests were noted during the survey of RSC.

Overall, the forest plant communities on RSC are healthy and relatively pest free. Isolated pockets of a variety of pests were noted; all were in an endemic state and are not of concern from a management perspective. A deep duff layer typically blankets the forest floor and provides a deep mulch layer to control erosion and provide for nutrient and moisture conservation. The presence of a variety of gall forming insects is evidenced by the remaining leaf and stem galls found within the forest. In addition, isolated cases of root rot were noted. Observed decay fungi include crown rots (*Phytophthora* and *Pythium spp.*) and oak root fungus, (*Armillaria melea*). Although heart rot is common, it does not impair the vigor of the tree. Instead, it weakens the structure that may cause branches to break, or occasionally, entire trees to topple. Lace lichen ("Spanish moss") is common at RSC. It is non parasitic, however, heavy infestations may create excessive shading or excessive weight that might impair the trees.

PROJECT DESCRIPTION

Rancho San Carlos is an historic 20,000 acre ranch located on the southerly side of the Carmel Valley and extends from two to twelve miles inland from Highway 1. The property was purchased in 1990 by the Rancho San Carlos Partnership. This partnership proposes to develop the land as a unique residential community within a preserve involving a progressive alliance of commercial and nonprofit conservation interests.

In March 1993, the Monterey County Board of Supervisors amended the Greater Monterey Peninsula Area Plan (GMPAP) and applied a forty (40) acre per unit density and Resource Conservation land use designation over the entire ranch. The Board further resolved that a "planned use overlay" for the entire property be prepared based on a comprehensive analysis of the natural resource systems of the ranch (Monterey County Board of Supervisors' Resolution No. 93-115, 1993).

Based on that direction, the RSC Partnership has prepared a comprehensive development plan for the ranch covering the 16,541 acres within the GMPAP, 2,544 acres within the Carmel Valley Master Plan Area (CVMPA), and the 733 acres located within the Carmel Area Coastal Zone (CACZ). This Forest Management Plan is an integral part of that comprehensive development plan.

The RSC comprehensive development plan provides that 18,000 acres +/- of the ranch be set aside as preserve lands that will be protected by a combination of fee title and conservation easements conveyed to and managed in perpetuity by an independent conservancy. Preserve management goals are focused to integrate a program of scientific resource management, conservation, education, and outdoor recreation activities.

Further, 2,000 +/- acres will be developed as Settled lands where residential units are carefully distributed throughout the ranch. The units will be clustered in locations where, through intensive analysis of the ranch landscape and its ecological resources, the RSC Partnership and its advisors have determined the specific suitability of the lands for development. On these Settled lands development will be restricted to a maximum of three hundred (300) market rate homesites, fifty (50) units of inclusionary/employee housing, one hundred and fifty (150) visitor accommodation rooms, neighborhood commercial, office, scientific, recreation, and community/commercial facilities. In addition, the existing ranch management facilities will be used and expanded as required for prudent operations. In sum, 90 percent of Rancho San Carlos will be preserved and managed as wildland open space, and 10 percent of the land will be developed by carefully integrating residential and lodging units in clusters appropriately located in the surrounding wildlands.

The structures will consist of some three hundred (300) single-family structures with appurtenant development structures. Inclusionary employee housing, the visitor accommodation area and other infrastructure will be centrally located to minimize environmental impact and maximize convenience for residents and employees.

IMPACTS

This Forest Management Plan for Rancho San Carlos has been prepared to provide a basic evaluation of the existing forest conditions found on the ranch. Based on the evaluation of these conditions, this management plan will provide for future management activities to enhance and preserve the forest resources. A complete evaluation of all proposed road locations was completed to assess the impacts of the development within the forest.

A site-by-site review of all proposed construction areas was conducted. All trees proposed for removal were measured and identified throughout the project area. Appendix B of this report includes a summary of all tree removals. Tree locations referenced in Appendix D are keyed to the road and driveway stationing found on the

Vesting Tentative Map. The site-by-site inspection provided an opportunity to inspect all trees for health, general tree conditions and overall site conditions. Within this inspection, an opportunity was afforded to review the proposed alignment of roads and driveways, and from a forest management perspective, to provide guidance for realignment where necessary. In many cases, road and driveway alignments were adjusted to avoid or minimize impacts on trees.

The existing road system has been carefully evaluated from an environmental/ecological perspective and from traffic and safety standpoints to provide access to the proposed development areas. The existing road system will be used throughout the property wherever possible. Improvement of these existing roads will be limited to the minimum required. Where necessary, additional roads will be constructed and necessary driveways to individual residential units will be also constructed. Roads have been carefully located and, in some cases, realigned to best conform to the topography and to minimize tree removal. Roads are aligned to best follow topography and existing roads thus causing a minimum of grading.

A thorough evaluation of the existing road alignments and tree conditions was completed. The general goal of using existing roads to the extent possible was fully evaluated before realignment and new road construction planning. Therefore, road construction and realignment are minimized due to proper planning. Only where necessary, due to California Department of Forestry and Fire Protection (CDF), General Plan (GP) or GMPAP ordinance requirements, are roads proposed for realignment or reconstruction. A team approach was used to minimize the impact on the forest community created by road development activities. Such an example is the relocation of Garzas Trail. This road was relocated to avoid the large old-growth stand of coast live oak found in the lower reach of Las Garzas Canyon.

Driveway alignments and grades have been selectively chosen. Generally, driveway alignments have been guided by the philosophy of fitting the road to the land and not the land to the road. In so doing, a minimum number of trees have been affected with the proposed driveway construction. In addition, several trees will be pruned instead of removed to allow for proper clearance for vehicle access to the development areas. Driveway grading will consist of a minimum width driveway and minimum cut and fill activities, especially through the forested areas. Construction of 110,350 feet of driveways will cause the removal of two hundred and twenty-three (223) trees. This averages less than one tree per unit and approximately two trees per thousand feet of driveway.



All building envelopes include a flat-to-gently sloping open area where minimal grading will be required for individual residential unit development. An estimated total of four hundred and fifty-one (451) trees will be removed for building site development. Based on a total of 283 residential units, tree loss for residential development will be approximately 1.5 trees per unit. Tree removal estimates were based on a clearing of designated residential sites. Integral to the site development will be a design plan that has minimal impact on the trees. In most cases, very few trees will be removed, and in some cases, no trees will be removed because of site development. In some situations healthy trees may be relocated and used for landscape trees. Generally, to qualify for relocation the tree must have a full, well-balanced crown and a diameter of twelve (12) inches or less.

Septic systems will be located in and around the open areas. In most cases, tree removal due to septic field installation can be avoided. The following lots have been identified as having potential impacts on trees due to septic field installation:

PT-2, T-4, T-9, T-11, T-12, T-13, T-25, T-33, SC-7, SC-4, SC-5, SC-71,
SC-74, SC-79, SC-91, SC-92

When specific development plans for these lots are prepared, tree removal will be re-evaluated and site specific mitigation measures proposed as necessary. Where leach line development is required within the forest area, special precautions will be included in the trenching and the grading operation. All roots over three inches in diameter will be preserved intact and not cut. Hand digging to provide trenching beneath the roots for septic leach lines in those limited areas will further preserve the oak resources. Septic drainage will be minimal and will not adversely affect the oak resources. During droughty summer periods when seasonal water is at a minimum, this added moisture will be beneficial.

Tree removal is related to lot development, driveways, and roads. Road and driveway development will cause the removal of one thousand and twenty-nine (1029) trees. Table 1 presents a species distribution of the trees proposed for removal by road and driveway construction.

Coast live oak is the most common species found on the ranch. It accounts for seventy-six (76) percent of the trees in Table 1.

TABLE 1

RANCHO SAN CARLOS ROAD AND DRIVEWAY TREE REMOVAL BY SPECIES		
Species	Number	% of Total
bay	14	1.36%
big leaf maple	4	0.39%
black oak	45	4.37%
blue oak	4	0.39%
coast live oak	782	76.00%
madrone	22	2.14%
redwood	2	0.19%
sycamore	2	0.19%
toyon	1	0.10%
valley oak	153	14.87%
TOTAL	1029	100.00%

Table 2 displays the general condition of the road and driveway removal trees and Table 3 displays the condition of landmark trees proposed for removal due to driveway and road construction.

TABLE 2

RANCHO SAN CARLOS ROAD AND DRIVEWAY HEALTH OF ALL TREES TO BE REMOVED		
Health Cond.	Number	% of Total
good	594	57.73%
fair	300	29.15%
poor	135	13.12%
Total	1029	100.00%

TABLE 3

RANCHO SAN CARLOS ROAD AND DRIVEWAY HEALTH OF LANDMARK TREES TO BE REMOVED		
Health Cond.	Number	% of Total
good	55	76.39%
fair	8	11.11%
poor	9	12.50%
Total	72	100.00%

The majority of the trees at the ranch are generally healthy both in the non landmark and landmark categories. Trees marked for removal are in similar condition. A landmark tree is a tree with a diameter of twenty-four (24) inches or greater when measured two (2) feet above the ground.

Most of the trees (92.99%) measure less than twenty-four (24) inches when measured at two (2) feet above the ground. Table 4 depicts the diameter of all trees proposed for removal during road and driveway construction.

TABLE 4

RANCHO SAN CARLOS ROAD AND DRIVEWAY TREE REMOVAL BY DIAMETER CLASS						
Diameter Class	6"-11"	12"-17"	18"-23"	24"-29"	30"-35"	36"+
% of Total	45.38%	36.05%	11.56%	5.25%	1.07%	0.68%
Count	467	371	119	54	11	7

Within the Monterey County Tree Preservation Ordinance, special concerns and conditions apply to landmark trees. Of the total road and driveway trees scheduled for removal, seven (7) percent are classified as landmark trees. Table 5 provides a diameter class breakout of the landmark trees.

TABLE 5

RANCHO SAN CARLOS ROAD AND DRIVEWAY LANDMARK TREE REMOVAL BY DIAMETER CLASS					
Diameter Class					
24"-29"	30"-35"	36"-41"	42"-47"	48"-53"	Total
54	11	4	1	2	72

Trees estimated for removal from the lots were tallied based on an average residential plan. Since site specific plans are not available, this conservative estimate was prepared to provide a basis for the premittigation program proposed to begin early in the project development process. A total of four hundred and fifty-one (451) trees (average of 1.50 trees per site) are estimated to be removed for all lot development. Table 6 is a summary of the building sites tree removal by tree species. As with the road development, most of the trees are coast live oak.

TABLE 6

RANCHO SAN CARLOS BUILDING SITES TREE REMOVAL BY SPECIES		
Species	Number	% of Total
bay	1	0.22%
big leaf maple	4	0.89%
black oak	40	8.87%
blue oak	4	0.89%
coast live oak	269	59.65%
madrone	2	0.44%
Monterey pine	1	0.22%
valley oak	130	28.82%
Total	451	100.00%

Table 7 is a summary by diameter class of the trees proposed for removal due to building site development.

TABLE 7

RANCHO SAN CARLOS BUILDING SITES TREE REMOVAL BY DIAMETER CLASS						
Diameter Class	6"-11"	12"-17"	18"-23"	24"-29"	30"-35"	36"+
% of Total	25.50%	37.69%	19.29%	9.76%	4.00%	3.76%
Count	115	170	87	44	18	17

Table 8 is a summary by diameter class distribution and tree species of all trees proposed for removal. Approximately ninety-eight (98) percent are less than thirty-six (36) inches in diameter.

Total tree removal for the RSC project as proposed is one thousand four hundred and eighty (1480) trees. A total of one hundred and fifty-one (151) landmark trees are included in the one thousand four hundred and eighty (1480) count. Of the one thousand four hundred and eighty (1480) trees, one thousand and fifty-two (1052) or seventy-one (71) percent are coast live oak. RSC has an estimated 550,000 trees of all species greater than six (6) inches in diameter. The proposed project will result in the loss of approximately 0.27 percent of the total tree population at RSC. Table 8 is a summary of all trees to be removed by species and diameter size classes.

TABLE 8

RANCHO SAN CARLOS TREE REMOVAL FOR ALL AREAS BY SPECIES AND DIAMETER CLASS							
Species	6"-11"	12"-17"	18"-23"	24"-29"	30"-35"	36"+	TOTAL
bay	7	3	5				15
big leaf maple	4		4				8
black oak	25	39	8	10		3	85
blue oak	2	3	2	1			8
coast live oak	426	388	147	64	15	11	1052
madrone	14	8	1	1			24
Monterey Pine			1				1
redwood	1					1	2
sycamore	1		1				2
toyon	1						1
valley oak	101	100	37	22	14	9	283
TOTALS	582	541	206	98	29	24	1480

All tree removal will be the result of construction and no trees are proposed for removal outside the development area.

REFORESTATION PLAN

The RSC project provides a unique setting and opportunity to provide tree planting and forest regeneration. Although the existing forest at RSC is healthy, the number of seedling and sapling size trees is minimal; in some areas, no oak reproduction is present. Tree replacement and replanting will be based on a 3:1 replacement for all trees less than landmark size and 5:1 (replacement:removal) for landmark trees.

To assure genetic integrity, seeds will be gathered from onsite sources. The balance of the species mix will be similar to the species ratio of the trees proposed for removal. The RSC Partnership proposes to construct an onsite nursery for plant propagation, education, and conservation foundation purposes. All seedlings will be grown at that facility.

Timing

As part of the Reforestation Plan, all tree losses will be premitigated. Tree removal will occur primarily because of infrastructure improvements (i.e., roads, driveways and utilities) and residential lot development. Infrastructure improvements will require tree removal early in the project development process. However, tree removal for individual lot development will occur over several years as the lots are individually sold and developed. A goal of the Reforestation Plan is to mitigate for all tree removal at the beginning of project construction before many trees are removed. Pre-mitigating the loss of trees and habitat will allow the reforestation effort to be well under way before many trees are ever removed. The benefits of this approach are multifold:

- Beginning the reestablishment process early will reduce the impact and disruption to the woodland habitat values.
- Monitoring of the reforestation program will verify the success and completion of the mitigation before the project is completed. In addition, a 5-year guarantee will be provided during the plant establishment period.
- Pre-mitigating will achieve a more cohesive reforestation program than would likely be achieved by a piece meal approach spread over many years.

Another primary goal of the reforestation program is to re-create or enhance functioning habitat units. The habitat unit approach to reforestation will enhance and/or re-create oak woodland habitats with understory plant species. Existing degraded habitat units may be enhanced and linked to other habitat types by the reforestation program.

The GIS (Geographic Information System) database used at RSC has been used to help in the selection of candidate mitigation sites. The GIS evaluated the ranch for specific site characteristics including soils, vegetative cover, slope, aspect, elevation, development areas, and grazing units. Using this information, potential mitigation sites were mapped and evaluated.

Site Selection Criteria

Successful implementation of this plan requires the careful selection of appropriate mitigation sites. Sites must possess physical characteristics conducive to the growth and establishment of the desired tree species. Species included in the mitigation planting program include California bay, big leaf maple, black oak, blue oak, coast live oak, madrone, redwood, sycamore, toyon, and valley oak. With this diversity of species, proper habitat and site selection is critical to the success of the program. The following criteria have been evaluated using the GIS system to locate desirable mitigation sites.

- **Aspect.** Generally most native oak species are found growing on north, northeast, southeast and flat areas. These aspects have cooler, moister environments than south and west exposures. Preference has been given to sites with north and east aspects and areas that are flat (no aspect).
- **Proposed Grazing Units.** To avoid damage by cattle (i.e., trampling, grazing and rubbing) to the reforestation planting, sites located inside the proposed grazing units must be fenced or otherwise protected.
- **Soils.** The Soil Conservation Service (SCS) Soil Survey of Monterey County, California was reviewed to select soil types compatible with the growth and establishment of oak and other hardwood species. The following soil types were selected: Chular, Elder, Elkhorn, Gorgonio, Junipero, Lockwood, Los Osos, Pfeiffer, San Andreas, Santa Inez, and Sheridan.
- **Development Areas.** Reforestation sites have been located outside proposed development areas to avoid potential conflicts and to provide better wildlife habitat integration.
- **Slope.** Sites with slopes of 30 percent or less were selected to aid in the installation and success of the reforestation program.
- **Vegetation Types.** Existing vegetation cover types were reviewed to select areas that were in need of enhancement or could be expanded and linked to other habitat types.

Reforestation Sites

The "Potential Reforestation Site Map" (See Map pocket folder) shows the location of the proposed mitigation sites. A total of 2,877 acres are potentially available for the reforestation mitigation program. Overstory tree planting density will vary from twenty (20) to one hundred (100) trees per acre. Approximately 4,800 trees will be planted requiring from 48 to 290 acres of land. Besides the replacement trees, various shrub and herbaceous plants will be planted as understory vegetation. Specific species and planting densities will be determined by the vegetative community that is being reestablished or enhanced.

