

APPENDIX D
Protected Tree Report

Protected Tree Report

Conejo Creek Park Southwest Development Project



City of Thousand Oaks

PREPARED FOR:

Conejo Recreation and Park District

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January 2019

PROTECTED TREE REPORT

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<u>SECTION</u>	<u>PAGE</u>
I. BACKGROUND INFORMATION	1
II. SITE OBSERVATIONS AND TREE CONDITIONS	2
III. PROJECT IMPACTS	2
IV. MITIGATION MEASURES	5
V. RECOMMENDATIONS	6

TABLES

Table 1	Trees Not Impacted	3
Table 2	Trees to Remain with Tree Protection Zone Impacts	4

APPENDICES

Appendix 1	Summary of Field Observation Definitions
Appendix 2	Tree Survey Data Forms
Appendix 3	Photographs of Surveyed Trees
Appendix 4	Tree Location and Project Impact Map

I. BACKGROUND INFORMATION

Property Owner/Applicant Information

The property owner/applicant for this project is:

Conejo Recreation & Park District
403 West Hillcrest Drive
Thousand Oaks, CA 91360

Preparer Information

The preparer of this Protected Tree Survey is:

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Project Location

The Conejo Creek Southwest Park Development Project (“the Project”) is located north of Combes Avenue and bisected by Paige Lane in the City of Thousand Oaks, California. The approximately 14 acre project site is bordered by State Route 23 to the east, Conejo Creek Channel to the north, and residential development to the south and west.

Assignment

The proposed Project consists of the development of a community park with associated amenities, including a Conejo Creek themed playground, multi-use recreational courts, fitness nodes, a parking lot, picnic areas, a restroom, multi-use lawns, as well as the repurposing and expansion of existing multi-use paths. This report provides survey results for trees protected in the City of Thousand Oaks that are growing within the limits of the proposed development and the surrounding 100 feet (“Project Survey Area”). Additionally, this report provides a tree impact analyses based on Grading and Drainage Plans prepared by RRM Design Group, received December 20, 2018. The contents of this report have been prepared in accordance with the content requirements outlined in subsection III.E of the Thousand Oaks Oak Tree Preservation and Protection Guidelines.

Method of Field Evaluation

The City of Thousand Oaks protects all oaks (*Quercus* sp.) measuring greater than 2 inches in diameter as measured 4.5 feet above mean natural grade, as well as the following “Landmark Trees”: *Platanus racemosa* (western sycamore) exceeding 12 inches in diameter and *Umbellularia californica* (California Bay Laurel), *Juglans californica* (California Black Walnut), and *Heteromeles arbutifolia*, (Toyon) exceeding 8 inches in diameter when measured 4.5-feet above mean natural. Trees with multiple trunks shall be deemed to have reached maturity if the sum of the diameters of the multiple trunks exceed the required diameter plus two (2") inches of a single trunked tree (Thousand Oaks Municipal Code Title 9, Chapter 4, Articles 42 and 43). For the purposes of this report, trees that meet these criteria are referred to as “Protected Trees”.

Pursuant to the City’s Preservation and Protection program, certified arborist Ms. Erin Roberts (ISA # WE-10365A) conducted a survey and evaluation of Protected Trees growing within the anticipated development

footprint. A blue aluminum tree tag marked with an identifying number was affixed to the north side of each surveyed tree, approximately 4.5-feet above normal grade. Visual inspections and measurements recorded over the course of three (3) days between October 9, 2018 and November 8, 2018 included the following:

- The trunk diameter at 4.5 feet above grade;
- The canopy extent; and
- Tree health, balance, and aesthetic values. These values were evaluated by visually inspecting the tree for signs of disease and pests, evidence of new growth and continued survival, and overall balance and value to the surrounding landscape. Field observation definitions are provided in **Appendix 1**.

In addition, per the request of the applicant, an abbreviated tree survey of the Protected Trees growing within the riparian corridor directly north of anticipated Project development footprint was performed to record the number and conditions associated with these trees. These data are summarized below.

II. SITE OBSERVATIONS AND TREE CONDITIONS

It is anticipated that Project development will be limited to those areas southeast of the existing multi-use path and north of Combes Avenue. Vegetation communities within these areas consist of an intact riparian woodland growing along the southern edge of the Conejo Creek Channel directly north of the site, a dominance of non-native grasses and forbs throughout the site, and several scattered groupings of native California black walnuts and oaks.

Within the Project Survey Area there are a total of 30 coast live oaks (*Quercus agrifolia*), 11 valley oaks (*Quercus lobata*), and six (6) California black walnuts protected under the City of Thousand Oaks Oak Tree and Landmark Trees Preservation and Protection guidelines (Thousand Oaks Municipal Code Title 9, Chapter 4, Articles 42 and 43, respectively). **Appendix 2** provides the assigned number, species, and trunk diameter, as well as sunlight exposure, and topography.

Approximately 192 oak trees of varying size classes comprise the oak woodland growing north of the anticipated limits of Project disturbance. In summary, the subject woodland supports a dense overhead canopy with an intact oak leaf litter layer. At the time of the survey the understory vegetation comprised the scattered distribution of native species including mugwort (*Artemisia douglasiana*), giant wild rye (*Elymus codensatus*), toyon (*Heteromeles arbutifolia*), and mulefat (*Baccharis salicifolia*), as well as approximately 111 coast live oak saplings, approximately five (5) valley oak saplings, and potentially 300 to 500 seedlings of both species were observed. In addition, the total approximated number of each size class for each oak species was as follows, approximately 61 coast live oaks and one (1) valley oak with a diameter measuring between 4 to 11 inches, 75 coast live oaks and 10 valley oaks with a diameter measuring between 12 to 32 inches, and 37 coast live oaks and five (5) valley oaks with a diameter measuring greater than 32 inches.

The results of the survey for individual protected oak trees are documented on the survey forms provided in Appendix 2. Photographs provided in **Appendix 3** document the visual condition of each tree as well as the oak woodland. **Appendix 4** provides the location of the surveyed trees within the project site.

III. PROJECT IMPACTS

The proposed Project would allow for 34 Protected Trees to remain in place without being impacted. Anticipated Project development would encroach into the Protected Zone associated with 13 Protected Trees. The Protected Zone (PZ) is defined as the area within the dripline and extending a minimum of 5-

feet outside the dripline or 15-feet from the trunk of a tree; whichever is greater (Oak Tree Preservation and Protection program, Section 9-4.4202 **Tables 1 and 2** provide a summary of the proposed impacts to all 47 of the protected oak / landmark trees. Additionally, Appendix 4 illustrates the impacts with respect to the proposed construction activities.

Trees to Remain without Impacts

A total of 34 Protected Trees would remain in place and would not be impacted by proposed Project activities. In addition, it is anticipated that Project activities will remain outside the dripline associated with the oak woodlands. The identities of the individual Protected Trees not to be impacted by Project development are listed in **Table 1**.