PROJECT ASSESSMENT

As described in the Project Description section, only a minimal area of the entire RSC holding will be impacted by development. The forest resources cover only part of the development area. The short-term and long-term impacts are two-fold. First, removal of trees may degrade pockets of habitats on a very localized basis. However, the anticipated grading footprints will be relatively small (6,000 to 15,000 square feet) and dispersed, thereby minimizing the overall impact. Second, the mitigation planting will help to reestablish young trees on RSC. This will minimize the long-term negative impact or perhaps result in a net positive impact by creating young vigorous forest conditions which offsets the continuing natural loss of mature tree.

The alternatives to minimize development impacts on the forest resources at RSC have been included in the design development process. Further reduction could only be accomplished by a reduction in the project scope and size. A reduction in project size due to forest resource impacts is not warranted. Through close interaction and cooperation among the project planners, engineers and Registered Professional Foresters in the design of the project, impacts to tree removal have been reduced to an insignificant level (approximately 0.27 percent removal). Further reduction of project scale would result in reduced levels of reforestation, including replanting of presently non-regenerating oak woodlands.

A guiding design principle for the Rancho San Carlos development is the avoidance of impacts where possible. As such, great effort has gone into minimizing tree removal. Building envelopes have been located in areas with minimal tree cover or tree densities that will allow the residences to be designed around the trees. In addition, the existing road network will be upgraded and widened only as needed to meet the appropriate design standards. While road widening requires some tree removal, the impacts are greatly reduced compared to constructing new roads. Road alignments have been adjusted, when possible, to avoid significant trees, groups of trees, and landmark trees.

The following mitigation and protection measures have been developed to offset the unavoidable loss of trees and habitat and to protect residual trees from construction impacts.

TREE PROTECTION GUIDELINES

Young, native trees are generally tolerant of changes in their environment and can usually adapt to construction and landscape changes. However, as trees mature, their environmental tolerance is reduced and significant changes can weaken or kill them (Johnson, 1989).

The root crown and the entire root zone are the most vulnerable parts of a mature tree. Generally the tree's root zone is considered one-third larger than the drip line area. Where possible, no disturbance should occur within this zone.

Common construction related impacts to trees include:

- grade changes caused by cuts and fills within the root zone
- natural drainage changes around trees
- soil compaction in the root zone
- utility trenching within the root zone
- pavement or hard impervious surfaces over the root zone
- excavation for building foundations and septic laterals
- trunk damage caused by construction equipment

The following guidelines will be followed and enforced by the Conservancy to minimize construction related impacts (Harris, 1983).

- All construction managers, heavy equipment operators, and tree cutters will be trained in tree protection procedures prior to the start of construction. Training will be conducted by Registered Professional Foresters.
- Before the start of construction in an area where existing trees are to be retained and protected, exclusion fencing will be installed. Fencing will be installed around the perimeter of the tree's drip line. Drip line is defined as the point where the distance from the edge of the tree canopy to the trunk is the greatest. This radius will be used in establishing the perimeter of the exclusion fencing. Fencing material should be highly visible and sturdy. Construction equipment and activities shall not encroach into the exclusion zone without written authorization from the designated forester.

- By constructing grade control structures (retaining walls at or beyond the drip line and dry wells around the base of trees), cuts and fills within the drip zone of trees will be avoided. If fill soil is placed within the drip zone of any protected tree, proper drainage and aeration must be provided. See Appendix C.
- Grade changes that affect surface and subsurface drainage around the tree should be avoided. Adequate drainage is needed to prevent ponding of water around the base of the trees.
- Trenching within the drip line of the tree should be minimized. An alternative to trenching is to place utilities in a conduit that is bored through the soil. This minimizes root damage. Trenches should never be excavated closer than half the distance from the trunk to the edge of the tree canopy. If trenching within the drip line is unavoidable, the use of a joint trench for all utilities will help minimize the damage caused by multiple trenching. If possible, roots three (3) inches in diameter and larger should not be cut.
- Trees with greater than 30 percent root loss should be provided with supplemental seasonal irrigation. The irrigation should be deep and infrequent, monthly during the growing season. Supplemental irrigation should be provided for one to three years, depending on the degree of root damage or loss. Care should be taken to keep the zone around the root crown (6-10 foot radius around the trunk) dry.
- Avoid soil compaction around the tree. When possible, use a thick layer of crushed rock underlain by a geotextile as an alternative to soil compaction for road base preparation within or near the drip zone of trees. Placement of a thick layer of organic mulch such as wood chips is recommended for areas subject to light traffic. Vehicle and equipment parking and materials storage should not be allowed within the drip line of trees at any time.
- Maintain a minimum six (6) foot radius around the base of the tree that is dry and well drained. Mature native oaks should not receive regular summer irrigation unless a tree has suffered significant root loss; then the irrigation should be deep and infrequent.
- If paving must be placed within the drip zone of a tree, a permeable pavement should be used. Avoid paving within a radius of six (6) feet around the base of any tree.
- Crown thinning to compensate for root loss should be avoided.

Landmark Trees

As defined in Chapter 16.60.030E of the Monterey County Code, a **landmark oak tree** is any native oak tree that measures twenty-four (24) inches or larger in diameter measured two (2) feet above the ground. In addition, trees that are visually significant, historically significant or exemplary of their species are also classified as landmark trees. Special emphasis has been placed on preserving and protecting landmark trees because of their significant wildlife, scenic and historic values.

Avoidance is the primary measure used to preserve and protect landmark trees. Only those trees that are a safety hazards or cannot be avoided will be removed. In addition, removal may be warranted when preservation would require the removal of many other healthy non landmark trees. Where feasible, road and driveway alignments have been adjusted to avoid landmark trees specifically and all trees in general.

Within the areas proposed for development of roads or building sites, each landmark tree will have an exclosure fence erected around its drip line at the widest point between the trunk and the edge of the canopy. Due to the age associated with most landmark trees, it is important to maintain a minimum amount of disturbance and change to the environment of the tree. The area within the exclosure fence is to remain off limits to construction activities and equipment unless prior written authorization is given by the designated forester.

FOREST IMPROVEMENT

In areas surrounding development or other use areas (trails, roads, vistas, etc.) the forest resources should be inspected for hazard trees or hazardous branches. Only in those areas should these trees be removed or otherwise treated to improve the safety of the area. All removal and pruning should be under the direction of a Registered Forester or qualified resource ecologist.

Exotic plant removal is recommended for the short-term and long-term. Scotch broom has invaded many areas of the ranch. This species and others can be highly invasive and detrimental to the native plant communities. In addition, the fire risk may be increased and the aesthetic qualities may be reduced. Control is accomplished by cutting, spraying, and/or burning. Repeat treatments are necessary for complete eradication.

Control burning is an excellent tool to maintain the vigor of the forest, enhance wildlife habitat values and to decrease wildfire risk. At RSC, fire is a natural element of the forest ecology. Burning will increase nutrient turnover, enhance herbaceous growth, control poison oak, and enhance forest reproduction. An intensive and professionally guided program of controlled burning is recommended for both the forest resource types and the chaparral types. The chaparral types at RSC have been burned over several times and are now decadent and prime for fire management application.

HOMEOWNER OAK TREE MAINTENANCE GUIDELINES

The following recommendations are for homeowner maintenance of oak trees within the landscaped area of each residence. Each homeowner will receive a management guide for landowners published by the University of California titled, "Living Among the Oaks." In addition to this publication, the following guidelines will be provided to assist the homeowner in the proper care of their native oaks. This guidance will ensure the longevity of the oaks and compatibility with landscaping plans.

Pruning

Native oaks require very little pruning. Mature oaks may benefit from removal of dead, diseased, or weakened branches. Thinning or "daylighting", the removal of ten to twenty percent of the leaf area, can also benefit the tree by allowing more sunlight to penetrate the canopy. It is important to prune when the tree is dormant. Heavy pruning of evergreen oaks should be performed during July and August. Deciduous oaks are best pruned during December and January. Light pruning can be performed at any time of the year. When pruning is done, it is important to do it correctly. Avoid excessive pruning, do not leave stubs, and do not paint the pruning wounds. Most major pruning is best left to professional tree care specialists who are properly trained and equipped.

Watering

Native oak trees are well adapted to the long dry summers of California and normally do not need supplemental irrigation. Many species of native oaks (i.e. coast live oak) are highly susceptible to root disease when they are subjected to summer irrigation. The most vulnerable portion of the oaks root zoning is the area extending out six to ten feet from the trunk of the tree. As a general guide, summer irrigation should be avoided within the inner third (one third of the distance from the trunk to canopy drip line) of the root zone. Avoid planting plants with high water requirements beneath the canopy of native oaks.

During extended drought periods (i.e. 1986-92) bimonthly supplemental irrigation can be beneficial, however the irrigation should be restricted to the outer two-thirds of the root zone. Supplemental watering during drought periods can help maintain tree vigor and resistance to insect attack.

Fertilizing

Native oaks generally do not require supplemental fertilizer; they receive natural fertilizer from their decomposing leaf litter. Trees under stress due to disease, root pruning, or lack of natural fertilizer may benefit from an annual fertilizer application. Fertilizers should be applied only in the outer two-thirds of the root zone. Nitrogen is the nutrient most often found to be deficient in oaks. Nitrogen application should be at a rate of two to four pounds of actual nitrogen per one thousand square feet of surface area.

BIBLIOGRAPHY

BioSystems Analysis, Inc., 1992. Rancho San Carlos, State of the Biota Report.

Cheatham, N. H. and J. R. Haller, 1975. An annotated list of California Habitat types. Unpublished manuscript prepared for the University of California Natural Land and Water Reserves System.

Harris, Richard W., 1983. Arboriculture - Care of Trees, Shrubs and Vines in the Landscape Prentice-Hall, Englewood Cliffs, New Jersey.

Holland, Robert F., 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Game, Sacramento, California. Unpublished.

Johnson, S., 1989. University of California Cooperative Extension at Berkeley, Natural Resources Program, Living Among the Oaks.

Monterey County, Soil Survey of, United States Department of Agriculture, Soil Conservation Service (SCS), 1978.

Munz, P. A., and D. D. Keck, 1959. A California Flora. University of California Press, Berkeley, California.

Pavlik, Bruce M., and Pamela C. Muick, Johnson, Sharon, Popper, Marjorie, 1991. Oaks of California, Cachuma Press, Los Olivos, California.

This Plan is intended to create a permanent forest management program for the site. It is understood, therefore, that in the event of a change in ownership, this Plan shall be as binding on the new owner(s) as it is on the present owner. As a permanent management program, this Plan will be conveyed to the future owner upon sale of the property.

A circular professional seal for a forester. The outer ring contains the text "REGISTERED PROFESSIONAL FORESTER" at the top and "STATE OF CALIFORNIA" at the bottom, separated by two five-pointed stars. The center of the seal contains the name "RALPH S. OSTERLING" and the license number "#38".

Date _____

X

Date _____

X

Date _____

MAP POCKET

POTENTIAL REFORESTATION AREA MAP

APPENDIX A

LIST OF MAJOR WOODY PLANT SPECIES

MAJOR WOODY PLANTS

TREES

LATIN NAME

Acer macrophyllum
Aesculus californica
Alnus rhombifolia
Arbutus menziesii
Cypressus macrocarpa
Juglans hindsii
Lithocarpus densiflorus
Pinus radiata
Pinus ponderosa
Platanus racemosa
Pseudotsuga menziesii
Quercus lobata
Quercus dumosa
Quercus kelloggii
Quercus wislizenii var. wislizenii
Quercus agrifolia
Quercus chrysolepis
Quercus douglasii
Salix spp.
Sequoia sempervirens
Umbrellularia californica

COMMON NAME

big-leaf maple
California buckeye
white alder
madrone
Monterey cypress
California black walnut
tanbark oak
Monterey pine
ponderosa pine
sycamore
Douglas fir
valley oak
scrub oak
black oak
interior live oak
coast live oak
canyon live oak
blue oak
willow
coast redwood
California bay

SHRUBS

Adenostoma fasciculatum
Arctostaphylos tomentosa spp. tomentosa
Artemisia californica
Baccharis pilularis var. consanguinea
Ceanothus thyrsiflorus
Garrya elliptica
Heteromeles arbutifolia
Holodiscus discolor var. discolor
Lonicera spp.
Prunus virginiana var. demissa
Rhamnus californica ssp. californica
Rhamnus crocea spp. crocea
Toxicodendron diversilobum
Ribes divaricatum var. pubiflorum
Sambucus mexicana
Symphoricarpos mollis
Vaccinium ovatum

chamise
shaggy-barked manzanita
California sage brush
coyote bush
blue blossom
silk tassel bush
toyon
ocean spray
wild honeysuckle
western choke cherry
coffeeberry
redberry, buckthorn
poison oak
(no common name)
elderberry
snowberry
California huckleberry

**RANCHO SAN CARLOS
ROAD AND DRIVEWAY
TREE REMOVAL SUMMARY**

Location	Species	6"-11"	12"-17"	18"-23"	24"-29"	30"-35"	36"+	Species Count	Total Count	Lineal Ft. Rd.	Tree Loss/1,000 Ft. Rd.
Pronghorn Run	valley oak	4	1					5	5	2100	2.4
Black Mtn. Trail	coast live oak	2	1					3	4	6500	0.6
	valley oak	1						1			
Chamisal Pass	bay	1						1	151	33500	4.5
	coast live oak	62	72	7	4	1	2	148			
	toyon	1						1			
	valley oak					1		1			
Steelhead Run	coast live oak	7	3	1				11	11	1470	7.5
Rumsen Trace	coast live oak		3	3				6	7	850	*8.2
	valley oak		1					1			
Vista Cielo	coast live oak	12	2	1				15	21	4550	4.6
	valley oak	2	4					6			
Garzas Trail	coast live oak	10	6	5		1		22	28	3800	7.4
	valley oak		2	1	2		1	6			
Long Ridge Trail	bay		1					1	180	14570	12.4
	black oak				1			1			
	coast live oak	24	27	37	14	3		105			
	valley oak	26	28	8	6	4	1	73			
M-10	coast live oak	1	2		1			4	4	1500	2.7
M-19	blue oak	2	2					4	4	150	*26.7
M-23	black oak	1						1	6	200	*30.0
	coast live oak	3	2					5			
M-29	coast live oak	1						1	1	1200	0.8
M-3	coast live oak	2		1				3	3	700	*4.3
M-6 & 7	coast live oak	6	3					9	9	1100	8.2
M-8	coast live oak	10	8	1				19	20	2500	8.0
	redwood	1						1			
PT-1	coast live oak	8	3					11	11	900	*12.2
Potrero Trail	coast live oak	47	31	14	4			96	96	14500	6.6
Rancho San Carlos Rd.	bay	1		1				2	26	48500	0.5
	coast live oak	15	7		1			23			
	big leaf maple			1				1			
Arroyo Sequoia	bay	1	1	1				3	45	7750	5.8
	big leaf maple	1						1			
	black oak		2	1	2			5			
	coast live oak	7	9	3	2			21			
	valley oak	6	9					15			
SC-3 & 4	coast live oak	1						1	13	1500	8.7
	valley oak	10		1			1	12			
SC-31	bay	2		1				3	6	1200	5.0

**RANCHO SAN CARLOS
ROAD AND DRIVEWAY
TREE REMOVAL SUMMARY**

Location	Species	6"-11"	12"-17"	18"-23"	24"-29"	30"-35"	36"+	Species Count	Total Count	Lineal Ft. Rd.	Tree Loss/1,000 Ft. Rd.
	coast live oak	3						3			
SC-61, 62, 63	bay	2	1					3	17	2100	8.1
	big leaf maple	1						1			
	black oak			1				1			
	coast live oak	9	2					11			
	valley oak	1						1			
SC-66 & 67	coast live oak	1	2	3				6	6	100	*50.0
SC-89	coast live oak	3	1					4	4	400	*10.0
SC-90	coast live oak	3	2	2				7	8	1500	5.3
	valley oak		1					1			
SC-92	valley oak	2						2	2	1900	1.1
SF-21	coast live oak		1		1			2	2		
SF-32	coast live oak	2	5					7	8	1800	4.4
	maple			1				1			
SF-33	black oak		2		1			3	42	2100	20.0
	coast live oak	8	3	4				15			
	madrone	14	5					19			
	valley oak	2	1	1	1			5			
SF-34	coast live oak	4	4		2			10	10	400	*25.0
SF-5	coast live oak	2	3					5	5	700	*7.1
SF-6	coast live oak	3	6	1				10	23	1800	12.8
	valley oak	2	9	1	1			13			
SF-7	black oak	2	3					5	32	1850	17.3
	coast live oak	8	7	5	3			23			
	madrone			1				1			
	valley oak	2	1					3			
SJ-10	coast live oak	2	1	1				4	4	1000	4.0
SJ-11	coast live oak	2						2	2	1800	1.1
SJ-12	coast live oak	3	2	1				6	6	600	*10.0
SJ-17	coast live oak	10	3	1				14	19	2950	6.4
	sycamore	1		1				2			
	valley oak	2				1		3			
SJ-2	coast live oak	8	1					9	9	400	*22.5
SJ-20	coast live oak	2	4	2	1		1	10	11	2350	4.7
	redwood						1	1			
SJ-9	coast live oak	18	10	2	1			31	31	1300	23.8
Touche Pass	coast live oak	7	1					8	9	10600	0.8
	valley oak	1						1			
Tank 13-1	coast live oak	28	20					48	49	3300	14.8
	madrone		1					1			

**RANCHO SAN CARLOS
ROAD AND DRIVEWAY
TREE REMOVAL SUMMARY**

Location	Species	6"-11"	12"-17"	18"-23"	24"-29"	30"-35"	36"+	Species Count	Total Count	Lineal Ft. Rd.	Tree Loss/1,000 Ft. Rd.
Vuelo Palomas	black oak	11	14		4			29	54	2950	18.2
	coast live oak	5	11	2	2			20			
	madrone		1					1			
	valley oak	2	1	1				4			
Vuelo Palomas Ext.	coast live oak	13	12					25	25	9350	2.7
TOTALS		467	371	119	54	11	7	1029	1029	200300	5.1

**RANCHO SAN CARLOS
BUILDING SITE
TREE REMOVAL SUMMARY**

Location	Species	6"-11"	12"-17"	18"-23"	24"-29"	30"-35"	36"+	Species Count	Total Count
Lodge Site	coast live oak						1	1	5
	valley oak		2	1	1			4	
M-1	coast live oak				1			1	1
M-6	coast live oak	3						3	3
M-16	coast live oak	1	3		1			5	5
M-17	coast live oak	2	5	1				8	8
M-18	coast live oak	6	4					10	11
	madrone				1			1	
M-19	black oak			1	1			2	14
	valley oak	3	5			1		12	
M-21	valley oak	3	2					5	5
M-22	valley oak		1	1	1			3	3
M-23	black oak	6	8	2				16	22
	coast live oak	1	3				1	5	
	valley oak	1						1	
M-24	black oak	4	8					12	19
	coast live oak	2	5					7	
M-25	black oak		1	1				2	11
	coast live oak	4	4	1				9	
M-27	coast live oak	1						1	11
	valley oak	6	2	2				10	
M-28	black oak			1				1	5
	coast live oak		3					3	
	valley oak			1				1	
M-30	coast live oak		2					2	2
M-31	coast live oak		6		1			7	7
M-33	coast live oak			1	1			2	2
M-34	coast live oak	1		1				2	2
M-35	coast live oak	1		1				2	3
	valley oak			1				1	
PT-15	coast live oak					1		1	1
SC-28	coast live oak	2	1	1	2			6	6
SC-31	coast live oak			1	1			2	2
SC-33	valley oak				1			1	1
SC-42	coast live oak			1				1	1
SC-43	coast live oak				1			1	1
SC-46	coast live oak	3	2	1	1			7	7
SC-47	coast live oak			3				3	3
SC-48	big leaf maple	2						2	3
	coast live oak	1						1	

**RANCHO SAN CARLOS
BUILDING SITE
TREE REMOVAL SUMMARY**

Location	Species	6"-11"	12"-17"	18"-23"	24"-29"	30"-35"	36"+	Species Count	Total Count
SC-49	valley oak		1					1	1
SC-50	black oak		1					1	7
	valley oak	1	1	3	1			6	
SC-51	valley oak	1	1					2	2
SC-53	valley oak						1	1	1
SC-56	coast live oak		1					1	3
	valley oak			2				2	
SC-57	coast live oak	1		1				2	4
	valley oak	1	1					2	
SC-58	coast live oak	2	3					5	10
	valley oak	3	2					5	
SC-59	black oak				1			1	1
SC-60	valley oak		2					2	2
SC-63	coast live oak		1					1	2
	valley oak				1			1	
SC-65	coast live oak	2	2	1	1	1		7	7
SC-67	coast live oak		1	1				2	3
	valley oak			1				1	
SC-69	valley oak		3					3	3
SC-70	valley oak		1				1	2	2
SC-72	coast live oak		1	1				2	11
	valley oak	2	4	3				9	
SC-73	valley oak						2	2	2
SC-74	valley oak		1	1				2	2
SC-79	valley oak	4	1	2	2			9	9
SC-84	valley oak					1		1	1
SC-85	valley oak		3	1	1			5	5
SC-87	coast live oak	1	1					2	12
	valley oak	5	1	3	1			10	
SC-89	coast live oak		2		1			3	3
SC-90	coast live oak	1	1	1				3	4
	Monterey pine			1				1	
SF-5	coast live oak	3	1	5		1		10	10
SF-7	black oak						1	1	13
	coast live oak			1				1	
	valley oak	3	4	1		2	1	11	
SF-11	coast live oak	2	1					3	3
SF-13	coast live oak	1	2	2	1			6	7
	valley oak					1		1	
SF-15	coast live oak		1		1			2	4

**RANCHO SAN CARLOS
BUILDING SITE
TREE REMOVAL SUMMARY**

Location	Species	6"-11"	12"-17"	18"-23"	24"-29"	30"-35"	36"+	Species Count	Total Count
	madrone		1					1	
	valley oak		1					1	
SF-19	coast live oak	5	5	3	2			15	17
	valley oak	2						2	
SF-20	coast live oak						1	1	1
SF-21	coast live oak		1	1				2	2
SF-28	big leaf maple			1				1	11
	coast live oak	2	5	1	1		1	10	
SF-29	big leaf maple			1				1	11
	coast live oak	2	5	1	1		1	10	
SF-30	black oak						1	1	12
	coast live oak	3	1	2	2	1	1	10	
	valley oak			1				1	
SF-31	black oak			1				1	19
	coast live oak	6	8	1	2			17	
	valley oak		1					1	
SF-34	black oak	1						1	24
	coast live oak	4	8	3		1	2	18	
	valley oak		2		2	1		5	
SF-43	black oak						1	1	1
SF-45	valley oak						1	1	1
SF-46	coast live oak	1						1	1
SJ-6	coast live oak		4	2	3			9	9
SJ-7	coast live oak		1	2		2		5	5
SJ-12	coast live oak		2	1				3	3
SJ-14	bay			1				1	1
SJ-15	coast live oak		3	3	1			7	7
SJ-17	coast live oak		1	4	1	1		7	7
SJ-18	coast live oak			1	1	1		3	3
SJ-20	coast live oak		3		1			4	4
T-1	coast live oak		4	1		1		6	6
T-2	coast live oak		1					1	1
	valley oak					1		1	1
T-13	blue oak			2	1			3	3
T-19	blue oak		1					1	1
T-20	valley oak					1		1	1
T-30	valley oak				1			1	1
TOTALS		115	170	87	44	18	17	451	451

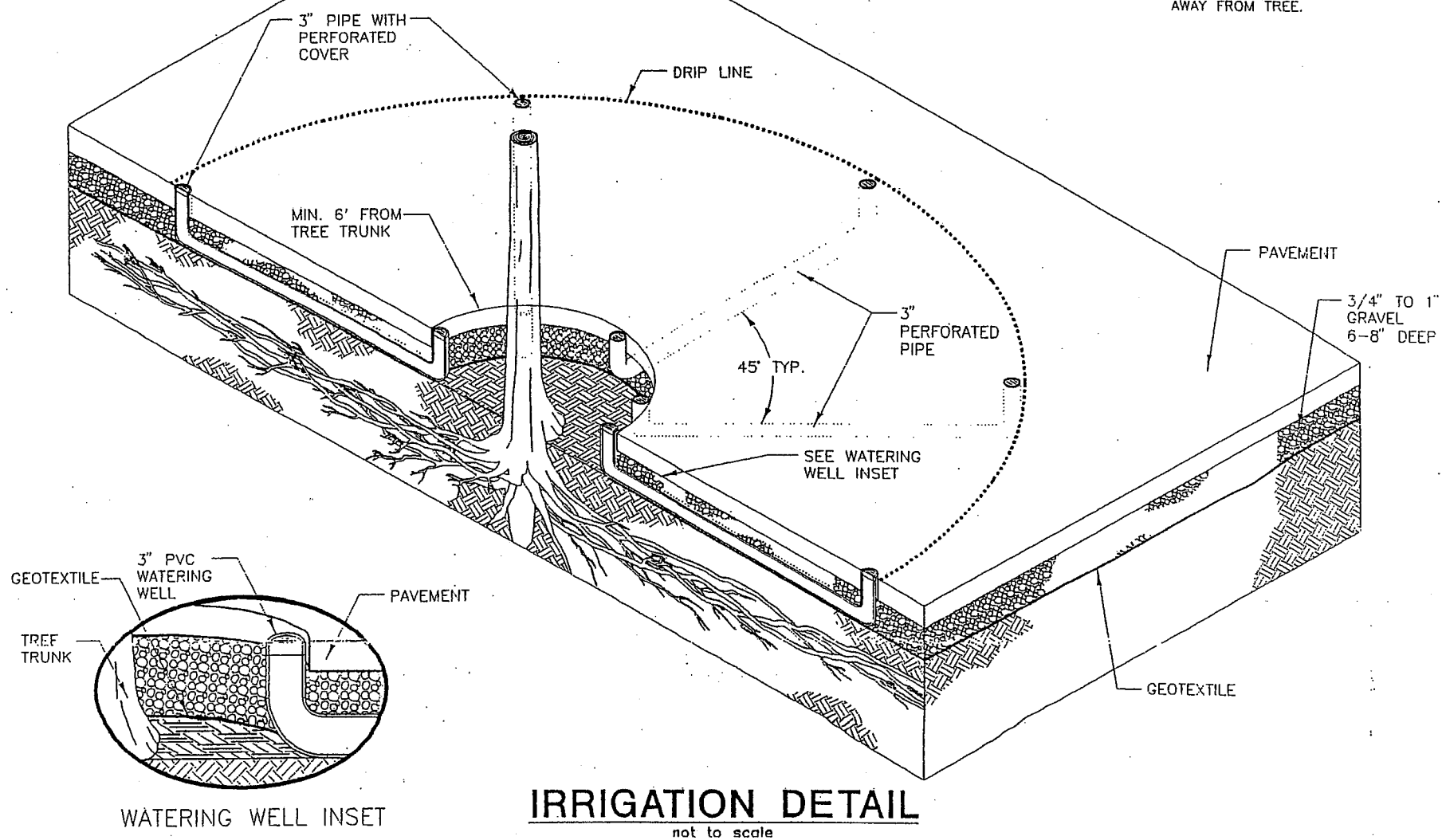
APPENDIX C

TREE PROTECTION DETAIL DRAWINGS

FOREST MANAGEMENT PLAN
RANCHO SAN CARLOS
Prepared by
Ralph Osterling Consultants, Inc.
February 18, 1994

**RALPH OSTERLING
CONSULTANTS, INC.**

NOTES: 1. BOTH PAVEMENT AND GROUND SURFACE HAS A MIN. 3% SLOPE AWAY FROM TREE.



January 27, 1994



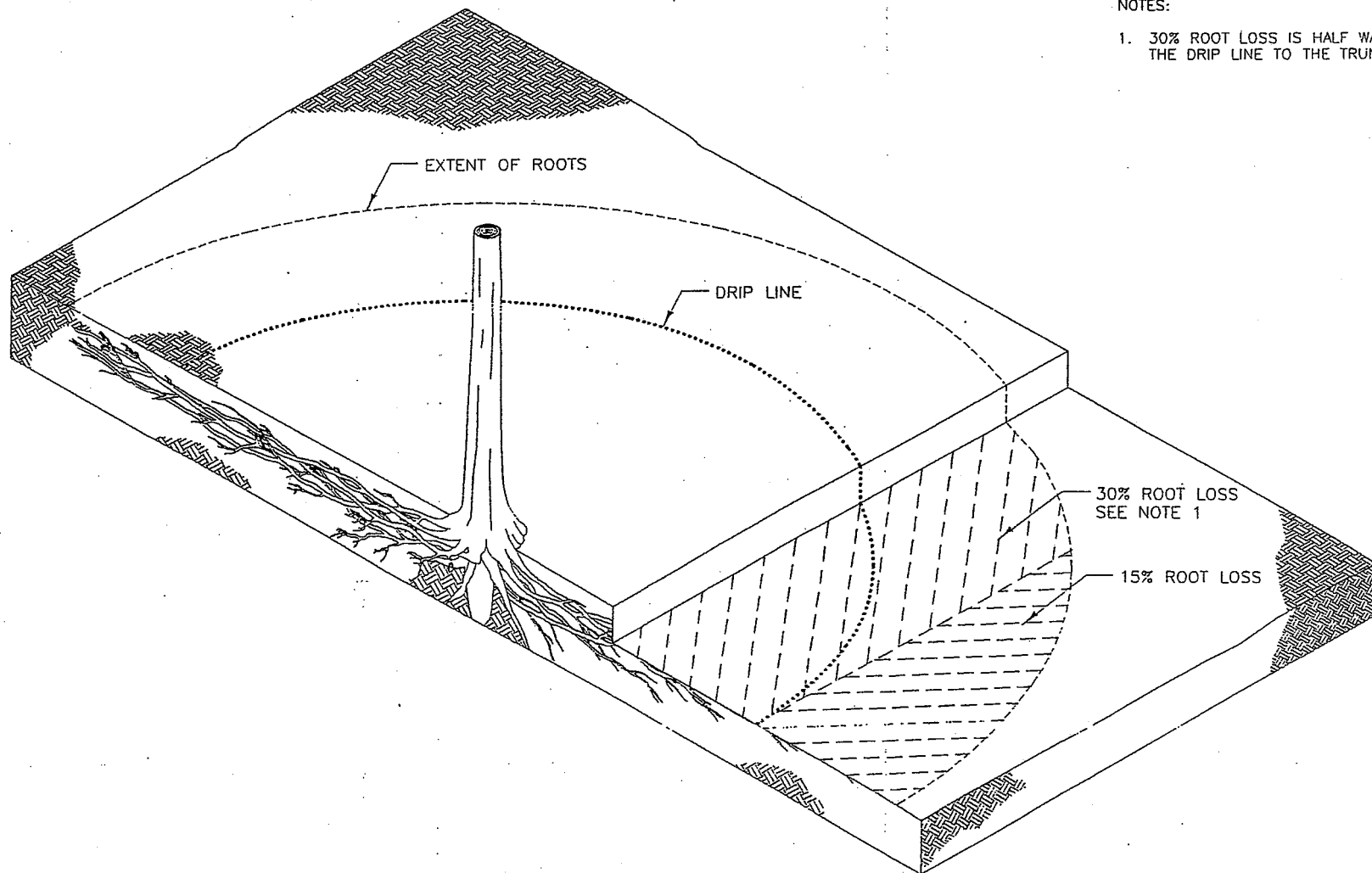
**RALPH OSTERLING
CONSULTANTS, INC.**

1650 Borel Place, Suite 204
San Mateo, California 94402
(415) 573-8733

**TYPICAL AERATION AND
IRRIGATION SYSTEM**

NOTES:

1. 30% ROOT LOSS IS HALF WAY FROM THE DRIP LINE TO THE TRUNK.