**Table 1
Trees Not Impacted**

*The tree numbers in this analysis include those south of the multi-use trail only

Tree #	Species	Trunk Diameter (in.)	Hazard	Health Rating
46	Qa	8.9	No	C
47	Qa	3.2, 3.2, 3.2	No	C
48	Qa	2.9, 2.9	No	C
49	Qa	2.9, 2.9, 2.9	No	C
50	Qa	29.9	No	C
51	Jc	15.6	No	B
52	Qa	5.7	No	C
53	Qa	2.5, 1.2, 1.6, 1.6	No	C
54	Qa	3.2, 3.2	No	C
55	Qa	2.2	No	C
56	Qa	2.5, 1.6	No	B
57	Qa	3.5	No	B
58	Qa	Inaccessible	No	B
59	Ql	7.3	No	C
60	Ql	6.1	No	C
63	Ql	9.2	No	C
64	Ql	5.4	No	C
65	Ql	17.8	No	C
66	Jc	16 trunks each measuring between 4 - 6 inches	No	B
67	Ql	32.8	No	C
68	Qa	7.3	No	B
69	Ql	3.5	No	C
70	Ql	2.9, 2.2	No	C
74	Jc	11.8, 11.1, 8.3, 7.6, 7.6	No	B
238	Qa	18.5	No	C
240	Qa	22.3	No	C
242	Qa	9.6	No	C
243	Qa	5.7	No	C
244	Qa	8.9	No	C
247	Qa	8.3	No	B
249	Qa	7.0	No	C

Tree #	Species	Trunk Diameter (in.)	Hazard	Health Rating
250	Qa	5.7	No	C
251	Qa	3.5	No	B
252	Qa	11.5	No	B

Trees to Remain with Protection Zone Impacts

Thirteen trees will remain in place with PZ impacts. It is anticipated that the natural grade within the dripline of these trees will be maintained. However, to allow for the placement of footings associated with the two-rail fence along the southern edge of Paige Lane, it is anticipated that four (4) or five (5) holes measuring approximately 32 to 36 inches deep and 14 to 18 inches wide will be excavated within the driplines associated with Tree #'s 246 and 254. Because the exact location of these footings will be determined at the time that the fence will be constructed, it is recommended that measures be taken to reduce impacts to roots, including having the work monitored by the Project arborist. The individual trees with anticipated PZ encroachments as well as the reason for the disturbance are summarized in **Table 2**.

In addition, it is anticipated that the native earth equestrian trail would encroach within approximately 0.2 percent of the PZ associated with the oak woodland that overhangs the existing paved multi-use trail and remain outside the associated dripline. In addition, the proposed equestrian trail will consist of the native soil and not require changes to the existing grade.

Table 2
Trees to Remain With Protection Zone Impacts

*The tree numbers in this analysis include those south of the multi-use trail only

Tree #	Species	Trunk Diameter (in.)	Health Rating	Reason for Disturbance
61	Jc	16 trunks each measuring between 4 - 6 inches	B	Ground plane improvements associated with a native earth equestrian trail and project grading activities. No grading activities or changes to the existing grade are anticipated.
62	Ql	6.7, 8.3	C	Minor grading activities to daylight into the existing grade as well as ground plane improvements associated with a native earth equestrian trail and project grading activities. No changes to the existing grade are anticipated.
71	Jc	6.4, 6.7, 7.6, 4.8, 4.8	C	Ground plane improvements associated with a native earth equestrian trail and project grading activities. No grading activities or changes to the existing grade are anticipated.
72	Jc	6 trunks each measuring between 9.5 - 13.4 inches	B	Ground plane improvements associated with a native earth equestrian trail and project grading activities. No grading activities or changes to the existing grade are anticipated.

Tree #	Species	Trunk Diameter (in.)	Health Rating	Reason for Disturbance
73	Jc	10 trunks each measuring between 4.8 - 9.5 inches	C	Ground plane improvements associated with a native earth equestrian trail and project grading activities. No grading activities or changes to the existing grade are anticipated.
237	Ql	30.9	B	Grading and construction activities associated with a native earth equestrian trail and an asphalt pedestrian path. No changes to the existing grade are anticipated.
239	Qa	20.7	B	Grading and construction activities associated with an asphalt pedestrian path.
241	Qa	7.6	C	Grading and construction activities associated with the proposed sand volleyball court.
245	Qa	5.4	B	Construction activities associated with the placement of a two-rail fence along Paige Lane.
246	Qa	8.6	B	Construction activities associated with the placement of potentially two (2) footings associated with the two-rail fence proposed along the southern edge of Paige Lane.
248	Qa	7.3	C	Construction activities associated with the placement of a two-rail fence along Paige Lane.
254	Qa	3.2	B	Construction activities associated with the placement of potentially three (3) footings associated with the two-rail fence proposed along the southern edge of Paige Lane.
255	Qa	3.5	B	Construction activities associated with the placement of a two-rail fence along Paige Lane.

IV. MITIGATION MEASURES

Development of the Project will encroach into the PZ associated with 13 trees. It is anticipated that the natural grade within the dripline of these trees will be maintained. However, to reduce potential impacts to the roots during the installation of the footings associated with the two-rail fence, it is recommended that work within the driplines of Tree #'s 246 and 254 be overseen by the Project arborist. No further mitigation is being recommended at this time.

Avoidance and Minimization Measures

The following avoidance and minimization measures are required to preserve the long-term health of all protected oak trees on-site:

-
- 1) Soil levels within the PZ shall be maintained at natural grade within the PZ of Tree #s 71 – 73, 237, 239, 241, 245, 246, 248, 254, and 255.
 - 2) Approved pruning of deadwood, broken branches and recommended structural pruning in accordance with International Society of Arboriculture, Pruning Standards and ANSI A-300 Pruning Guidelines.
 - 3) Remove all concrete, trash, and debris located within the Protection Zones. The Protection Zones shall be kept free of the construction materials in the future.
 - 4) Protective fencing shall be installed at the edge of the PZ around the protected oak / landmark trees to remain in place in the proximity of the proposed activities. Fencing can be taken down or moved to the edge of canopy or edge of grading only when approved work is being carried out under the observation of the applicant's oak tree consultant and agreed to by the Community Development Department.
 - 5) The fences must be installed prior to the commencement of any grading operations. Signs must be installed on the fence in four (4) locations at equidistant around each tree. In the case of a grove of oak trees signs shall be placed at approximately 50-foot intervals. The signs must be a minimum two (2) feet by two (2) feet and contain the following language: WARNING: THIS FENCE SHALL NOT BE REMOVED OR RELOCATED WITHOUT WRITTEN AUTHORITY FROM THE COMMUNITY DEVELOPMENT DEPARTMENT.
 - 6) All work performed within the PZ of any oak shall be accomplished by utilizing hand tools only and must be monitored by the Project Arborist.
 - 7) Minor roots under 1" in diameter exposed during project grading shall be treated with an approved compound by the Project Arborist before the improvements are installed. Root pruning cuts shall be clean cut at a 45-degree angle with the cut surface facing downward.
 - 8) Major roots over 1" in diameter may not be cut. Depending on the type of improvement being proposed, bridging techniques or a new site may need to be employed to protect the root and the tree.
 - 9) The leaf-litter build-up under the canopy of the oak is ideal for healthy tree growth and root development. Do not alter or remove if possible. A 3-inch layer of mulch may be advisable in settings where leaf-litter has been lost.
 - 10) Do not remove the tags numbering each oak on this site.
 - 11) No construction materials are to be stored or discarded within the Protection Zone of any oak. Rinse water, concrete residue, liquid contaminants (paint, thinners, gasoline, oils, etc.) of any type shall not be deposited in any form at the base of an oak.
 - 12) No vehicles shall be parked within the Protection Zone of an oak.
 - 13) The Project Arborist will be overseeing the care of mitigation oaks and existing oaks that remain on-site through the completion of the construction phase of the project.
 - 14) Operate in conformance with the City of Thousand Oaks Oak Tree Preservation and Protection Guidelines.

V. RECOMMENDATIONS

Pruning Recommendations

When larger oaks become fixtures in public areas, regular maintenance pruning for end-weight reduction is imperative for safety. Healthy oaks, if not maintained, will eventually grow beyond their ability to support themselves and fail at a weak point. This commonly occurs at a branch union or the main crotch. Weight reduction pruning and/or cabling is vitally important in an oak tree preservation program.

Frequency of Watering

Care should be taken to avoid placing any sprinklers within watering distance to the trunk of an oak tree. Generally, sprinklers should not reach within 15' of a mature oak trunk. Grass or ground covers must never be planted next to the trunks. Too much moisture near the base of an oak is generally believed to be their leading cause of death in public settings. Oak Root Fungus tends to thrive in an over-irrigated setting. Oak trees survive and thrive on annual rainfall alone and generally do not need supplemental irrigation except during periods of extended drought. Watering should take place at or near the dripline only. Landscape plans should leave the area within the dripline of an oak tree in a native or natural setting where feasible.

Placement of Picnic Tables

To reduce unnecessary soil compaction, it is recommended that picnic tables be placed outside the driplines of the trees identified within this report.

Appendix 1
Summary of Field Observation Definitions

SUMMARY OF FIELD OBSERVATIONS DEFINITIONS

The following provides a reference for terms and ratings used on the survey datasheet and criteria used during the evaluation process of the oak and landmark tree survey.

FORM

- Tree Number - each tree of ordinance size surveyed within the field has been assigned a number. This assigned number corresponds to a tree location on the “Protected Tree Location Map”.
- Species - the identity of the tree being evaluated
- Tree Height - approximate height of tree
- Lean - indicates the direction the tree is leaning from vertical
- Trunk Diameter / Circumference - diameter / circumference of trunk as measured from 4 ½ feet above natural grade
- Slope - surface the tree is growing on, slope or level.
- Lean - indicates the direction the tree is leaning from vertical

PHYSICAL CONDITION

- Cavity - hollow spaces along the branches
- Trunk Exudation - substance secreting or oozing from the trunk or branches
- Hollow Trunk - hollow area in a trunk
- Evidence of Disease - evidenced by the presence of fruiting bodies
- Weak Crotch - poorly formed branch attachments
- Insect Damage - evidenced by presence of insect frass, boring holes, chewed leaves, etc.
- Parasites - evidenced by presence of parasites, including mistletoe, in the canopy and branches
- Fire Damage - the extent of structural damage caused from fire
- Excessive Branching - tree exhibiting increased levels of horizontal branching not characteristic of the species
- Epicormic Growth - shoots growing from the trunk, stem, or branch of a tree
- Sparse Foliage - canopy defoliation and/or twig dieback
- Unbalanced Crown - asymmetrical canopy
- Leaf Scorch - A non-infectious condition caused by unfavorable environment. Symptoms include brown or yellow leaf margins caused by water stress.
- Soil Buildup - the type of soil or material found at the base of the tree
 - Alluvial Fill - detrital material or soils deposited by waters
 - Colluvial Fill - detrital material or soils deposited by gravity
 - Woodrat Nest - woodrat nest or nesting material built up at the base of the tree
- Deadwood - evidenced by the presence of singular and / or groupings of dead branches in the canopy
- Exfoliating Bark - the flaking off of bark on the trunk

RATINGS

Aesthetics and Conformity

The aesthetics of a tree is an overall inspection of the appearance based on type specimens of the subject species and value it adds to the surrounding landscape. The ratings and characteristics used during this process include the following:

- **A (Excellent)** Visually symmetrical and balanced, exhibits the ideal appearance and form for this species.
- **B (Average)** = Although, not symmetrical is visually appealing exhibiting very little canopy dieback and deadwood.
- **C (Below Average)** = Non-symmetrical and/or is visually unappealing exhibiting substantial canopy dieback and deadwood.
- **D (Poor)** = Displays few characteristics that are visually appealing.
- **F (Dead/Dying)** = Dead

Health

Tree health was determined by visually inspecting the tree for signs of disease and pests and canopy density. The following rationale for determining health grades is as follows:

- **A (Outstanding)** = A healthy and vigorous tree characteristic of its species and free of any visible signs of disease or pest infestation. Canopy density 90 - 100%.
- **B (Above Average)** = A healthy and vigorous tree. However, there are minor visible signs of disease or pest infestation. Canopy density 80 - 100%.
- **C (Average)** = Although healthy in overall appearance, there is normal amount of disease or pest infestation typical of the species. Canopy density 60 - 79%.
- **D (Below Average / Poor)** = This tree is characterized by exhibiting a greater degree of disease or pest infestation than normal and appears to be in a state of decline. This tree also exhibits signs of twig and branch dieback. Canopy density 20 - 59%.
- **E (Dead)** = This tree exhibits no signs of life whatsoever.

Vigor

The vigor of a tree is the capacity for growth and continued survival. Observable growth characteristics used to determine the following vigor ratings are described below.

- **Good** = Evidence of new growth, healthy leaf color, and bark is relatively free of uncharacteristic cracks and decay.
- **Moderate** = Very little evidence of new growth, minor unseasonal browning and thinning of foliage, and galls may be present.
- **Poor** = No evidence of new growth, unhealthy leaf and bark color, large amounts of deadwood, and severely unseasonal thinned canopy.