CROSS SECTION

not to scale

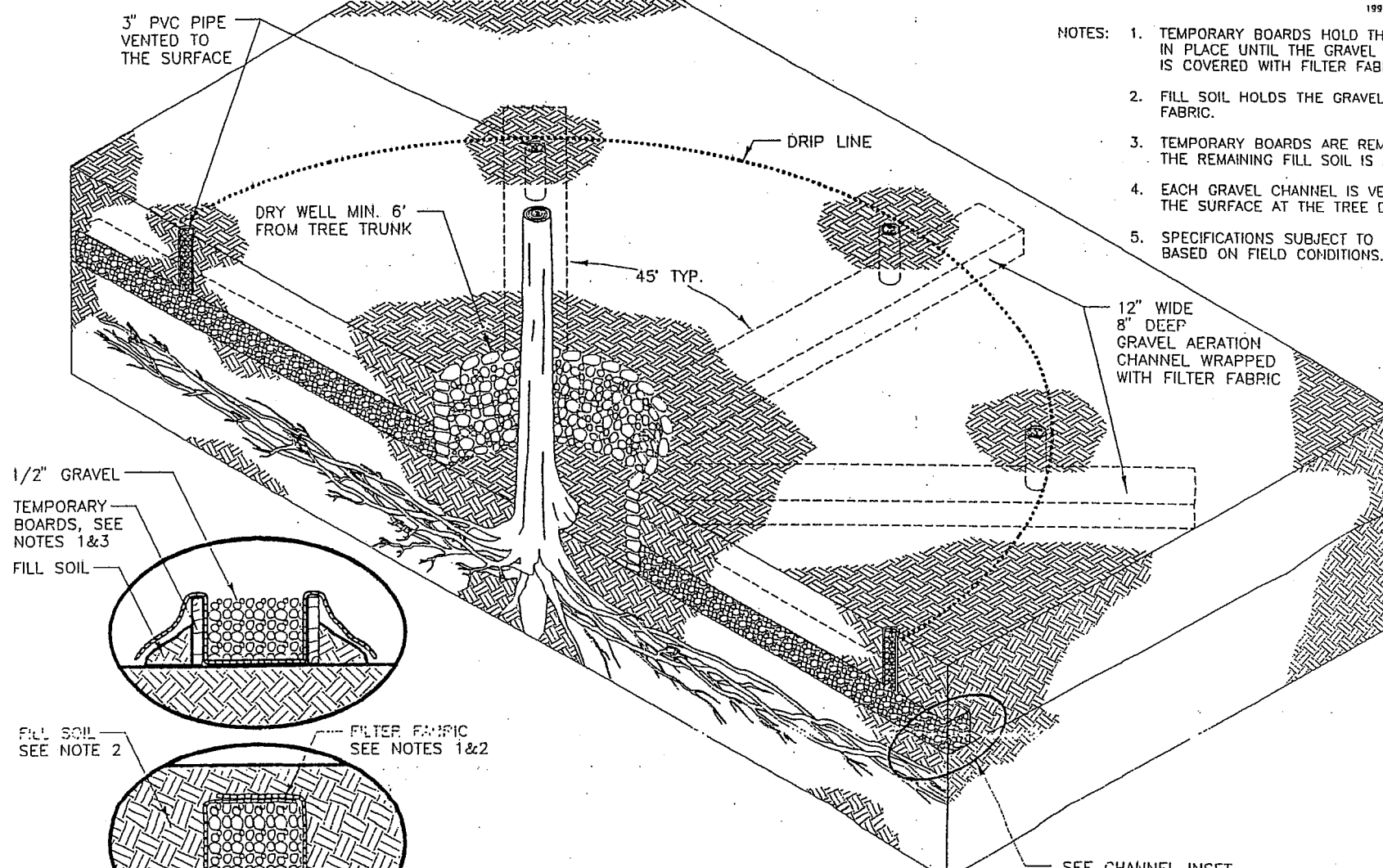
January 27, 1994



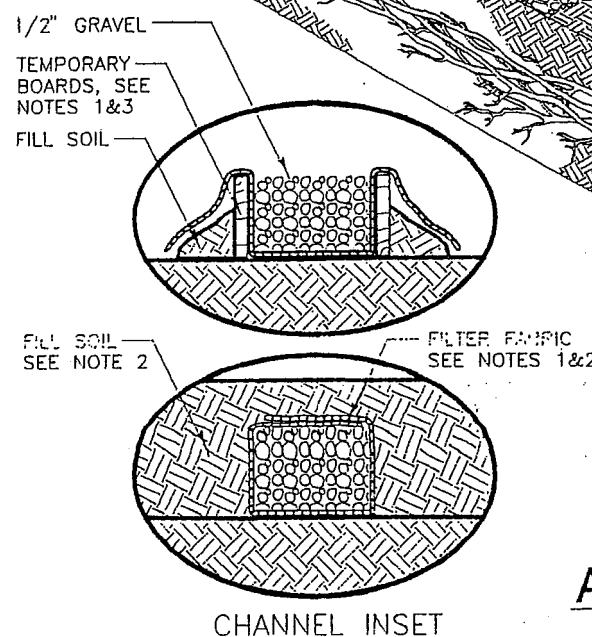
**RALPH OSTERLING
CONSULTANTS, INC.**

1650 Borel Place, Suite 204
San Mateo, California 94402
(415) 573-8733

**ROOT LOSS DIAGRAM DUE TO
EXCAVATION AND TRENCHING**



- NOTES:
1. TEMPORARY BOARDS HOLD THE GRAVEL IN PLACE UNTIL THE GRAVEL CHANNEL IS COVERED WITH FILTER FABRIC.
 2. FILL SOIL HOLDS THE GRAVEL AND FILTER FABRIC.
 3. TEMPORARY BOARDS ARE REMOVED BEFORE THE REMAINING FILL SOIL IS APPLIED.
 4. EACH GRAVEL CHANNEL IS VENTED TO THE SURFACE AT THE TREE DRIP LINE.
 5. SPECIFICATIONS SUBJECT TO CHANGE BASED ON FIELD CONDITIONS.



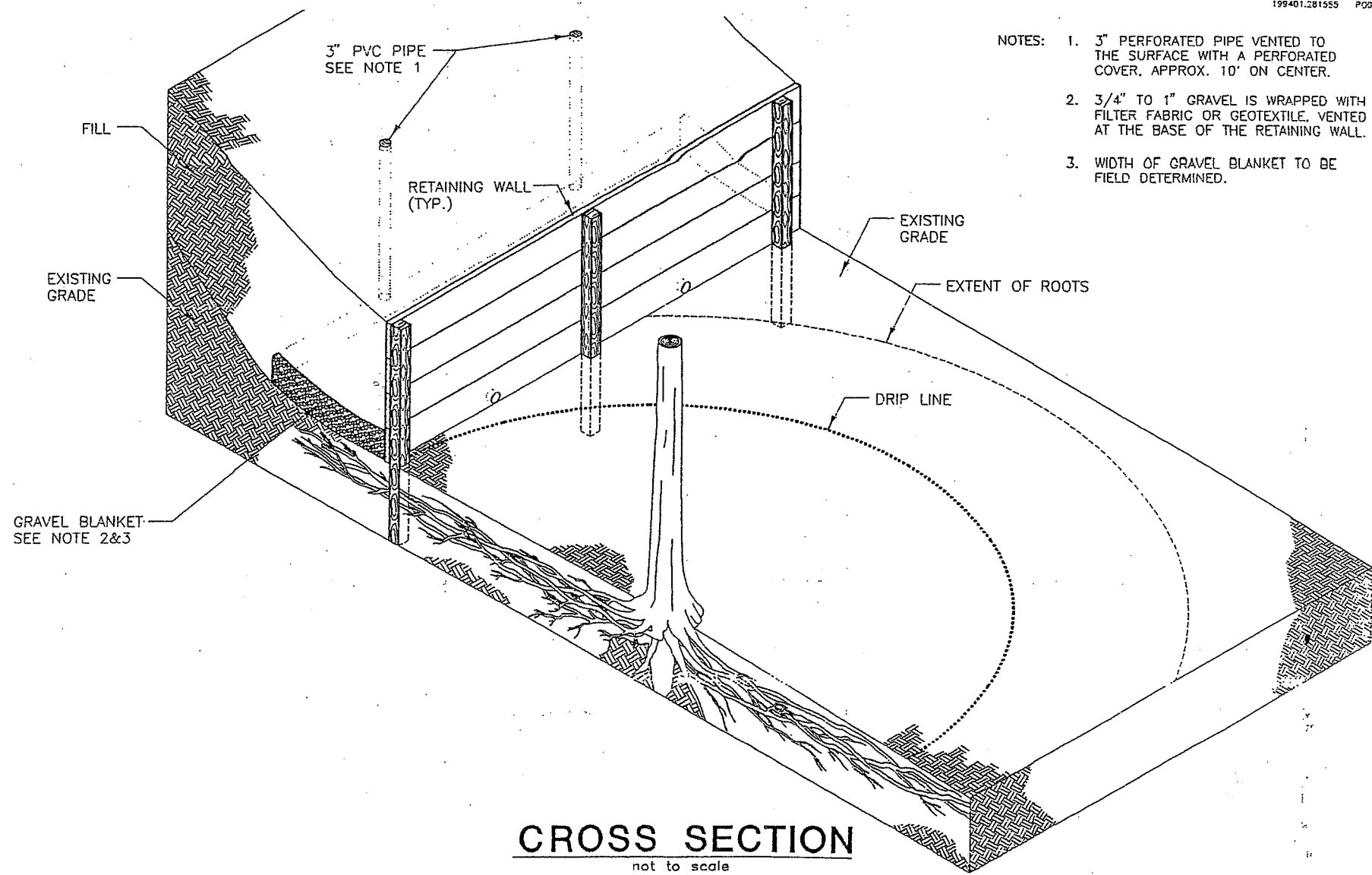
DRY WELL AND AERATION SPOKE DETAIL not to scale

January 27, 1994



**RALPH OSTERLING
CONSULTANTS, INC.**
1650 Borel Place, Suite 204
San Mateo, California 94402
(415) 573-8733

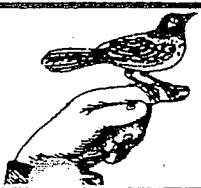
TYPICAL DRY WELL INSTALLATION



- NOTES:
1. 3" PERFORATED PIPE VENTED TO THE SURFACE WITH A PERFORATED COVER, APPROX. 10' ON CENTER.
 2. 3/4" TO 1" GRAVEL IS WRAPPED WITH FILTER FABRIC OR GEOTEXTILE, VENTED AT THE BASE OF THE RETAINING WALL.
 3. WIDTH OF GRAVEL BLANKET TO BE FIELD DETERMINED.

CROSS SECTION
not to scale

January 28, 1994



**RALPH OSTERLING
CONSULTANTS, INC.**
1650 Borel Place, Suite 204
San Mateo, California 94402
(415) 573-8733

**TYPICAL
RETAINING WALL**

APPENDIX D

ROAD AND DRIVEWAY TREE SURVEY DATA

FOREST MANAGEMENT PLAN
RANCHO SAN CARLOS
Prepared by
Ralph Osterling Consultants, Inc.
February 18, 1994

**RALPH OSTERLING
CONSULTANTS, INC.**

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Pronghorn Run	2+40	10		valley oak	15.00		good	
Pronghorn Run	2+50	10		valley oak	10.00		good	
Pronghorn Run	2+51	8		valley oak	8.00		good	
Pronghorn Run	2+65	10		valley oak	10.00		good	
Pronghorn Run	2+70	+	+	valley oak	8.00		good	
Black Mtn. Trail	1+37			8 valley oak	9.00		fair	
Black Mtn. Trail	1+60	+	+	coast live oak	8.00		good	
Black Mtn. Trail	1+66		13	coast live oak	17.00		good	
Black Mtn. Trail	1+75		10	coast live oak	9.00		fair	
Chamisal Pass	3+55		8	coast live oak	13.00		fair	multi w/ 9", 7" trunks
Chamisal Pass	3+55	12		coast live oak	12.00		poor	undercut
Chamisal Pass	3+75	12		coast live oak	6.00		poor	
Chamisal Pass	3+80	12		coast live oak	12.00		poor	undercut
Chamisal Pass	3+90		12	coast live oak	12.00		good	
Chamisal Pass	3+90	14		coast live oak	8.00		fair	
Chamisal Pass	4+05	12		coast live oak	14.00		fair	undercut
Chamisal Pass	4+15	9		coast live oak	6.00		fair	undercut
Chamisal Pass	4+30	11		coast live oak	14.00		fair	undercut
Chamisal Pass	4+40	13		coast live oak	10.00		poor	multi w/ 8", 8", 6" trunks - undercut
Chamisal Pass	4+75	13		coast live oak	20.00		good	undercut
Chamisal Pass	4+80	13		coast live oak	14.00		fair	
Chamisal Pass	6+10		8	coast live oak	18.00		fair	road fill
Chamisal Pass	6+20	30		coast live oak	32.00	X	good	
Chamisal Pass	6+25	30		coast live oak	8.00		fair	
Chamisal Pass	6+40	16		coast live oak	14.00		fair	
Chamisal Pass	6+50		10	coast live oak	12.00		fair	road fill
Chamisal Pass	6+50		9	coast live oak	12.00		good	road fill
Chamisal Pass	6+90		10	coast live oak	10.00		fair	road fill
Chamisal Pass	7+00		10	coast live oak	16.00		fair	multi w/ 12", 14", 16", 16" trunks - road fill
Chamisal Pass	7+25	7		coast live oak	12.00		fair	multi w/ 10", 8", 6", 6", trunks
Chamisal Pass	7+50		7	coast live oak	16.00		fair	
Chamisal Pass	7+55	8		coast live oak	8.00		fair	undercut
Chamisal Pass	8+00		10	coast live oak	10.00		fair	multi w/ 8" trunk - road fill
Chamisal Pass	8+15		8	coast live oak	12.00		fair	road fill
Chamisal Pass	8+20		10	coast live oak	12.00		fair	road fill
Chamisal Pass	10+00	11		coast live oak	12.00		good	road fill
Chamisal Pass	10+02	7		coast live oak	16.00		good	
Chamisal Pass	10+03		6	coast live oak	22.00		good	
Chamisal Pass	10+20		12	coast live oak	14.00		good	
Chamisal Pass	10+25	16		coast live oak	18.00		fair	
Chamisal Pass	10+35	10		coast live oak	6.00		poor	undercut
Chamisal Pass	10+40	16		coast live oak	16.00		fair	multi w/ 14", 14" trunks

**RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY**

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Chamisal Pass	10+65	16		coast live oak	12.00		fair	multi w/ 12", 10" trunks
Chamisal Pass	10+90	19		coast live oak	11.00		fair	multi w/ 11" trunk
Chamisal Pass	10+94	14		coast live oak	9.00		fair	
Chamisal Pass	11+05	14		coast live oak	12.00		fair	multi w/ 12" trunk
Chamisal Pass	11+15	12		coast live oak	14.00		fair	
Chamisal Pass	11+45		5	coast live oak	16.00		poor	road fill
Chamisal Pass	11+60	11		coast live oak	8.00		fair	multi w/ 6" trunk
Chamisal Pass	11+75		8	coast live oak	16.00		fair	multi w/ 14", 12" trunks
Chamisal Pass	11+90	13		coast live oak	15.00		fair	multi w/ 9", 12" trunks
Chamisal Pass	12+20	17		coast live oak	14.00		good	multi w/ 12" trunk
Chamisal Pass	12+70		8	coast live oak	10.00		fair	multi w/ 10" trunk
Chamisal Pass	12+90		9	coast live oak	12.00		fair	
Chamisal Pass	13+00		9	coast live oak	14.00		fair	
Chamisal Pass	14+30	16		coast live oak	16.00		fair	multi w/ 14", 12" trunks - undercut
Chamisal Pass	14+70		14	coast live oak	16.00		good	multi w/ 14", 14" trunks - road fill
Chamisal Pass	14+85	14		coast live oak	16.00		good	multi w/ 14", 14", 8" trunks - undercut
Chamisal Pass	15+15	17		coast live oak	16.00		fair	
Chamisal Pass	15+73	7		coast live oak	10.00		good	undercut
Chamisal Pass	16+00		7	coast live oak	14.00		fair	road fill
Chamisal Pass	16+30	15		coast live oak	12.00		fair	multi w/ 10", 10" trunks
Chamisal Pass	16+50	15		coast live oak	12.00		fair	multi w/ 10" trunk
Chamisal Pass	17+20	14		coast live oak	12.00		good	multi w/ 10", 12" trunks
Chamisal Pass	18+15	12		coast live oak	12.00		poor	undercut
Chamisal Pass	18+45	23		coast live oak	12.00		fair	multi w/ 10" trunk
Chamisal Pass	18+80	22		coast live oak	14.00		good	multi w/ 6" trunk
Chamisal Pass	18+90	21		coast live oak	10.00		good	
Chamisal Pass	18+98	17		coast live oak	14.00		fair	
Chamisal Pass	19+20	14		coast live oak	8.00		fair	
Chamisal Pass	19+85	11		coast live oak	8.00		fair	
Chamisal Pass	19+90	14		coast live oak	10.00		good	
Chamisal Pass	19+95	21		coast live oak	12.00		good	multi w/ 10", 8" trunks
Chamisal Pass	20+10	10		coast live oak	16.00		good	undercut
Chamisal Pass	20+30	10		coast live oak	6.00		good	undercut
Chamisal Pass	20+60	18		coast live oak	12.00		good	
Chamisal Pass	20+75	13		coast live oak	10.00		fair	undercut
Chamisal Pass	21+00	15		coast live oak	8.00		good	multi w/ 7", 7" trunks
Chamisal Pass	21+15	14		coast live oak	16.00		fair	
Chamisal Pass	21+45	14		coast live oak	10.00		fair	
Chamisal Pass	21+65	10		coast live oak	18.00		fair	undercut
Chamisal Pass	22+95	17		coast live oak	12.00		fair	
Chamisal Pass	23+10	17		coast live oak	9.00		fair	multi w/ 6" trunk
Chamisal Pass	23+30	12		coast live oak	8.00		fair	

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Chamisal Pass	23+35	10		coast live oak	6.00		poor	
Chamisal Pass	23+55	13		coast live oak	8.00		fair	
Chamisal Pass	23+90	11		coast live oak	14.00		fair	
Chamisal Pass	24+15	15		coast live oak	14.00		good	multi w/ 12" trunk
Chamisal Pass	24+75	17		coast live oak	16.00		fair	multi w/ 14" trunk
Chamisal Pass	24+90	17		coast live oak	8.00		fair	
Chamisal Pass	25+20	12		coast live oak	24.00	X	fair	
Chamisal Pass	26+15	16		coast live oak	10.00		fair	
Chamisal Pass	26+35	16		coast live oak	16.00		fair	
Chamisal Pass	26+70		12	coast live oak	12.00		poor	
Chamisal Pass	26+71	13		coast live oak	6.00		fair	
Chamisal Pass	26+85	16		coast live oak	16.00		good	
Chamisal Pass	28+75	10		coast live oak	10.00		good	
Chamisal Pass	30+40	16		coast live oak	12.00		fair	
Chamisal Pass	30+75	8		coast live oak	10.00		fair	leaning
EQ 40+00 Back = 0+00 Ahead								
Chamisal Pass	0+40	15		coast live oak	8.00		fair	
Chamisal Pass	0+50		6	coast live oak	6.00		poor	
Chamisal Pass	0+50	7		coast live oak	24.00	X	good	multi w/ 14", 14" trunks
Chamisal Pass	0+75		2	coast live oak	24.00	X	good	
Chamisal Pass	0+95	4		coast live oak	8.00		poor	
Chamisal Pass	1+05	5		coast live oak	12.00		poor	
Chamisal Pass	1+15		12	coast live oak	12.00		fair	
Chamisal Pass	1+17	3		coast live oak	7.00		poor	
Chamisal Pass	1+20	+	+	coast live oak	7.00		poor	
Chamisal Pass	1+26	8		coast live oak	14.00		good	
Chamisal Pass	1+35	8		coast live oak	14.00		fair	
Chamisal Pass	1+43	12		coast live oak	12.00		poor	
Chamisal Pass	1+45		8	coast live oak	14.00		good	
Chamisal Pass	1+51		1	coast live oak	6.00		poor	
Chamisal Pass	1+51	1		coast live oak	6.00		poor	
Chamisal Pass	2+22		18	coast live oak	12.00		fair	multi w/ 12" trunk
Chamisal Pass	2+48	18		coast live oak	12.00		fair	multi w/ 12", 10", 10", 10", 8", 6" trunks
Chamisal Pass	2+50		22	coast live oak	16.00		fair	multi w/ 12", 12", 10", 6" trunks
Chamisal Pass	2+57	16		coast live oak	8.00		fair	multi w/ 6" trunk
Chamisal Pass	2+60		20	coast live oak	14.00		fair	multi w/ 10" trunk
Chamisal Pass	2+73	13		coast live oak	6.00		poor	
Chamisal Pass	2+75	13		coast live oak	7.00		poor	
Chamisal Pass	2+85		8	coast live oak	6.00		poor	
Chamisal Pass	3+04		6	coast live oak	9.00		fair	multi w/ 8" trunk
Chamisal Pass	3+04	20		coast live oak	11.00		fair	
Chamisal Pass	3+45	10		coast live oak	12.00		fair	

**RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY**

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Chamisal Pass	3+48	11		coast live oak	13.00		fair	
Chamisal Pass	3+93			6 coast live oak	9.00		fair	
Chamisal Pass	4+30		15	bay	6.00		good	
Chamisal Pass	4+30		15	coast live oak	9.00		good	
Chamisal Pass	4+60		10	coast live oak	28.00	X	good	multi w/ 24" trunk - road fill
Chamisal Pass	4+97		6	coast live oak	14.00		good	
Chamisal Pass	4+98		7	coast live oak	8.00		fair	
Chamisal Pass	5+09		12	coast live oak	10.00		good	multi w/ 7" trunk
Chamisal Pass	5+40	7		coast live oak	10.00		good	multi w/ 8" trunk
Chamisal Pass	5+50		7	coast live oak	12.00		fair	
Chamisal Pass	10+07		8	coast live oak	13.00		good	
Chamisal Pass	44+26		10	coast live oak	17.00		good	
Chamisal Pass	44+52		21	coast live oak	16.00		good	
Chamisal Pass	44+55	18		coast live oak	22.00		good	
Chamisal Pass	44+90		10	coast live oak	10.00		good	
Chamisal Pass	45+31		27	coast live oak	18.00		good	
Chamisal Pass	125+25		23	coast live oak	11.00		good	
Chamisal Pass	126+50		14	coast live oak	8.00		good	
Chamisal Pass	126+60	17		coast live oak	10.00		good	
Chamisal Pass	127+25	11		coast live oak	11.00		fair	
Chamisal Pass	127+65	12		coast live oak	14.00		poor	multi w/ 7" trunk
Chamisal Pass	128+00		10	coast live oak	9.00		fair	multi w/ 7" trunk
Chamisal Pass	130+30		14	coast live oak	8.00		good	multi w/ 14", 12" trunks
Chamisal Pass	132+00	12		coast live oak	10.00		fair	
Chamisal Pass	132+60		15	toyon	8.00		fair	
Chamisal Pass	132+85	14		coast live oak	14.00		poor	multi w/ 11" trunk
Chamisal Pass	132+95	13		coast live oak	10.00		fair	multi w/ 10" trunk
Chamisal Pass	133+15	18		coast live oak	10.00		good	multi w/ 10" trunk
Chamisal Pass	133+80	8		coast live oak	11.00		fair	multi w/ 8" trunk
Chamisal Pass	136+15	10		coast live oak	12.00		good	
Chamisal Pass	147+85	13		coast live oak	7.00		good	
Chamisal Pass	149+65	11		coast live oak	9.00		fair	multi w/ 8", 8", 7" trunks
Chamisal Pass	233+50		55	coast live oak	46.00	X	good	
Chamisal Pass	235+40		23	coast live oak	48.00	X	good	
Chamisal Pass	246+85	8		valley oak	30.00	X	good	
Steelhead Run	9+49	12		coast live oak	9.00		fair	
Steelhead Run	9+63	10		coast live oak	13.00		good	basal cavity
Steelhead Run	11+16		8	coast live oak	21.00		good	
Steelhead Run	12+40	4		coast live oak	12.00		fair	multi w/ 9" trunk
Steelhead Run	12+50	4		coast live oak	6.00		fair	
Steelhead Run	12+65	8		coast live oak	9.00		poor	broken top
Steelhead Run	13+10	3		coast live oak	11.00		fair	leaning

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Steelhead Run	13+15		6	coast live oak	11.00		fair	
Steelhead Run	BULB			coast live oak	6.00		good	END
Steelhead Run	BULB			coast live oak	9.00		good	
Steelhead Run	BULB			coast live oak	13.00		good	
Rumsen Trace	2+35		15	coast live oak	12.00		good	leaning
Rumsen Trace	2+50		14	coast live oak	14.00		good	leaning
Rumsen Trace	3+55		12	coast live oak	13.00		good	
Rumsen Trace	3+90		11	coast live oak	21.00		good	multi w/ 15" trunk
Rumsen Trace	3+95		17	coast live oak	21.00		good	
Rumsen Trace	3+97		15	coast live oak	23.00		fair	
Rumsen Trace	7+55	+	+	valley oak	17.00		fair	END
Vista Cielo	10+65		10	coast live oak	20.00		good	
Vista Cielo	11+75	5		coast live oak	9.00		good	
Vista Cielo	12+95	8		coast live oak	11.00		good	
Vista Cielo	18+97		11	valley oak	13.00		fair	dead scaffold limbs
Vista Cielo	19+07		8	valley oak	12.00		good	
Vista Cielo	23+15		10	valley oak	16.00		fair	dead scaffold limbs
Vista Cielo	24+20		5	coast live oak	11.00		good	exposed roots
Vista Cielo	35+63	5		valley oak	17.00		good	
Vista Cielo	37+80		1	coast live oak	6.00		good	
Vista Cielo	37+90	+	+	coast live oak	10.00		good	
Vista Cielo	38+05	10		coast live oak	8.00		good	
Vista Cielo	38+65	5		coast live oak	10.00		good	
Vista Cielo	38+67	7		coast live oak	11.00		good	
Vista Cielo	38+86		12	coast live oak	17.00		good	
Vista Cielo	44+00	+	+	coast live oak	8.00		good	
Vista Cielo	44+11	+	+	coast live oak	11.00		good	
Vista Cielo	44+18		5	coast live oak	10.00		good	
Vista Cielo	44+23	11		valley oak	9.00		good	
Vista Cielo	44+28	11		valley oak	11.00		good	
Vista Cielo	44+39	8		coast live oak	16.00		good	
Vista Cielo	44+50	7		coast live oak	6.00		good	END
Garzas Trail	20+58		10	coast live oak	35.00	X	good	leaning
Garzas Trail	20+58		10	valley oak	14.00		good	
Garzas Trail	23+20		5	coast live oak	13.00		poor	extensive decay and cavities
Garzas Trail	23+75		6	coast live oak	22.00		fair	large fire scar; cavity at base
Garzas Trail	24+25		7	coast live oak	18.00		poor	bark missing on one side of tree; decay
Garzas Trail	29+53	5		coast live oak	7.00		fair	
Garzas Trail	29+53	5		coast live oak	17.00		fair	
Garzas Trail	29+95	3		coast live oak	14.00		fair	
Garzas Trail	30+07	7		coast live oak	9.00		fair	
Garzas Trail	30+15	12		coast live oak	21.00		good	

**RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY**

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Garzas Trail	30+19		7	coast live oak	10.00		fair	leaning
Garzas Trail	30+27		9	coast live oak	11.00		fair	leaning
Garzas Trail	30+31		9	coast live oak	6.00		fair	sparse foliage
Garzas Trail	30+35	15		coast live oak	16.00		good	
Garzas Trail	30+69	+	+	valley oak	27.00	X	fair	partially dead top
Garzas Trail	30+81	5		coast live oak	9.00		fair	
Garzas Trail	30+81	5		coast live oak	10.00		fair	leaning
Garzas Trail	31+19	12		coast live oak	20.00		good	
Garzas Trail	31+20	7		coast live oak	19.00		good	
Garzas Trail	33+83	3		coast live oak	14.00		good	leaning
Garzas Trail	34+70		5	coast live oak	16.00		good	leaning
Garzas Trail	35+82	3		valley oak	27.00	X	good	
Garzas Trail	36+20	8		valley oak	18.00		fair	
Garzas Trail	36+21	11		valley oak	14.00		fair	
Garzas Trail	36+38	5		coast live oak	6.00		fair	
Garzas Trail	36+39	3		coast live oak	11.00		fair	leaning
Garzas Trail	36+41	2		coast live oak	6.00		fair	
Garzas Trail	38+00	+	+	valley oak	52.00	X	fair	safety hazard
Long Ridge Trail	10+85	5		coast live oak	18.00		good	
Long Ridge Trail	11+10	3		coast live oak	23.00		good	leaning
Long Ridge Trail	11+25		10	bay	13.00		good	multi w/ 9", 9" trunks
Long Ridge Trail	11+55		10	coast live oak	8.00		good	
Long Ridge Trail	11+60		14	coast live oak	19.00		good	
Long Ridge Trail	11+65	+	+	coast live oak	23.00		good	
Long Ridge Trail	14+07		11	coast live oak	8.00		good	
Long Ridge Trail	14+10		11	coast live oak	13.00		good	
Long Ridge Trail	14+90	10		valley oak	12.00		fair	multi w/ 12" trunk
Long Ridge Trail	15+00	11		valley oak	17.00		poor	leaning
Long Ridge Trail	15+68	12		coast live oak	20.00		good	
Long Ridge Trail	16+00	17		coast live oak	23.00		good	multi w/ 18" trunk
Long Ridge Trail	16+18	13		coast live oak	7.00		good	
Long Ridge Trail	16+30	15		coast live oak	19.00		good	
Long Ridge Trail	16+50	5		coast live oak	26.00	X	good	
Long Ridge Trail	16+60	12		coast live oak	17.00		good	leaning
Long Ridge Trail	16+80	10		valley oak	7.00		poor	
Long Ridge Trail	16+85	12		valley oak	9.00		fair	
Long Ridge Trail	16+90	4		valley oak	6.00		poor	
Long Ridge Trail	17+60	20		valley oak	15.00		fair	
Long Ridge Trail	17+96	12		coast live oak	14.00		good	multi w/ 11", 11", 9" trunks
Long Ridge Trail	18+84	+	+	coast live oak	22.00		fair	large cavity
Long Ridge Trail	20+80	5		coast live oak	12.00		fair	undercut
Long Ridge Trail	20+95	12		coast live oak	26.00	X	good	

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Long Ridge Trail	21+45	+	+	coast live oak	19.00		good	leaning; undercut
Long Ridge Trail	21+55		5	coast live oak	22.00		fair	
Long Ridge Trail	22+12		5	coast live oak	18.00		fair	
Long Ridge Trail	22+34	+	+	coast live oak	21.00		good	
Long Ridge Trail	22+40	+	+	coast live oak	13.00		fair	leaning
Long Ridge Trail	22+55		2	valley oak	19.00		good	
Long Ridge Trail	22+59		3	coast live oak	10.00		good	
Long Ridge Trail	22+61		3	coast live oak	10.00		good	
Long Ridge Trail	22+85	5		coast live oak	11.00		good	
Long Ridge Trail	22+86	7		coast live oak	18.00		good	multi w/ 8" trunk
Long Ridge Trail	23+08	2		coast live oak	17.00		good	undercut
Long Ridge Trail	23+18	+	+	coast live oak	13.00		fair	
Long Ridge Trail	23+22	12		coast live oak	22.00		good	
Long Ridge Trail	23+47	18		coast live oak	13.00		good	
Long Ridge Trail	23+63	15		coast live oak	16.00		good	
Long Ridge Trail	23+75	10		coast live oak	22.00		good	
Long Ridge Trail	24+10	12		coast live oak	25.00	X	good	
Long Ridge Trail	24+24	15		coast live oak	21.00		good	leaning
Long Ridge Trail	24+28	+	+	coast live oak	33.00	X	good	
Long Ridge Trail	24+86	+	+	coast live oak	23.00		good	
Long Ridge Trail	25+00	5		coast live oak	18.00		good	multi w/ 15" trunk
Long Ridge Trail	25+18	11		coast live oak	20.00		good	
Long Ridge Trail	25+25	6		coast live oak	11.00		fair	broken top
Long Ridge Trail	25+40	+	+	coast live oak	20.00		good	leaning
Long Ridge Trail	25+60	+	+	valley oak	11.00		fair	
Long Ridge Trail	25+85		12	coast live oak	6.00		poor	
Long Ridge Trail	25+86		12	coast live oak	12.00		poor	
Long Ridge Trail	26+00	5		coast live oak	11.00		fair	
Long Ridge Trail	26+05	5		coast live oak	10.00		fair	
Long Ridge Trail	26+07		5	coast live oak	7.00		fair	
Long Ridge Trail	26+07		6	valley oak	11.00		fair	
Long Ridge Trail	26+26		9	valley oak	12.00		good	
Long Ridge Trail	27+15	6		valley oak	15.00		good	
Long Ridge Trail	33+50	5		coast live oak	28.00	X	good	
Long Ridge Trail	33+75	7		coast live oak	11.00		good	multi w/ 8", 7" trunks
Long Ridge Trail	33+90	3		coast live oak	8.00		good	
Long Ridge Trail	34+00	13		valley oak	20.00		good	
Long Ridge Trail	34+00	14		coast live oak	10.00		good	
Long Ridge Trail	34+02	14		coast live oak	7.00		fair	
Long Ridge Trail	34+05	14		valley oak	25.00	X	good	
Long Ridge Trail	34+10		11	coast live oak	31.00	X	good	
Long Ridge Trail	35+10		10	coast live oak	23.00		good	

**RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY**

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Long Ridge Trail	35+15		12	coast live oak	9.00		fair	
Long Ridge Trail	35+20	+	+	coast live oak	14.00		fair	
Long Ridge Trail	35+25	8		coast live oak	21.00		good	
Long Ridge Trail	35+50		4	coast live oak	17.00		good	
Long Ridge Trail	35+55	24		coast live oak	25.00	X	good	
Long Ridge Trail	35+85	21		coast live oak	28.00	X	good	
Long Ridge Trail	36+35	12		coast live oak	22.00		good	
Long Ridge Trail	36+45	16		coast live oak	25.00	X	good	
Long Ridge Trail	36+59	12		coast live oak	20.00		good	
Long Ridge Trail	36+60		12	coast live oak	26.00	X	good	
Long Ridge Trail	36+60	+	+	coast live oak	7.00		fair	
Long Ridge Trail	37+18	4		coast live oak	14.00		good	
Long Ridge Trail	37+20		6	coast live oak	15.00		good	
Long Ridge Trail	37+30		7	coast live oak	18.00		good	multi w/ 13" trunk
Long Ridge Trail	37+60	4		coast live oak	20.00		good	multi w/ 15" trunk
Long Ridge Trail	37+65	5		coast live oak	20.00		good	
Long Ridge Trail	37+75	5		coast live oak	27.00	X	good	multi w/ 20" trunk
Long Ridge Trail	38+00		4	coast live oak	8.00		good	
Long Ridge Trail	38+20		10	coast live oak	10.00		good	
Long Ridge Trail	38+25		14	coast live oak	13.00		good	
Long Ridge Trail	38+53	3		coast live oak	10.00		good	
Long Ridge Trail	39+00		8	coast live oak	19.00		fair	multi w/ 12" trunk
Long Ridge Trail	39+00	10		coast live oak	12.00		good	multi w/ 12" trunk
Long Ridge Trail	39+00	10		coast live oak	16.00		good	multi w/ 15", 12", 11" trunks
Long Ridge Trail	39+40	8		coast live oak	18.00		fair	multi w/ 16", 16", 12" trunks
Long Ridge Trail	39+60	10		valley oak	14.00		poor	basal cavity
Long Ridge Trail	39+65	6		coast live oak	23.00		poor	basal cavity
Long Ridge Trail	40+30	9		coast live oak	30.00	X	good	multi w/ 26" trunk
Long Ridge Trail	40+70	12		coast live oak	26.00	X	good	
Long Ridge Trail	40+95	5		coast live oak	25.00	X	good	
Long Ridge Trail	41+10		12	coast live oak	16.00		good	
Long Ridge Trail	41+16		8	coast live oak	10.00		poor	
Long Ridge Trail	41+20		3	coast live oak	10.00		good	
Long Ridge Trail	41+73	5		coast live oak	20.00		good	
Long Ridge Trail	41+75		5	coast live oak	23.00		good	
Long Ridge Trail	42+47	20		coast live oak	24.00	X	good	
Long Ridge Trail	42+53	15		coast live oak	17.00		good	multi w/ 16" trunk
Long Ridge Trail	42+85		5	valley oak	16.00		good	leaning
Long Ridge Trail	43+00		5	coast live oak	16.00		good	
Long Ridge Trail	43+05	4		coast live oak	18.00		fair	
Long Ridge Trail	43+15	9		coast live oak	9.00		poor	
Long Ridge Trail	43+30		5	coast live oak	20.00		good	