CANOPY CLASSIFICATION

- **Co-dominant** - Trees with canopies forming the general level of the adjacent canopy cover and receiving full light from above but comparatively little from the sides; usually with medium-sized canopies, more or less crowded on the sides.
- **Dominant** - Trees with canopies extending above the general level of the adjacent canopy cover and receiving full light from above and partly from the side; larger than the average

trees in the associated stand, and with canopies well developed but possibly somewhat crowded on the sides.

- Intermediate - Trees shorter than those in the preceding classes, but with canopies either below or extending into the canopy cover of adjacent trees with dominant and co-dominant canopies; canopy receives little light from directly overhead, but none from the sides, usually with small canopies considerably crowded on the sides.
- Open Grown - Tree growing isolated from surrounding tree stands.
- Over-topped - Trees with canopies entirely below the general level of adjacent tree canopies; canopy receives no direct light either from above or from the sides.

Appendix 2
Tree Survey Data Forms

CONEJO CREEK PARK SW OAK TREE SURVEY

TREE NUMBER		SPECIES		FORM		PHYSICAL CONDITION																TREATMENT						RATING			CODES			
				TREE HEIGHT (FT)	TRUNK DIAMETER (IN)	SLOPE	LEAN	CAVITY	TRUNK EXUDATION	HOLLOW TRUNK	EVIDENCE OF DISEASE	WEAK CROTCH	INSECT DAMAGE	PARASITES	FIRE DAMAGE	EXCESSIVE BRANCHING	EPICORMIC GROWTH	SPARSE FOLIAGE	UNBALANCED CROWN	LEAF SCORCHING	SOIL BUILDUP	DEADWD	EXFOLIATING BARK	CABLE BRACE	CROWN REDUCTION	REMOVE DEADWD	REPLENISH NUTRIENTS	DISEASE TREATMENT	INSECT TREATMENT	RAISE CANOPY	STRUCTURAL PRUNING	AESTHETIC	HEALTH	VIGOR	STRESS RATING
46	QA	15	8.9	.	.	.	.	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	G	C	G	.	
47	QA	11	3.2 2.2 3.2	.	.	.	.	.	.	.	X	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	C	C	G	.	
48	QA	10	2.9 2.9	.	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	C	C	G	.	
49	QA	12	2.9 2.9 2.9	.	.	.	.	.	.	X	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	C	C	G	.	
50	QA	20	29.9	.	.	.	.	.	.	X	.	.	.	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	C	C	G	.	measured below fork	
51	JC	20	15.6	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	B	B	G	.	taken below fork	

QA = Quercus agrifolia
 QL = Quercus lobata
 JC = Juglans californica
 CF = Colluvial Fill
 O=Other
 X- =Minor, X =Yes, X+ =Excessive
 Aesthetic: A=Outstanding, B=Good
 C=Average, D=Below Avg., F=Dead
 Health: A=Outstanding, B=Good,
 C=Average, D=Below Avg., F=Dead
 Vigor: G=Good, M=Moderate, P=Poor
 N:North, NE:Northeast, E:East,
 SE:Southeast, S:South, SW:Southwest,
 W:West, NW:Northwest, LVL:Level

FORM							PHYSICAL CONDITION														TREATMENT							RATING			CODES						
TREE NUMBER	SPECIES	HERITAGE OAK	TREE HEIGHT (FT)	TRUNK DIAMETER (IN)	SLOPE	LEAN	CAVITY	TRUNK EXUDATION	HOLLOW TRUNK	EVIDENCE OF DISEASE	WEAK CROTCH	INSECT DAMAGE	PARASITES	FIRE DAMAGE	EXCESSIVE BRANCHING	EPICORMIC GROWTH	SPARSE FOLIAGE	UNBALANCED CROWN	LEAF SCORCHING	SOIL BUILDUP	DEADWD	EXFOLIATING BARK	CABLE BRACE	CROWN REDUCTION	REMOVE DEADWD	REPLENISH NUTRIENTS	DISEASE TREATMENT	INSECT TREATMENT	RAISE CANOPY	STRUCTURAL PRUNING	AESTHETIC	HEALTH	VIGOR	STRESS RATING			
52	QA		13	5.7	X	X	C	C	G	.	
53	QA		10		.	.	.	.	.	.	.	X	.	.	.	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.	.	C	C	G	.	8 trunks measuring approx 4-5"
54	QA		11	3.2 3.2	.	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	C	C	G	.	
55	QA		15	2.2	.	.	.	.	.	.	.	X+	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	C	C	G	.	
56	QA		9	2.5 1.6	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	B	B	G	.	
57	QA		11	3.5	.	S	X	X	B	B	G	.	conspicuous scale		
58	QA		0		X	B	B	G	.	taken at fence approximately 40-50 ft W, measure from aerial	

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 JC = Juglans californica
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 O=Other
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 Aesthetic: A=Outstanding, B=Good
 C=Average, D=Below Avg., F=Dead
 Health: A=Outstanding, B=Good,
 C=Average, D=Below Avg., F=Dead
 Vigor: G=Good, M=Moderate, P=Poor
 N:North, NE:Northeast, E:East,
 SE:Southeast, S:South, SW:Southwest,
 W:West, NW:Northwest, LVL:Level

FORM							PHYSICAL CONDITION																TREATMENT							RATING			CODES			
TREE NUMBER	SPECIES	HERITAGE OAK	TREE HEIGHT (FT)	TRUNK DIAMETER (IN)	SLOPE	LEAN	CAVITY	TRUNK EXUDATION	HOLLOW TRUNK	EVIDENCE OF DISEASE	WEAK CROTCH	INSECT DAMAGE	PARASITES	FIRE DAMAGE	EXCESSIVE BRANCHING	EPICORMIC GROWTH	SPARSE FOLIAGE	UNBALANCED CROWN	LEAF SCORCHING	SOIL BUILDUP	DEADWD	EXFOLIATING BARK	CABLE BRACE	CROWN REDUCTION	REMOVE DEADWD	REPLENISH NUTRIENTS	DISEASE TREATMENT	INSECT TREATMENT	RAISE CANOPY	STRUCTURAL PRUNING	AESTHETIC	HEALTH	VIGOR	STRESS RATING		
59	QL		15	7.3	.	NW	X	X		G	C	G	.	
60	QL		25	6.1	X	G	C	G	.	
61	QL		45	21.3	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	X		.	.	.	.	.	.	.	.	C	C	G	.	
62	QL		25	6.7 8.3	.	.	X	X	X		C	C	G	.	
63	QL		25	9.2	.	W	X	.	.	.	.	X	.	.	X	.	.	.	.	.	X		.	.	.	.	.	.	.	.	C	C	G	.	
64	QL		11	5.4	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	X		.	.	.	.	.	.	.	.	C	C	G	.	
65	QL		35	17.8	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	X		.	.	.	.	.	.	.	.	C	C	G	.	