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Long Ridge Trail	43+35		8	coast live oak	12.00		good	
Long Ridge Trail	44+00	11		coast live oak	16.00		good	multi w/ 12" trunk
Long Ridge Trail	44+20		15	coast live oak	19.00		good	
Long Ridge Trail	44+30		13	coast live oak	10.00		good	
Long Ridge Trail	45+75		10	coast live oak	18.00		good	multi w/ 16" trunk
Long Ridge Trail	45+75	15		coast live oak	24.00	X	good	
Long Ridge Trail	45+95	9		valley oak	14.00		poor	
Long Ridge Trail	46+30	+	+	coast live oak	16.00		good	
Long Ridge Trail	46+50	22		coast live oak	27.00	X	good	multi w/ 20", 20", 19" trunks
Long Ridge Trail	47+20	+	+	coast live oak	18.00		good	multi w/ 18", 13" trunks
Long Ridge Trail	47+30	+	+	valley oak	10.00		poor	
Long Ridge Trail	47+35	+	+	coast live oak	13.00		good	
Long Ridge Trail	47+45	7		valley oak	14.00		fair	multi w/ 13", 11" trunks
Long Ridge Trail	47+95	7		valley oak	29.00	X	good	
Long Ridge Trail	48+11		6	valley oak	11.00		good	multi w/ 9", 9" trunks
Long Ridge Trail	48+80	5		valley oak	10.00		good	
Long Ridge Trail	48+90		10	valley oak	19.00		good	
Long Ridge Trail	49+72		6	valley oak	9.00		fair	
Long Ridge Trail	49+90	6		valley oak	7.00		good	
Long Ridge Trail	49+95	4		valley oak	10.00		good	
Long Ridge Trail	50+00		10	valley oak	23.00		poor	extensive decay
Long Ridge Trail	50+00		12	valley oak	10.00		good	multi w/ 10" trunk
Long Ridge Trail	50+00	10		valley oak	17.00		good	multi w/ 11" trunk
Long Ridge Trail	50+15	10		valley oak	9.00		fair	
Long Ridge Trail	50+15	6		valley oak	9.00		poor	
Long Ridge Trail	50+20		20	valley oak	40.00	X	good	
Long Ridge Trail	50+23	6		valley oak	11.00		fair	
Long Ridge Trail	50+35	11		valley oak	14.00		good	
Long Ridge Trail	50+35	5		valley oak	6.00		poor	
Long Ridge Trail	50+60	10		valley oak	13.00		fair	
Long Ridge Trail	50+70	15		valley oak	20.00		good	
Long Ridge Trail	50+80		8	valley oak	14.00		fair	
Long Ridge Trail	50+80	20		valley oak	13.00		fair	
Long Ridge Trail	50+85	3		valley oak	13.00		good	multi w/ 12" trunk
54~ BK=46~ AH Equation								
Long Ridge Trail	46+80	14		valley oak	12.00		good	
Long Ridge Trail	50+60	10		coast live oak	14.00		good	
Long Ridge Trail	51+05	5		valley oak	11.00		good	
Long Ridge Trail	51+20		8	valley oak	16.00		good	multi w/ 12" trunk
Long Ridge Trail	51+30	20		black oak	25.00	X	good	
Long Ridge Trail	51+50	10		valley oak	8.00		fair	
Long Ridge Trail	52+85	10		valley oak	34.00	X	poor	extensive decay

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Long Ridge Trail	56+75		5	valley oak	21.00		good	
Long Ridge Trail	61+27		12	valley oak	14.00		good	
Long Ridge Trail	62+40		9	valley oak	12.00		poor	multi w/ 12" trunk
Long Ridge Trail	62+60		12	valley oak	14.00		fair	
Long Ridge Trail	62+85		10	coast live oak	13.00		good	
Long Ridge Trail	62+87		12	valley oak	19.00		good	
Long Ridge Trail	63+20		5	valley oak	11.00		fair	
Long Ridge Trail	63+24		8	valley oak	12.00		fair	
Long Ridge Trail	63+43		10	valley oak	13.00		good	
Long Ridge Trail	71+20		15	valley oak	16.00		fair	
Long Ridge Trail	71+42		17	coast live oak	13.00		good	
Long Ridge Trail	71+73		3	valley oak	17.00		fair	
Long Ridge Trail	72+72		5	valley oak	30.00	X	good	
Long Ridge Trail	74+20		6	valley oak	11.00		good	multi w/ 10" trunk
Long Ridge Trail	76+35		5	valley oak	23.00		good	
Long Ridge Trail	81+35		8	valley oak	27.00	X	poor	large cavity
Long Ridge Trail	82+12	+	+	valley oak	31.00	X	fair	large cavity
85+70 BK=81~ AH								
81 AH=85+70 BK								
Long Ridge Trail	83+60	+	+	valley oak	14.00		good	
Long Ridge Trail	84+25	+	+	valley oak	25.00	X	good	
Long Ridge Trail	88+10	+	+	valley oak	14.00		good	
Long Ridge Trail	88+17	+	+	valley oak	10.00		fair	
Long Ridge Trail	113+90	+	+	valley oak	31.00	X	fair	
Long Ridge Trail	116+40	7		valley oak	27.00	X	fair	heart rot
Long Ridge Trail	127+80		13	valley oak	17.00		good	
Long Ridge Trail	128+10		15	valley oak	9.00		fair	
Long Ridge Trail	128+18		6	valley oak	7.00		fair	
Long Ridge Trail	128+18		8	valley oak	6.00		fair	
Long Ridge Trail	128+28		3	valley oak	7.00		fair	
Long Ridge Trail	128+30		15	valley oak	24.00	X	fair	
Long Ridge Trail	128+90		5	valley oak	9.00		fair	
Long Ridge Trail	129+35	5		valley oak	14.00		good	
M-3	1+66		5	coast live oak	18.00		fair	
M-3	2+10		7	coast live oak	10.00		fair	multi w/ 9" trunk
M-3	3+15		5	coast live oak	10.00		fair	multi w/ 8" trunk
M-6 & 7	1+70		4	coast live oak	7.00		fair	
M-6 & 7	1+75	3		coast live oak	7.00		fair	
M-6 & 7	2+41		5	coast live oak	9.00		fair	
M-6 & 7	2+47		3	coast live oak	8.00		fair	
M-6 & 7	3+95		5	coast live oak	15.00		good	
M-6 & 7	5+65		5	coast live oak	11.00		good	

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
M-6 & 7	8+38	+	+	coast live oak	10.00		poor	
M-6 & 7	8+75	3		coast live oak	12.00		poor	
M-6 & 7	10+60	0	7	coast live oak	13.00		fair	
M-8	11+75	20		coast live oak	15.00		poor	leaning
M-8	11+90		10	coast live oak	11.00		fair	
M-8	12+15	0	5	coast live oak	16.00		good	undercut
M-8	12+25		15	coast live oak	11.00		poor	multi w/ 9" trunk - undercut
M-8	12+65	10		coast live oak	12.00		fair	
M-8	13+00		8	coast live oak	13.00		good	undercut
M-8	13+75	11		coast live oak	14.00		fair	
M-8	14+80	+	+	coast live oak	10.00		poor	
M-8	15+85		7	coast live oak	8.00		poor	undercut
M-8	16+10	10		coast live oak	10.00		fair	
M-8	16+15	7		coast live oak	7.00		good	undercut
M-8	17+50	+	+	redwood	9.00		good	
M-8	19+05		5	coast live oak	10.00		fair	
M-8	19+25	+	+	coast live oak	16.00		poor	
M-8	19+75	5		coast live oak	22.00		poor	uprooted
M-8	20+40		8	coast live oak	9.00		poor	
M-8	21+45	+	+	coast live oak	12.00		fair	
M-8	21+55	3		coast live oak	7.00		poor	
M-8	22+15		7	coast live oak	15.00		good	
M-8	22+35	+	+	coast live oak	11.00		good	
M-10	13+65	5		coast live oak	16.00		good	
M-10	14+30	+	+	coast live oak	16.00		good	
M-10	15+00	+	+	coast live oak	11.00		good	
M-10	21+75		17	coast live oak	24.00	X	good	
M-19	0+65		5	blue oak	12.00		fair	
M-19	0+72	5		blue oak	11.00		fair	multi w/ 8" trunk
M-19	1+00		8	blue oak	6.00		fair	multi w/ 8" trunk
M-19	1+08		7	blue oak	12.00		fair	multi w/ 10", 6", 6" trunks
M-23	0+20	+	+	coast live oak	7.00		poor	
M-23	0+20	+	+	coast live oak	8.00		poor	
M-23	1+01		3	coast live oak	7.00		poor	
M-23	1+01	2		coast live oak	14.00		poor	
M-23	1+07		5	coast live oak	14.00		poor	
M-23	1+42	5		black oak	10.00		fair	
M-29	2+20		10	coast live oak	10.00		good	
PT-1	0+90	2		coast live oak	11.00		fair	broken top; cavities on lower trunk
PT-1	1+50		5	coast live oak	12.00		good	
PT-1	1+70		7	coast live oak	14.00		good	
PT-1	1+90	+	+	coast live oak	6.00		good	

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
PT-1	1+90	+	+	coast live oak	6.00		good	
PT-1	1+90	+	+	coast live oak	6.00		good	
PT-1	1+90	+	+	coast live oak	6.00		good	
PT-1	1+90	+	+	coast live oak	8.00		good	
PT-1	1+90	+	+	coast live oak	8.00		good	END
PT-1	1+90	+	+	coast live oak	9.00		good	
PT-1	1+90	+	+	coast live oak	15.00		good	
Potrero Trail	78+85	12		coast live oak	15.00		good	
Potrero Trail	79+00	9		coast live oak	22.00		good	
Potrero Trail	79+03	12		coast live oak	7.00		good	
Potrero Trail	79+16	10		coast live oak	18.00		good	multi w/ 14" trunk - cavity at base
Potrero Trail	79+25	11		coast live oak	6.00		fair	
Potrero Trail	80+00	9		coast live oak	10.00		good	multi w/ 8" trunk
Potrero Trail	80+05	10		coast live oak	8.00		fair	multi w/ 6" trunk
Potrero Trail	80+15	10		coast live oak	13.00		fair	multi w/ 13", 13", 13", 9", 6" trunks
Potrero Trail	106+65	7		coast live oak	10.00		poor	leaning; sparse foliage
Potrero Trail	107+05		12	coast live oak	7.00		poor	
Potrero Trail	107+20	+	+	coast live oak	11.00		fair	
Potrero Trail	107+21		5	coast live oak	9.00		fair	multi w/ 8" trunk
Potrero Trail	107+25	+	+	coast live oak	7.00		fair	
Potrero Trail	107+36	5		coast live oak	7.00		poor	multi w/ 6" trunk
Potrero Trail	107+45	5		coast live oak	16.00		good	
Potrero Trail	107+48	5		coast live oak	7.00		poor	
Potrero Trail	107+70		2	coast live oak	11.00		fair	multi w/ 8" trunk - basal cavity
Potrero Trail	107+87		3	coast live oak	21.00		good	
Potrero Trail	108+06		14	coast live oak	19.00		poor	top mostly dead; conks on trunk
Potrero Trail	108+17	13		coast live oak	24.00	X	good	
Potrero Trail	108+21		7	coast live oak	15.00		fair	large basal cavity
Potrero Trail	108+42		11	coast live oak	6.00		poor	
Potrero Trail	108+42	2		coast live oak	11.00		good	multi w/ 11" trunk
Potrero Trail	108+67		10	coast live oak	25.00	X	good	
Potrero Trail	108+97	+	+	coast live oak	9.00		poor	leaning
Potrero Trail	115+40	+	+	coast live oak	11.00		good	
Potrero Trail	119+50	6		coast live oak	12.00		good	
Potrero Trail	126+65	+	+	coast live oak	22.00		fair	leaning
Potrero Trail	128+30	+	+	coast live oak	17.00		good	multi w/ 7" trunk
Potrero Trail	128+90		7	coast live oak	15.00		good	
Potrero Trail	129+00		9	coast live oak	16.00		good	leaning
Potrero Trail	129+25		9	coast live oak	9.00		poor	leaning
Potrero Trail	130+00		7	coast live oak	14.00		good	
Potrero Trail	130+05		8	coast live oak	11.00		good	
Potrero Trail	130+23	+	+	coast live oak	7.00		good	

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Potrero Trail	130+25	+	+	coast live oak	14.00		good	multi w/ 12", 13" trunks
Potrero Trail	130+45		3	coast live oak	8.00		good	
Potrero Trail	130+50		4	coast live oak	8.00		good	
Potrero Trail	130+55		2	coast live oak	9.00		good	
Potrero Trail	130+65		10	coast live oak	11.00		fair	leaning
Potrero Trail	130+75		8	coast live oak	9.00		good	multi w/ 8" trunk
Potrero Trail	130+90	3		coast live oak	12.00		good	
Potrero Trail	130+97		12	coast live oak	26.00	X	good	multi w/ 14" trunk; cavity in 26" trunk
Potrero Trail	131+00	5		coast live oak	11.00		good	leaning
Potrero Trail	131+25		7	coast live oak	13.00		good	
Potrero Trail	131+50	+	+	coast live oak	18.00		fair	multi w/ 11" trunk - leaning
Potrero Trail	131+55		2	coast live oak	19.00		good	
Potrero Trail	132+38	19		coast live oak	8.00		fair	
Potrero Trail	132+40	20		coast live oak	13.00		good	
Potrero Trail	132+50	+	+	coast live oak	9.00		good	leaning
Potrero Trail	132+65	2		coast live oak	19.00		fair	
Potrero Trail	132+67		3	coast live oak	17.00		good	multi w/ 11", 14" trunk
Potrero Trail	132+71	8		coast live oak	17.00		good	leaning
Potrero Trail	132+94		13	coast live oak	25.00	X	good	multi w/ 14" trunk - leaning
Potrero Trail	133+05		12	coast live oak	14.00		fair	leaning
Potrero Trail	133+40	15		coast live oak	17.00		good	
Potrero Trail	133+57	8		coast live oak	15.00		good	
Potrero Trail	134+34		5	coast live oak	16.00		good	
Potrero Trail	134+46	+	+	coast live oak	6.00		good	
Potrero Trail	134+75	6		coast live oak	22.00		good	
Potrero Trail	134+90		2	coast live oak	6.00		good	
Potrero Trail	135+23		4	coast live oak	9.00		good	
Potrero Trail	135+31		12	coast live oak	11.00		good	
Potrero Trail	135+36		13	coast live oak	10.00		good	
Potrero Trail	135+50		10	coast live oak	6.00		good	
Potrero Trail	135+50		10	coast live oak	8.00		good	
Potrero Trail	135+50		4	coast live oak	7.00		good	
Potrero Trail	135+50		5	coast live oak	6.00		good	
Potrero Trail	135+52		10	coast live oak	9.00		good	
Potrero Trail	135+52	+	+	coast live oak	8.00		good	
Potrero Trail	135+84	4		coast live oak	17.00		good	
Potrero Trail	135+91		3	coast live oak	13.00		good	
Potrero Trail	136+80	7		coast live oak	11.00		good	
Potrero Trail	136+95	10		coast live oak	6.00		good	
Potrero Trail	137+30		7	coast live oak	14.00		good	multi w/ 11" trunk
Potrero Trail	137+48		6	coast live oak	18.00		good	
Potrero Trail	137+50	5		coast live oak	11.00		good	

**RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY**

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Potrero Trail	137+70		10	coast live oak	11.00		good	multi w/ 7" trunk
Potrero Trail	137+80		9	coast live oak	6.00		fair	
Potrero Trail	137+85	+	+	coast live oak	10.00		good	
Potrero Trail	137+90	12		coast live oak	12.00		fair	multi w/ 9" trunk - leaning/partially uprooted
Potrero Trail	138+00	9		coast live oak	15.00		good	
Potrero Trail	138+30	+	+	coast live oak	13.00		good	multi w/ 10", 10" trunks
Potrero Trail	138+40	+	+	coast live oak	13.00		good	
Potrero Trail	138+50		10	coast live oak	11.00		good	multi w/ 8" trunk
Potrero Trail	138+50	+		coast live oak	23.00		good	
Potrero Trail	138+60		10	coast live oak	8.00		fair	leaning
Potrero Trail	138+60		9	coast live oak	15.00		good	
Potrero Trail	138+65	+	+	coast live oak	13.00		good	leaning
Potrero Trail	138+90		10	coast live oak	16.00		good	multi w/ 10" trunk
Potrero Trail	138+90		12	coast live oak	19.00		good	
Potrero Trail	139+00		12	coast live oak	19.00		good	
Potrero Trail	139+00	3		coast live oak	11.00		good	
Potrero Trail	139+25	3		coast live oak	17.00		good	multi w/ 9", 14" trunk
Potrero Trail	139+36		6	coast live oak	20.00		good	
Potrero Trail	139+55	8		coast live oak	15.00		good	END
Rancho San Carlos Rd.	65+00		+	coast live oak	9.00		good	undercut
Rancho San Carlos Rd.	65+00		+	coast live oak	9.00		good	undercut
Rancho San Carlos Rd.	66+00		+	coast live oak	6.00		good	undercut
Rancho San Carlos Rd.	68+00		+	coast live oak	10.00		good	undercut
Rancho San Carlos Rd.	161+50		+	coast live oak	9.00		good	
Rancho San Carlos Rd.	162+00		+	coast live oak	10.00		good	
Rancho San Carlos Rd.	165+00		+	coast live oak	9.00		good	near 5- mile marker
Rancho San Carlos Rd.	165+00		+	coast live oak	26.00	X	good	near 5- mile marker
Rancho San Carlos Rd.	165+00		10	coast live oak	9.00		good	near 5- mile marker
Rancho San Carlos Rd.	173+00	+		coast live oak	7.00		poor	large cavity on trunk; suppressed
Rancho San Carlos Rd.	173+00	+		coast live oak	9.00		good	
Rancho San Carlos Rd.	173+00	+		coast live oak	10.00		fair	basal cavity and rot
Rancho San Carlos Rd.	173+00	+		coast live oak	10.00		good	
Rancho San Carlos Rd.	173+00	+		coast live oak	11.00		good	
Rancho San Carlos Rd.	173+00	+		coast live oak	14.00		good	
Rancho San Carlos Rd.	286+50	+		coast live oak	10.00		good	
Rancho San Carlos Rd.	286+50	+		coast live oak	13.00		good	
Rancho San Carlos Rd.	297+69	+		big leaf maple	19.00		fair	topped multiple time for power line clearance
Rancho San Carlos Rd.	298+00	+		coast live oak	16.00		good	
Rancho San Carlos Rd.	302+59		14	bay	19.00		fair	leaning
Rancho San Carlos Rd.	304+00	+	+	coast live oak	16.00		good	remove for road split around redwood grove
Rancho San Carlos Rd.	325+00		+	bay	7.00		fair	exposed roots
Rancho San Carlos Rd.	325+00		+	coast live oak	13.00		good	exposed roots - leaning

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Rancho San Carlos Rd.	325+00		+	coast live oak	14.00		good	exposed roots - leaning
Rancho San Carlos Rd.	325+00		+	coast live oak	14.00		good	exposed roots
Rancho San Carlos Rd.	348+00	12		coast live oak	8.00		good	END
Arroyo Sequoia	22+25	5		bay	11.00		good	leaning
Arroyo Sequoia	22+50	12		bay	18.00		good	
Arroyo Sequoia	23+60	10		bay	12.00		good	multi w/ 12" trunk; top of creek bank
Arroyo Sequoia	25+45		5	coast live oak	27.00	X	good	
Arroyo Sequoia	27+36		5	coast live oak	15.00		good	
Arroyo Sequoia	30+00	5		coast live oak	15.00		fair	leaning
Arroyo Sequoia	36+07	5		coast live oak	13.00		poor	leaning
Arroyo Sequoia	36+12	2		coast live oak	26.00	X	good	
Arroyo Sequoia	36+80	2		big leaf maple	6.00		good	
Arroyo Sequoia	37+16	3		coast live oak	9.00		good	
Arroyo Sequoia	37+50		10	coast live oak	12.00		good	
Arroyo Sequoia	39+00	2		coast live oak	15.00		good	
Arroyo Sequoia	42+50	5		black oak	29.00	X	good	
Arroyo Sequoia	44+50	+	+	black oak	29.00	X	good	
Arroyo Sequoia	44+50	3		black oak	18.00		good	
Arroyo Sequoia	44+85	+	+	valley oak	15.00		poor	
Arroyo Sequoia	45+85	5		coast live oak	21.00		good	
Arroyo Sequoia	46+20	3		black oak	16.00		good	
Arroyo Sequoia	50+95	5		coast live oak	11.00		good	
Arroyo Sequoia	51+55	3		coast live oak	14.00		good	
Arroyo Sequoia	51+56		5	coast live oak	9.00		good	
Arroyo Sequoia	52+50	5		coast live oak	16.00		good	
Arroyo Sequoia	55+60		5	valley oak	11.00		fair	
Arroyo Sequoia	55+80		5	coast live oak	22.00		good	
Arroyo Sequoia	55+90	5		coast live oak	14.00		fair	
Arroyo Sequoia	56+30	5		valley oak	10.00		poor	
Arroyo Sequoia	56+35	+	+	coast live oak	15.00		good	
Arroyo Sequoia	56+35	+	+	valley oak	11.00		fair	
Arroyo Sequoia	56+35	10		valley oak	13.00		good	
Arroyo Sequoia	56+35	15		valley oak	12.00		good	
Arroyo Sequoia	56+60		5	coast live oak	10.00		good	
Arroyo Sequoia	56+60		6	valley oak	12.00		good	
Arroyo Sequoia	57+10	+	+	coast live oak	11.00		good	
Arroyo Sequoia	57+25	+	+	valley oak	9.00		fair	
Arroyo Sequoia	58+15		10	valley oak	15.00		good	
Equation 60+00 Back=56+00 Ahead								
Arroyo Sequoia	61+02		3	coast live oak	19.00		good	
Arroyo Sequoia	61+06		7	valley oak	17.00		good	
Arroyo Sequoia	61+07		1	coast live oak	10.00		good	

**RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY**

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Arroyo Sequoia	63+07	+	+	valley oak	9.00		fair	multi w/ 7" trunk
Arroyo Sequoia	64+30	+	+	valley oak	15.00		good	leaning
Arroyo Sequoia	65+10	4		valley oak	14.00		good	leaning
Arroyo Sequoia	72+30		10	valley oak	14.00		good	
Arroyo Sequoia	72+60	5		black oak	13.00		good	
Arroyo Sequoia	72+60	8		coast live oak	6.00		good	
Arroyo Sequoia	72+70		10	valley oak	7.00		fair	
SC-3 & 4	1+00	10		valley oak	11.00		good	
SC-3 & 4	6+85	10		valley oak	23.00		good	
SC-3 & 4	8+90	7		valley oak	36.00	X	poor	extensive decay
SC-3 & 4	11+15	2		valley oak	9.00		good	
SC-3 & 4	13+25		8	valley oak	10.00		fair	
SC-3 & 4	13+27	7		valley oak	8.00		good	
SC-3 & 4	13+65	8		valley oak	10.00		good	
SC-3 & 4	13+70		3	valley oak	10.00		good	
SC-3 & 4	13+80	6		valley oak	8.00		good	
SC-3 & 4	13+80	6		valley oak	8.00		good	
SC-3 & 4	13+85	7		valley oak	8.00		good	
SC-3 & 4	13+86	+	+	valley oak	8.00		good	
SC-3 & 4	14+05		10	coast live oak	11.00		good	
SC-31	6+45	5		bay	23.00		good	
SC-31	7+40		5	coast live oak	11.00		good	
SC-31	7+44		5	coast live oak	6.00		good	
SC-31	7+45	5		coast live oak	7.00		good	
SC-31	8+15	4		bay	6.00		good	
SC-31	8+15	4		bay	9.00		good	END
SC-61,62,63	1+00		5	black oak	18.00		good	multi w/ 11", 15" trunks
SC-61,62,63	13+70	5		valley oak	9.00		fair	
SC-61,62,63	15+10	10		coast live oak	7.00		poor	leaning
SC-61,62,63	15+10	8		coast live oak	7.00		poor	leaning
SC-61,62,63	16+85	3		bay	9.00		good	
SC-61,62,63	17+50	5		bay	17.00		good	multi w/ 11", 16" trunks
SC-61,62,63	17+60	8		big leaf maple	10.00		good	
SC-61,62,63	17+70	8		coast live oak	10.00		good	leaning
SC-61,62,63	17+85		8	coast live oak	9.00		good	
SC-61,62,63	18+13	8		coast live oak	9.00		good	leaning
SC-61,62,63	18+22	7		coast live oak	12.00		good	
SC-61,62,63	18+30	8		coast live oak	7.00		good	
SC-61,62,63	18+40	6		coast live oak	9.00		fair	leaning
SC-61,62,63	18+60		5	bay	10.00		good	
SC-61,62,63	18+90	10		coast live oak	10.00		good	leaning
SC-61,62,63	18+90	3		coast live oak	17.00		good	

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
SC-61,62,63	19+00		5	coast live oak	8.00		good	
SC-66 & 67	2+35	2		coast live oak	15.00		good	
SC-66 & 67	2+45		3	coast live oak	18.00		fair	undercut
SC-66 & 67	2+75	15		bay	21.00		good	undercut
SC-66 & 67	8+10		5	coast live oak	10.00		good	leaning
SC-66 & 67	8+10		5	coast live oak	19.00		good	
SC-66 & 67	8+19	7		coast live oak	12.00		good	END
SC-89	0+30		6	coast live oak	12.00		good	
SC-89	0+63	+	+	coast live oak	6.00		fair	
SC-89	0+63	+	+	coast live oak	6.00		fair	
SC-89	0+63	+	+	coast live oak	7.00		fair	
SC-90	7+00	5		coast live oak	14.00		good	multi w/ 14" trunk
SC-90	8+30		6	coast live oak	7.00		fair	
SC-90	8+35		5	coast live oak	20.00		good	
SC-90	9+55	8		coast live oak	9.00		good	
SC-90	11+50	5		coast live oak	13.00		good	
SC-90	12+80	+	+	coast live oak	7.00		poor	
SC-90	12+80	6		valley oak	13.00		fair	
SC-90	13+30	+	+	coast live oak	19.00		good	multi w/ 10" trunk - basal cavity
SC-92	14+60	5		valley oak	10.00		good	
SC-92	14+62		6	valley oak	10.00		good	
SF-5	1+25	7		coast live oak	13.00		good	
SF-5	1+95	3		coast live oak	10.00		fair	
SF-5	2+50		12	coast live oak	17.00		good	multi w/ 9" trunk
SF-5	3+75	8		coast live oak	10.00		fair	
SF-5	4+90		5	coast live oak	12.00		fair	
SF-6	8+90	+	+	valley oak	15.00		poor	
SF-6	9+40	5		valley oak	15.00		good	avoid
SF-6	9+85	5		valley oak	16.00		fair	
SF-6	11+45		5	valley oak	9.00		fair	
SF-6	12+15		5	valley oak	13.00		poor	
SF-6	12+55	+	+	valley oak	28.00	X	poor	
SF-6	12+87	5		valley oak	18.00		good	multi w/ 17" trunk
SF-6	13+26	+	+	valley oak	12.00		poor	
SF-6	13+60		6	valley oak	8.00		good	
SF-6	13+65		4	coast live oak	12.00		good	
SF-6	13+75		7	coast live oak	8.00		good	
SF-6	13+85	+	+	coast live oak	13.00		good	
SF-6	14+60		5	coast live oak	22.00		good	
SF-6	14+70		4	coast live oak	12.00		fair	
SF-6	14+90	+	+	coast live oak	17.00		good	
SF-6	14+93		7	coast live oak	14.00		good	

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
SF-6	15+00			2 coast live oak	12.00		good	
SF-6	15+95	+	+	valley oak	12.00		poor	
SF-6	16+05	+	+	valley oak	17.00		good	
SF-6	16+45	+	+	valley oak	16.00		fair	
SF-6	16+95	+	+	valley oak	12.00		good	
SF-6	17+12			7 coast live oak	8.00		good	
SF-6	17+15	+	+	coast live oak	9.00		good	
SF-7	1+80			10 coast live oak	8.00		fair	
SF-7	2+00	+	+	coast live oak	16.00		good	
SF-7	2+20			8 coast live oak	18.00		good	
SF-7	2+35	6		coast live oak	24.00	X	good	
SF-7	3+10			5 coast live oak	22.00		poor	
SF-7	3+45	5		coast live oak	10.00		good	
SF-7	3+60			5 coast live oak	12.00		good	
SF-7	4+20	8		coast live oak	14.00		fair	re-align to avoid
SF-7	4+45			5 coast live oak	28.00	X	good	
SF-7	5+00	2		coast live oak	10.00		fair	
SF-7	5+85			8 coast live oak	14.00		fair	
SF-7	9+70	3		coast live oak	10.00		poor	
SF-7	10+00			6 coast live oak	10.00		good	
SF-7	10+00	+	+	black oak	11.00		fair	
SF-7	10+00	+	+	black oak	14.00		fair	
SF-7	10+35			4 coast live oak	18.00		good	
SF-7	11+10	3		coast live oak	9.00		poor	
SF-7	11+13	5		coast live oak	16.00		good	
SF-7	11+14			10 coast live oak	16.00		good	
SF-7	11+20			5 coast live oak	26.00	X	good	
SF-7	11+30			6 coast live oak	20.00		good	
SF-7	11+31	5		coast live oak	19.00		good	
SF-7	11+78			7 black oak	9.00		poor	
SF-7	11+90	5		black oak	16.00		poor	
SF-7	11+92	7		coast live oak	12.00		fair	
SF-7	11+95			10 black oak	15.00		fair	
SF-7	12+15	7		coast live oak	9.00		fair	
SF-7	12+20			12 valley oak	11.00		fair	
SF-7	12+70	3		valley oak	14.00		fair	
SF-7	13+10	+	+	coast live oak	10.00		fair	
SF-7	13+20	5		madrone	18.00		fair	
SF-7	13+23	7		valley oak	11.00		poor	
SF-21	4+95	+	+	coast live oak	28.00	X	good	
SF-21	4+96	3		coast live oak	14.00		good	
SF-32	1+75			10 coast live oak	14.00		good	

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
SF-32	1+90			8 coast live oak	12.00		fair	
SF-32	2+03			2 coast live oak	13.00		fair	
SF-32	2+05	4		coast live oak	8.00		poor	
SF-32	2+10	3		coast live oak	13.00		fair	
SF-32	2+50		4	coast live oak	8.00		poor	
SF-32	8+67		2	big leaf maple	18.00		poor	avoid by moving left
SF-32	9+15		5	coast live oak	15.00		fair	
SF-33	0+80		5	coast live oak	7.00		good	
SF-33	1+63	+	+	coast live oak	16.00		good	
SF-33	2+15	5		coast live oak	18.00		good	
SF-33	2+24	4		coast live oak	12.00		good	
SF-33	2+24	7		coast live oak	10.00		good	
SF-33	2+38	+	+	coast live oak	13.00		good	
SF-33	2+87	+	+	coast live oak	7.00		good	
SF-33	3+75		8	valley oak	26.00	X	good	
SF-33	4+97	10		coast live oak	18.00		good	
SF-33	6+30	+	+	coast live oak	9.00		good	
SF-33	6+40	3		valley oak	8.00		good	
SF-33	6+60	+	+	valley oak	9.00		good	
SF-33	7+26		4	valley oak	20.00		good	
SF-33	7+28	+	+	coast live oak	8.00		good	
SF-33	7+50	+	+	coast live oak	7.00		good	
SF-33	7+61	+	+	coast live oak	18.00		good	
SF-33	11+25	+	+	madrone	7.00		good	
SF-33	11+28	3		madrone	7.00		good	
SF-33	11+88	+	+	madrone	11.00		good	
SF-33	11+93		2	madrone	8.00		good	
SF-33	11+93		3	madrone	10.00		good	
SF-33	12+06	+	+	madrone	12.00		good	
SF-33	12+07	+	+	black oak	16.00		good	
SF-33	12+60	+	+	black oak	26.00	X	fair	
SF-33	12+80		5	black oak	16.00		fair	
SF-33	13+00	11		madrone	7.00		good	
SF-33	13+00	7		madrone	9.00		good	
SF-33	13+33	10		madrone	7.00		good	
SF-33	13+33	5		valley oak	16.00		poor	
SF-33	13+38	7		madrone	9.00		good	
SF-33	14+00	11		madrone	10.00		good	
SF-33	14+03	0	4	madrone	7.00		good	
SF-33	18+19	+	+	coast live oak	22.00		good	
SF-33	19+72		6	madrone	8.00		good	
SF-33	19+75		6	coast live oak	9.00		good	