QA = Quercus agrifolia
 QL = Quercus lobata
 JC = Juglans californica
 CF = Colluvial Fill
 O=Other
 X- =Minor, X =Yes, X+ =Excessive
 Aesthetic: A=Outstanding, B=Good
 C=Average, D=Below Avg., F=Dead
 Health: A=Outstanding, B=Good,
 C=Average, D=Below Avg., F=Dead
 Vigor: G=Good, M=Moderate, P=Poor
 N:North, NE:Northeast, E:East,
 SE:Southeast, S:South, SW:Southwest,
 W:West, NW:Northwest, LVL:Level

TREE NUMBER	SPECIES	HERITAGE OAK	FORM				PHYSICAL CONDITION														TREATMENT							RATING			CODES			
			TREE HEIGHT (FT)	TRUNK DIAMETER (IN)	SLOPE	LEAN	CAVITY	TRUNK EXUDATION	HOLLOW TRUNK	EVIDENCE OF DISEASE	WEAK CROTCH	INSECT DAMAGE	PARASITES	FIRE DAMAGE	EXCESSIVE BRANCHING	EPICORMIC GROWTH	SPARSE FOLIAGE	UNBALANCED CROWN	LEAF SCORCHING	SOIL BUILDUP	DEADWD	EXFOLIATING BARK	CABLE BRACE	CROWN REDUCTION	REMOVE DEADWD	REPLENISH NUTRIENTS	DISEASE TREATMENT	INSECT TREATMENT	RAISE CANOPY	STRUCTURAL PRUNING	AESTHETIC	HEALTH	VIGOR	STRESS RATING
66	JC		22		B	B	G	.	trunks ranging between 4-7" DBH
67	QL		50	32.8	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	C	C	G	.	taken below fork
68	QA		25	7.3	.	.	.	.	.	.	X	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	B	B	G	.	
69	QL		20	3.5	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	C	C	G	.	
70	QL		15	2.9 2.2	.	N	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	C	C	G	.	
71	JC		22	6.4 6.7 7.6 4.8 4.8	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	C	C	G	.	
72	.		30		.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	B	B	G	.	trunks measuring 2'6"-3'6" circ

QA = Quercus agrifolia
QL = Quercus lobata
JC = Juglans californica
CF = Colluvial Fill
O=Other
X- =Minor, X =Yes, X+ =Excessive
Aesthetic: A=Outstanding, B=Good
C=Average, D=Below Avg., F=Dead
Health: A=Outstanding, B=Good,
C=Average, D=Below Avg., F=Dead
Vigor: G=Good, M=Moderate, P=Poor
N:North, NE:Northeast, E:East,
SE:Southeast, S:South, SW:Southwest,
W:West, NW:Northwest, LVL:Level

TREE NUMBER	SPECIES	HERITAGE OAK	FORM				PHYSICAL CONDITION														TREATMENT						RATING			CODES					
			TREE HEIGHT (FT)	TRUNK DIAMETER (IN)	SLOPE	LEAN	CAVITY	TRUNK EXUDATION	HOLLOW TRUNK	EVIDENCE OF DISEASE	WEAK CROTCH	INSECT DAMAGE	PARASITES	FIRE DAMAGE	EXCESSIVE BRANCHING	EPICORMIC GROWTH	SPARSE FOLIAGE	UNBALANCED CROWN	LEAF SCORCHING	SOIL BUILDUP	DEADWD	EXFOLIATING BARK	CABLE BRACE	CROWN REDUCTION	REMOVE DEADWD	REPLENISH NUTRIENTS	DISEASE TREATMENT	INSECT TREATMENT	RAISE CANOPY	STRUCTURAL PRUNING	AESTHETIC	HEALTH	VIGOR	STRESS RATING	QA = Quercus agrifolia QL = Quercus lobata JC = Juglans californica CF = Colluvial Fill O=Other X- =Minor, X =Yes, X+ =Excessive Aesthetic: A=Outstanding, B=Good C=Average, D=Below Avg., F=Dead Health: A=Outstanding, B=Good, C=Average, D=Below Avg., F=Dead Vigor: G=Good, M=Moderate, P=Poor N:North, NE:Northeast, E:East, SE:Southeast, S:South, SW:Southwest, W:West, NW:Northwest, LVL:Level
73	JC		25		X	C	C	G	.	trunks measuring 1'3" -2'6"
74	JC		23	11.8 11.1 8.3 7.6 7.6	X	B	B	G	.	
237	QL		45	30.9	.	.	X	.	.	.	X	.	.		.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	B	B	G	.	
238	QA		25	18.5	.	NW	X	.	.	.	X	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	C	C	G	.	
239	QA		33	20.7	.	NW	X	.	.	.	X	.	.		.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	B	B	G	.	
240	QA		30	22.3	.	.	X	.	.	.	X	.	.		.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	C	C	G	.	
241	QA		12	7.6	.	.	.	.	.	.	X	.	.		.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	C	C	G	.	

TREE NUMBER	SPECIES	HERITAGE OAK	FORM				PHYSICAL CONDITION																TREATMENT						RATING			CODES			
			TREE HEIGHT (FT)	TRUNK DIAMETER (IN)	SLOPE	LEAN	CAVITY	TRUNK EXUDATION	HOLLOW TRUNK	EVIDENCE OF DISEASE	WEAK CROTCH	INSECT DAMAGE	PARASITES	FIRE DAMAGE	EXCESSIVE BRANCHING	EPICORMIC GROWTH	SPARSE FOLIAGE	UNBALANCED CROWN	LEAF SCORCHING	SOIL BUILDUP	DEADWD	EXFOLIATING BARK	CABLE BRACE	CROWN REDUCTION	REMOVE DEADWD	REPLENISH NUTRIENTS	DISEASE TREATMENT	INSECT TREATMENT	RAISE CANOPY	STRUCTURAL PRUNING	AESTHETIC	HEALTH	VIGOR	STRESS RATING	QA = Quercus agrifolia QL = Quercus lobata JC = Juglans californica CF = Colluvial Fill O=Other X- =Minor, X =Yes, X+ =Excessive Aesthetic: A=Outstanding, B=Good C=Average, D=Below Avg., F=Dead Health: A=Outstanding, B=Good, C=Average, D=Below Avg., F=Dead Vigor: G=Good, M=Moderate, P=Poor N:North, NE:Northeast, E:East, SE:Southeast, S:South, SW:Southwest, W:West, NW:Northwest, LVL:Level
242	QA		21	9.6	.	E	X	X	C	C	G	.	
243	QA		25	5.7	.	E	X	X	C	C	G	.	
244	.		25	8.9	.	E	.	.	.	.	.	X	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	C	C	G	.	
245	QA		24	5.4	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	B	B	G	.	
246	QA		25	8.6	.	N	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	B	B	G	.	
247	QA		25	8.3	.	NW	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	B	B	G	.	
248	QA		27	7.3	.	.	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	C	C	G	.	

FORM							PHYSICAL CONDITION																	TREATMENT							RATING			CODES			
TREE NUMBER	SPECIES	HERITAGE OAK	TREE HEIGHT (FT)	TRUNK DIAMETER (IN)	SLOPE	LEAN	CAVITY	TRUNK EXUDATION	HOLLOW TRUNK	EVIDENCE OF DISEASE	WEAK CROTCH	INSECT DAMAGE	PARASITES	FIRE DAMAGE	EXCESSIVE BRANCHING	EPICORMIC GROWTH	SPARSE FOLIAGE	UNBALANCED CROWN	LEAF SCORCHING	SOIL BUILDUP	DEADWD	EXFOLIATING BARK	CABLE BRACE	CROWN REDUCTION	REMOVE DEADWD	REPLENISH NUTRIENTS	DISEASE TREATMENT	INSECT TREATMENT	RAISE CANOPY	STRUCTURAL PRUNING	AESTHETIC	HEALTH	VIGOR	STRESS RATING			
249	QA		24	7.0	.	N	.	.	.	.	.	X	.	.		X	.	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.
250	QA		20	5.7	.	NE	.	.	.	.	.	X	.	.		X	.	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.
251	QA		17	3.5	.	NE	.	.	.	.	.	X	.	.		.	.	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.
252	QA		30	11.5	.	NW	.	.	.	.	.	X	.	.		.	.	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.
254	QA		11	3.2	.	NE	.	.	.	.	.	X	.	.		.	.	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.
255	QA		17	3.5	.	N	.	.	.	.	.	X	.	.		.	.	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.

QA = Quercus agrifolia
 QL = Quercus lobata
 JC = Juglans californica
 CF = Colluvial Fill
 O=Other
 X- =Minor, X =Yes, X+ =Excessive
 Aesthetic: A=Outstanding, B=Good
 C=Average, D=Below Avg., F=Dead
 Health: A=Outstanding, B=Good,
 C=Average, D=Below Avg., F=Dead
 Vigor: G=Good, M=Moderate, P=Poor
 N:North, NE:Northeast, E:East,
 SE:Southeast, S:South, SW:Southwest,
 W:West, NW:Northwest, LVL:Level

CONEJO CREEK PARK SW TREE SURVEY 2018: ESTIMATED DRIPLINE MEASUREMENTS

DIRECTION OF MEASUREMENT

	NORTH (FEET)	NORTH (INCHES)	NORTHEAST (FEET)	NORTHEAST (INCHES)	EAST (FEET)	EAST (INCHES)	SOUTHEAST (FEET)	SOUTHEAST (INCHES)	SOUTH (FEET)	SOUTH (INCHES)	SOUTHWEST (FEET)	SOUTHWEST (INCHES)	WEST (FEET)	WEST (INCHES)	NORTHWEST (FEET)	NORTHWEST (INCHES)	CANOPY CLASS
TREE NUMBER: 46	5	0	5	0	7	0	10	0	11	0	9	0	12	0	10	0	CO-DOMINANT
TREE NUMBER: 47	6	0	6	0	5	0	6	0	6	0	7	0	9	0	7	0	OPEN-GROWN
TREE NUMBER: 48	7	0	6	0	5	0	5	0	7	0	7	0	5	0	5	0	OPEN-GROWN
TREE NUMBER: 49	7	0	9	0	6	0	5	0	4	0	6	0	6	0	6	0	OPEN-GROWN
TREE NUMBER: 50	20	0	20	0	20	0	20	0	20	0	20	0	20	0	20	0	OPEN-GROWN
TREE NUMBER: 51	11	0	11	0	11	0	11	0	11	0	11	0	11	0	11	0	OPEN-GROWN
TREE NUMBER: 52	9	0	5	0	7	0	7	0	5	0	8	0	5	0	5	0	OPEN-GROWN
TREE NUMBER: 53	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	OPEN-GROWN
TREE NUMBER: 54	9	0	9	0	5	0	5	0	5	0	5	0	5	0	5	0	OPEN-GROWN
TREE NUMBER: 55	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	OVER TOPPED
TREE NUMBER: 56	5	0	7	0	7	0	7	0	5	0	5	0	5	0	5	0	OVER TOPPED
TREE NUMBER: 57	4	0	0	4	0	5	0	6	0	6	0	6	0	7	0	7	OVER TOPPED

DIRECTION OF MEASUREMENT

	NORTH (FEET)	NORTH (INCHES)	NORTHEAST (FEET)	NORTHEAST (INCHES)	EAST (FEET)	EAST (INCHES)	SOUTHEAST (FEET)	SOUTHEAST (INCHES)	SOUTH (FEET)	SOUTH (INCHES)	SOUTHWEST (FEET)	SOUTHWEST (INCHES)	WEST (FEET)	WEST (INCHES)	NORTHWEST (FEET)	NORTHWEST (INCHES)	CANOPY CLASS
TREE NUMBER: 58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.
TREE NUMBER: 59	20	0	20	0	6	0	3	0	3	0	3	0	6	0	20	0	OVER TOPPED
TREE NUMBER: 60	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	OVER TOPPED
TREE NUMBER: 61	35	0	35	0	35	0	35	0	35	0	35	0	35	0	35	0	DOMINANT
TREE NUMBER: 62	15	0	15	0	15	0	15	0	15	0	15	0	15	0	15	0	OVER TOPPED
TREE NUMBER: 63	7	0	2	0	2	0	2	0	5	0	21	0	21	0	25	0	OVER TOPPED
TREE NUMBER: 64	9	0	9	0	9	0	9	0	9	0	9	0	9	0	9	0	OVER TOPPED
TREE NUMBER: 65	21	0	15	0	5	0	5	0	20	0	20	0	20	0	20	0	CO-DOMINANT
TREE NUMBER: 66	20	0	20	0	20	0	20	0	20	0	20	0	20	0	20	0	OPEN-GROWN
TREE NUMBER: 67	40	0	40	0	40	0	40	0	40	0	40	0	40	0	40	0	DOMINANT
TREE NUMBER: 68	10	0	10	0	10	0	10	0	10	0	10	0	10	0	10	0	OVER TOPPED
TREE NUMBER: 69	4	0	4	0	4	0	4	0	4	0	4	0	4	0	4	0	OVER TOPPED
TREE NUMBER: 70	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	OVER TOPPED