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
SF-33	20+16		8	madrone	9.00		good	
SF-33	20+26	+	+	madrone	12.00		good	
SF-33	20+34	3		madrone	7.00		good	
SF-33	20+35		1	madrone	16.00		good	
SF-33	20+40		5	madrone	12.00		good	
SF-33	20+40	8		madrone	12.00		good	
SF-33	20+80		6	coast live oak	11.00		good	
SF-34	2+30		5	coast live oak	27.00	X	good	
SF-34	2+40		5	coast live oak	26.00	X	good	
SF-34	2+40		7	coast live oak	17.00		good	
SF-34	2+50		6	coast live oak	10.00		good	
SF-34	2+50	2		coast live oak	10.00		fair	
SF-34	3+00	+	+	coast live oak	11.00		fair	
SF-34	3+62	+	+	coast live oak	14.00		good	
SF-34	3+62	7		coast live oak	17.00		good	
SF-34	3+67	7		coast live oak	16.00		good	
SF-34	3+90	+	+	coast live oak	10.00		fair	
SJ-2	0+40	4		coast live oak	9.00		good	
SJ-2	0+50		5	coast live oak	9.00		good	
SJ-2	0+90	8		coast live oak	10.00		good	
SJ-2	1+95	7		coast live oak	10.00		poor	
SJ-2	1+96		7	coast live oak	11.00		fair	
SJ-2	3+75	5		coast live oak	11.00		good	
SJ-2	3+84	+	+	coast live oak	9.00		fair	
SJ-2	3+89		5	coast live oak	8.00		good	
SJ-2	3+89		5	coast live oak	16.00		good	END
SJ-9	5+30	+	+	coast live oak	10.00		poor	
SJ-9	5+31		3	coast live oak	10.00		fair	
SJ-9	5+31		3	coast live oak	14.00		poor	
SJ-9	5+35	+	+	coast live oak	9.00		fair	
SJ-9	5+45	+	+	coast live oak	12.00		fair	
SJ-9	5+95	10		coast live oak	12.00		fair	
SJ-9	6+20	11		coast live oak	16.00		fair	
SJ-9	6+70	5		coast live oak	6.00		fair	
SJ-9	7+05		6	coast live oak	18.00		poor	cavity
SJ-9	7+10	6		coast live oak	8.00		poor	
SJ-9	7+15	5		coast live oak	13.00		fair	
SJ-9	7+18	8		coast live oak	20.00		fair	
SJ-9	7+25	8		coast live oak	12.00		fair	
SJ-9	7+65	0	5	coast live oak	10.00		poor	
SJ-9	7+75	+	+	coast live oak	10.00		fair	
SJ-9	7+80	+	+	coast live oak	9.00		fair	

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
SJ-9	7+89	10		coast live oak	10.00		fair	
SJ-9	7+90	+	+	coast live oak	9.00		poor	
SJ-9	8+10	+	+	coast live oak	12.00		poor	
SJ-9	8+10	8		coast live oak	10.00		poor	
SJ-9	8+20	+	+	coast live oak	16.00		good	
SJ-9	9+95	+	+	coast live oak	9.00		poor	cavity
SJ-9	10+80	8		coast live oak	14.00		good	
SJ-9	10+85	6		coast live oak	10.00		poor	
SJ-9	10+90	6		coast live oak	24.00	X	good	
SJ-9	11+25	8		coast live oak	12.00		fair	
SJ-9	11+30	11		coast live oak	7.00		poor	
SJ-9	11+50	5		coast live oak	10.00		poor	
SJ-9	11+50	5		coast live oak	10.00		poor	
SJ-9	12+02	7		coast live oak	11.00		poor	
SJ-9	12+15		3	coast live oak	10.00		poor	multi w/ 8" trunk
SJ-10	6+00		6	coast live oak	7.00		poor	
SJ-10	6+10		6	coast live oak	10.00		fair	
SJ-10	6+70	10		coast live oak	20.00		good	
SJ-10	6+85	16		coast live oak	12.00		fair	
SJ-11	5+70		5	coast live oak	10.00		fair	
SJ-11	7+45		5	coast live oak	10.00		poor	
SJ-12	2+40	0	5	coast live oak	10.00		fair	
SJ-12	2+90		3	coast live oak	16.00		good	
SJ-12	2+95	2		coast live oak	11.00		poor	
SJ-12	3+15	+	+	coast live oak	7.00		poor	
SJ-12	3+75	0	5	coast live oak	23.00		good	
SJ-12	5+45	+	+	coast live oak	16.00		poor	multi w/ 15" trunk - leaning
SJ-17	2+78		8	sycamore	18.00		poor	
SJ-17	3+00	+	+	coast live oak	9.00		fair	
SJ-17	3+45	5		coast live oak	10.00		good	
SJ-17	3+75	+	+	valley oak	32.00	X	poor	cavity
SJ-17	3+94	0	5	sycamore	10.00		fair	
SJ-17	5+07	+	+	coast live oak	8.00		good	
SJ-17	5+30	+	+	coast live oak	13.00		good	
SJ-17	8+25	5		coast live oak	9.00		good	
SJ-17	9+00	+	+	coast live oak	9.00		poor	leaning
SJ-17	9+38	+	+	coast live oak	14.00		fair	
SJ-17	11+30	5		coast live oak	18.00		fair	
SJ-17	12+00	+	+	coast live oak	10.00		fair	
SJ-17	12+10		5	coast live oak	11.00		fair	
SJ-17	12+17		7	coast live oak	13.00		fair	
SJ-17	12+75		7	coast live oak	9.00		poor	

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
SJ-17	13+05	7		valley oak	11.00		poor	cavity
SJ-17	17+90		5	valley oak	7.00		poor	
SJ-17	17+92		6	coast live oak	10.00		poor	
SJ-17	17+94	5		coast live oak	9.00		fair	
SJ-20	7+35		10	redwood	38.00	X	poor	leaning
SJ-20	11+90		7	coast live oak	20.00		poor	leaning
SJ-20	15+50		5	coast live oak	38.00	X	poor	cavity
SJ-20	15+70	3		coast live oak	9.00		poor	
SJ-20	15+80		15	coast live oak	12.00		good	
SJ-20	15+80		5	coast live oak	16.00		fair	
SJ-20	16+14	5		coast live oak	24.00	X	good	
SJ-20	16+34		5	coast live oak	12.00		fair	
SJ-20	16+35	5		coast live oak	14.00		fair	multi w/ 8" trunk
SJ-20	16+90		10	coast live oak	9.00		poor	
SJ-20	17+63		8	coast live oak	22.00		good	
Tank Site 13-1	3+40	+	+	coast live oak	9.00		good	
Tank Site 13-1	3+78	+	+	coast live oak	12.00		good	
Tank Site 13-1	3+79		6	coast live oak	10.00		good	
Tank Site 13-1	3+90	+	+	coast live oak	14.00		good	
Tank Site 13-1	4+10	+	+	coast live oak	12.00		good	
Tank Site 13-1	4+82		12	coast live oak	11.00		good	
Tank Site 13-1	4+87		10	coast live oak	16.00		good	
Tank Site 13-1	5+12	+	+	coast live oak	9.00		good	
Tank Site 13-1	5+92	+	+	coast live oak	7.00		good	
Tank Site 13-1	7+88		12	coast live oak	12.00		good	
Tank Site 13-1	8+40	+	+	madrone	13.00		good	
Tank Site 13-1	8+48		9	coast live oak	7.00		good	
Tank Site 13-1	8+58	+	+	coast live oak	10.00		good	
Tank Site 13-1	8+86	+	+	coast live oak	12.00		good	
Tank Site 13-1	9+20	8		coast live oak	17.00		good	
Tank Site 13-1	11+23	+	+	coast live oak	12.00		good	
Tank Site 13-1	11+29	+	+	coast live oak	12.00		good	
Tank Site 13-1	11+53		8	coast live oak	8.00		good	
Tank Site 13-1	11+59		10	coast live oak	10.00		good	
Tank Site 13-1	11+90	5		coast live oak	12.00		good	
Tank Site 13-1	12+10	+	+	coast live oak	9.00		good	
Tank Site 13-1	12+30	+	+	coast live oak	7.00		good	
Tank Site 13-1	12+31	4		coast live oak	9.00		good	
Tank Site 13-1	12+43	5		coast live oak	7.00		good	
Tank Site 13-1	12+66	+	+	coast live oak	9.00		good	
Tank Site 13-1	13+00		10	coast live oak	14.00		good	
Tank Site 13-1	13+40	+	+	coast live oak	10.00		good	

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Tank Site 13-1	13+72	+	+	coast live oak	9.00		good	
Tank Site 13-1	13+83			8 coast live oak	11.00		good	
Tank Site 13-1	13+84	+	+	coast live oak	11.00		good	
Tank Site 13-1	13+95	+	+	coast live oak	13.00		good	
Tank Site 13-1	14+00			5 coast live oak	7.00		good	
Tank Site 13-1	14+30			8 coast live oak	8.00		good	
Tank Site 13-1	14+31	+	+	coast live oak	13.00		good	
Tank Site 13-1	14+61	+	+	coast live oak	9.00		good	
Tank Site 13-1	14+61	+	+	coast live oak	10.00		good	
Tank Site 13-1	14+66	+	+	coast live oak	10.00		good	
Tank Site 13-1	14+80	+	+	coast live oak	12.00		good	
Tank Site 13-1	14+95	10		coast live oak	10.00		good	
Tank Site 13-1	17+40	+	+	coast live oak	7.00		good	
Tank Site 13-1	17+60	3		coast live oak	10.00		good	
Tank Site 13-1	18+00	8		coast live oak	8.00		good	
Tank Site 13-1	18+00	8		coast live oak	12.00		good	
Tank Site 13-1	20+42	5		coast live oak	10.00		good	
Tank Site 13-1	20+92		10	coast live oak	13.00		good	
Tank Site 13-1	20+92		10	coast live oak	14.00		good	
Tank Site 13-1	21+90	5		coast live oak	12.00		good	
Tank Site 13-1	22+00		5	coast live oak	12.00		good	
Tank Site 13-1	22+15	5		coast live oak	15.00		good	
Touche Pass	15+30		10	coast live oak	8.00		good	
Touche Pass	16+07	10		coast live oak	12.00		fair	basal trunk damage
Touche Pass	17+12	8		coast live oak	7.00		fair	trunk damage
Touche Pass	55+67		8	coast live oak	7.00		good	
Touche Pass	56+00	9		coast live oak	8.00		good	
Touche Pass	60+15		9	coast live oak	7.00		good	
Touche Pass	60+30		8	valley oak	10.00		good	
Touche Pass	60+35		8	coast live oak	11.00		good	
Touche Pass	61+03		7	coast live oak	7.00		good	
Vuelo Palomas	5+25		8	valley oak	12.00		fair	multi w/ 7" trunk
Vuelo Palomas	5+98			valley oak	7.00		poor	
Vuelo Palomas	6+15	+	+	valley oak	20.00		fair	
Vuelo Palomas	6+40		5	coast live oak	26.00	X	good	multi w/ 24" trunk
Vuelo Palomas	6+43		5	coast live oak	22.00		good	
Vuelo Palomas	6+92	+	+	coast live oak	24.00	X	good	multi w/ 20" trunk
Vuelo Palomas	7+90	11		valley oak	10.00		good	
Vuelo Palomas	7+98		7	black oak	14.00		good	multi w/ 10" trunk
Vuelo Palomas	8+30		6	black oak	10.00		poor	
Vuelo Palomas	8+39	5		black oak	28.00	X	good	
Vuelo Palomas	8+70	3		black oak	7.00		poor	

**RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY**

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Vuelo Palomas	9+90	+	+	coast live oak	16.00		poor	
Vuelo Palomas	10+65		6	black oak	12.00		good	
Vuelo Palomas	10+80	8		coast live oak	9.00		fair	
Vuelo Palomas	15+55	10		coast live oak	15.00		good	
Vuelo Palomas	15+90		10	coast live oak	11.00		good	
Vuelo Palomas	15+90		11	black oak	9.00		good	
Vuelo Palomas	15+90		5	coast live oak	10.00		good	
Vuelo Palomas	18+26		5	coast live oak	12.00		fair	
Vuelo Palomas	18+32	5		black oak	28.00	X	good	
Vuelo Palomas	19+20	3		coast live oak	13.00		good	
Vuelo Palomas	19+25	6		black oak	15.00		good	
Vuelo Palomas	19+25	8		black oak	13.00		good	
Vuelo Palomas	19+32	12		coast live oak	12.00		poor	
Vuelo Palomas	19+70		10	black oak	10.00		good	multi w/ 9" trunk
Vuelo Palomas	19+71	6		black oak	12.00		poor	
Vuelo Palomas	19+88		10	coast live oak	9.00		fair	
Vuelo Palomas	19+95	5		black oak	10.00		good	
Vuelo Palomas	20+05	8		black oak	12.00		good	
Vuelo Palomas	20+12		8	black oak	12.00		fair	
Vuelo Palomas	20+25		10	black oak	15.00		good	
Vuelo Palomas	20+32		3	coast live oak	16.00		good	
Vuelo Palomas	20+35		7	black oak	11.00		fair	
Vuelo Palomas	20+65	12		coast live oak	14.00		fair	multi w/ 14", 8" trunks
Vuelo Palomas	20+65	14		black oak	14.00		fair	multi w/ 11" trunk
Vuelo Palomas	20+73	8		black oak	12.00		good	
Vuelo Palomas	20+88		5	black oak	8.00		fair	
Vuelo Palomas	20+95	3		black oak	11.00		good	
Vuelo Palomas	20+97	10		black oak	10.00		fair	
Vuelo Palomas	21+62	15		black oak	28.00	X	poor	
Vuelo Palomas	21+85		5	black oak	26.00	X	poor	cavity
Vuelo Palomas	22+13		7	black oak	14.00		good	
Vuelo Palomas	22+21	5		black oak	11.00		fair	
Vuelo Palomas	22+80	10		black oak	14.00		good	
Vuelo Palomas	22+80	13		coast live oak	13.00		good	
Vuelo Palomas	22+80	15		coast live oak	22.00		good	
Vuelo Palomas	22+85		10	coast live oak	13.00		fair	
Vuelo Palomas	22+96	+	+	black oak	13.00		good	
Vuelo Palomas	22+97	11		black oak	11.00		poor	
Vuelo Palomas	23+00	11		black oak	12.00		poor	multi w/ 11" trunk
Vuelo Palomas	24+00	6		coast live oak	12.00		good	
Vuelo Palomas	24+75		5	madrone	12.00		good	
Vuelo Palomas	25+75	+	+	coast live oak	12.00		good	multi w/ 11" trunk

RANCHO SAN CARLOS
ROAD AND DRIVEWAY TREE SURVEY

Location	Station	Left	Right	Species	Diameter	Landmark	Health	Comments
Vuelo Palomas	27+60		10	coast live oak	10.00		good	
Vuelo Palomas Ext.	0+61	8		coast live oak	12.00		fair	multi w/ 10" trunk
Vuelo Palomas Ext.	0+72	8		coast live oak	12.00		fair	
Vuelo Palomas Ext.	0+79	5		coast live oak	9.00		poor	multi w/ 6" trunk
Vuelo Palomas Ext.	0+80		8	coast live oak	10.00		fair	multi w/ 8" trunk
Vuelo Palomas Ext.	0+92		3	coast live oak	12.00		fair	
Vuelo Palomas Ext.	1+12	5		coast live oak	11.00		good	
Vuelo Palomas Ext.	1+26		5	coast live oak	12.00		poor	
Vuelo Palomas Ext.	1+52		3	coast live oak	10.00		fair	
Vuelo Palomas Ext.	1+52	5		coast live oak	8.00		fair	multi w/ 6" trunk
Vuelo Palomas Ext.	1+58		5	coast live oak	9.00		poor	
Vuelo Palomas Ext.	1+67		5	coast live oak	10.00		good	multi w/ 10", 6" trunks
Vuelo Palomas Ext.	1+96	5		coast live oak	12.00		good	multi w/ 14" trunk
Vuelo Palomas Ext.	2+14		+	coast live oak	16.00		good	
Vuelo Palomas Ext.	2+17	+		coast live oak	9.00		fair	
Vuelo Palomas Ext.	2+30	+		coast live oak	8.00		fair	
Vuelo Palomas Ext.	2+52		5	coast live oak	10.00		fair	multi w/ 12", 9" trunks
Vuelo Palomas Ext.	2+86	6		coast live oak	12.00		fair	
Vuelo Palomas Ext.	2+87		6	coast live oak	10.00		poor	
Vuelo Palomas Ext.	2+89		6	coast live oak	6.00		fair	multi w/ 11", 10" trunks
Vuelo Palomas Ext.	2+92	5		coast live oak	12.00		fair	multi w/ 11" trunk
Vuelo Palomas Ext.	3+13		7	coast live oak	12.00		fair	
Vuelo Palomas Ext.	3+33	5		coast live oak	11.00		fair	multi w/ 6" trunk
Vuelo Palomas Ext.	90+64		5	coast live oak	15.00		fair	multi w/ 8" trunk
Vuelo Palomas Ext.	90+65		5	coast live oak	12.00		fair	multi w/ 12" trunk
Vuelo Palomas Ext.	90+70		10	coast live oak	14.00		fair	

This page intentionally left blank