DIRECTION OF MEASUREMENT

	NORTH (FEET)	NORTH (INCHES)	NORTHEAST (FEET)	NORTHEAST (INCHES)	EAST (FEET)	EAST (INCHES)	SOUTHEAST (FEET)	SOUTHEAST (INCHES)	SOUTH (FEET)	SOUTH (INCHES)	SOUTHWEST (FEET)	SOUTHWEST (INCHES)	WEST (FEET)	WEST (INCHES)	NORTHWEST (FEET)	NORTHWEST (INCHES)	CANOPY CLASS
TREE NUMBER: 71	15	0	15	0	15	0	15	0	15	0	15	0	15	0	15	0	CO-DOMINANT
TREE NUMBER: 72	25	0	25	0	25	0	25	0	25	0	25	0	25	0	25	0	CO-DOMINANT
TREE NUMBER: 73	20	0	20	0	20	0	20	0	20	0	20	0	20	0	20	0	CO-DOMINANT
TREE NUMBER: 74	16	0	16	0	16	0	16	0	16	0	16	0	16	0	16	0	OPEN-GROWN
TREE NUMBER: 237	24	0	25	0	26	0	29	0	36	0	32	0	31	0	28	0	DOMINANT
TREE NUMBER: 238	12	0	11	0	9	0	5	0	5	0	14	0	26	0	21	0	OVER TOPPED
TREE NUMBER: 239	9	0	9	0	21	0	15	0	21	0	21	0	15	0	10	0	CO-DOMINANT
TREE NUMBER: 240	13	0	13	0	13	0	13	0	13	0	13	0	13	0	13	0	CO-DOMINANT
TREE NUMBER: 241	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	OVER TOPPED
TREE NUMBER: 242	4	0	16	0	19	0	16	0	7	0	5	0	3	0	3	0	CO-DOMINANT
TREE NUMBER: 243	5	0	7	0	12	0	11	0	5	0	4	0	4	0	6	0	CO-DOMINANT
TREE NUMBER: 244	14	0	18	0	18	0	8	0	4	0	2	0	2	0	4	0	CO-DOMINANT
TREE NUMBER: 245	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	CO-DOMINANT

DIRECTION OF MEASUREMENT

	NORTH (FEET)	NORTH (INCHES)	NORTHEAST (FEET)	NORTHEAST (INCHES)	EAST (FEET)	EAST (INCHES)	SOUTHEAST (FEET)	SOUTHEAST (INCHES)	SOUTH (FEET)	SOUTH (INCHES)	SOUTHWEST (FEET)	SOUTHWEST (INCHES)	WEST (FEET)	WEST (INCHES)	NORTHWEST (FEET)	NORTHWEST (INCHES)	CANOPY CLASS
TREE NUMBER: 246	18	0	15	0	5	0	2	0	2	0	2	0	2	0	18	0	CO-DOMINANT
TREE NUMBER: 247	14	0	14	0	3	0	2	0	2	0	2	0	5	0	14	0	CO-DOMINANT
TREE NUMBER: 248	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	CO-DOMINANT
TREE NUMBER: 249	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0	CO-DOMINANT
TREE NUMBER: 250	14	0	4	0	2	0	2	0	3	0	6	0	6	0	7	0	CO-DOMINANT
TREE NUMBER: 251	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0	OVER TOPPED
TREE NUMBER: 252	10	0	10	0	5	0	5	0	5	0	13	0	18	0	17	0	CO-DOMINANT
TREE NUMBER: 254	9	0	9	0	3	0	3	0	3	0	3	0	3	0	9	0	OVER TOPPED
TREE NUMBER: 255	10	0	10	0	2	0	2	0	2	0	2	0	2	0	10	0	OVER TOPPED

Appendix 3
Photographs of Surveyed Trees



Tree 46



Tree 47



Tree 48



Tree 49



Tree 50



Tree 51



Tree 52



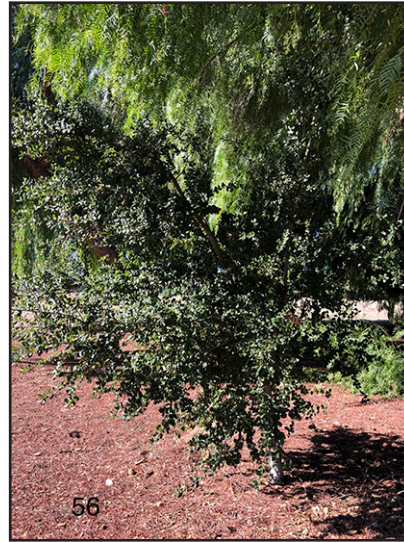
Tree 53



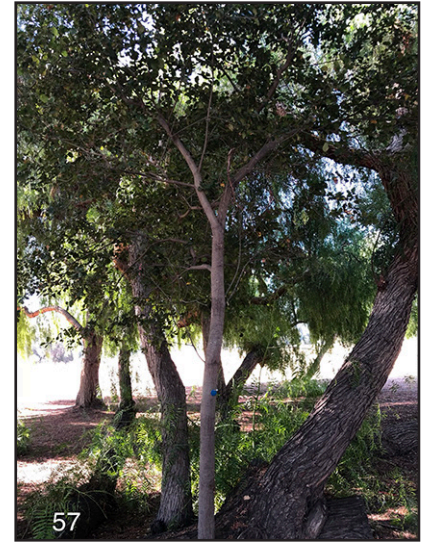
Tree 54



Tree 55



Tree 56



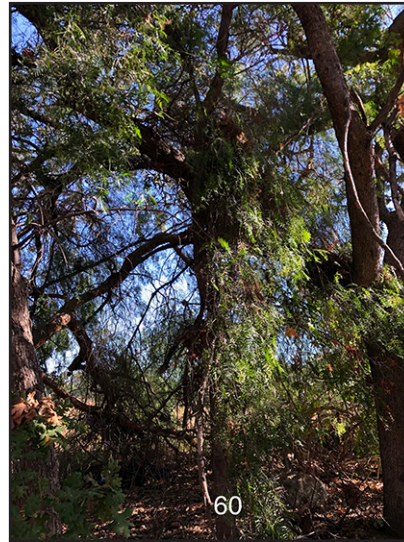
Tree 57



Tree 58



Tree 59



Tree 60



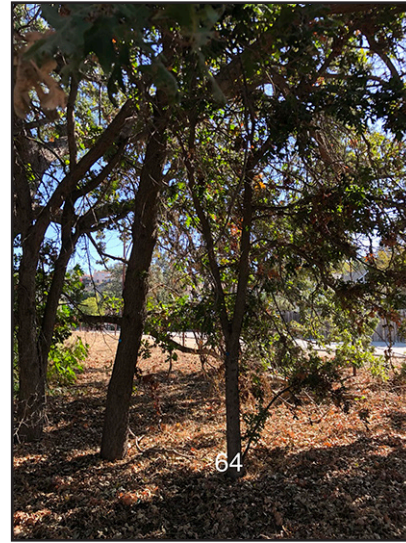
Tree 61



Tree 62



Tree 63



Tree 64



Tree 65



Tree 66



Tree 67



Tree 68



Tree 69



Tree 70



Tree 71



Tree 72



Tree 73



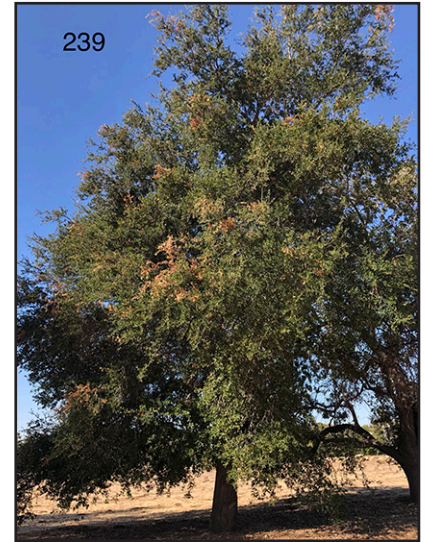
Tree 74



Tree 237



Tree 238



Tree 239



Tree 240



Tree 241



Tree 242



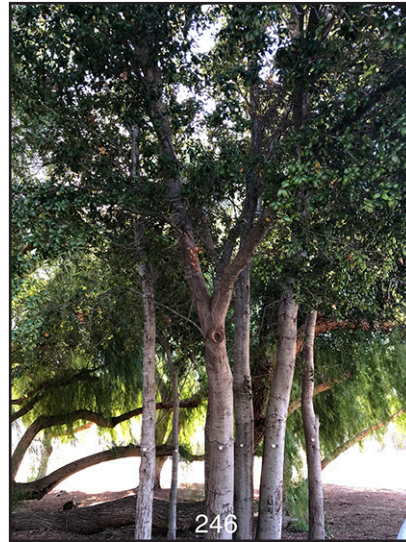
Tree 243



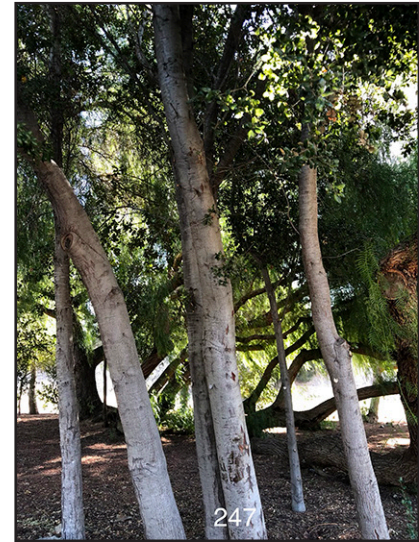
Tree 244



Tree 245



Tree 246



Tree 247



Tree 248



Tree 249



Tree 250



Tree 251



Tree 252



Tree 254



Tree 255

Appendix 4
Tree Location and Project Impact Map

Legend

- Survey Area
- Project Site
- Limits of Disturbance

Tree Locations

- Trunk Location
- Tree Number
- Tree Protective Zone

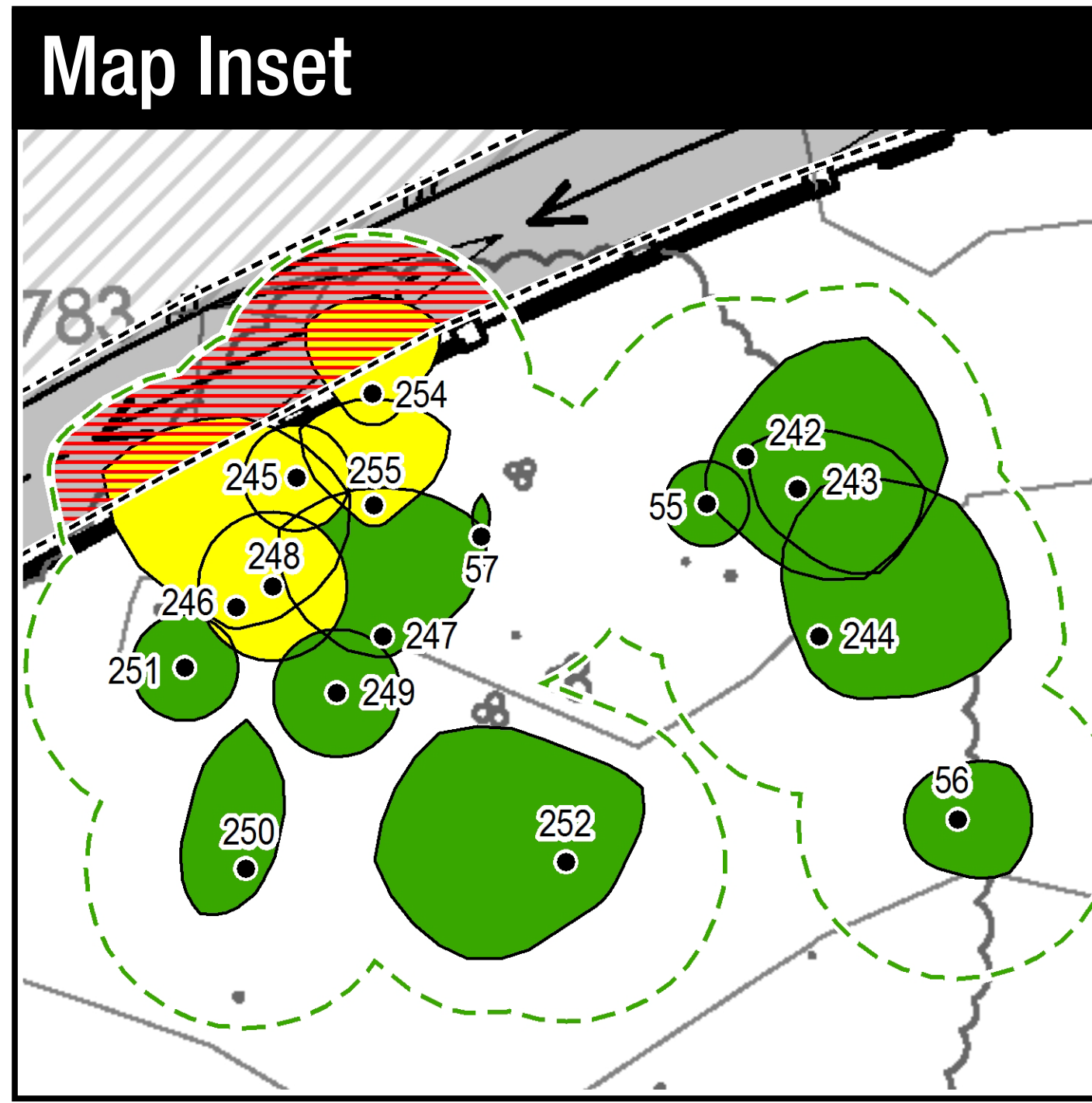
Existing Trees

- Trees to Remain without Impacts
- Encroached Trees
- Trees to be Removed
- Oak Woodland Canopies

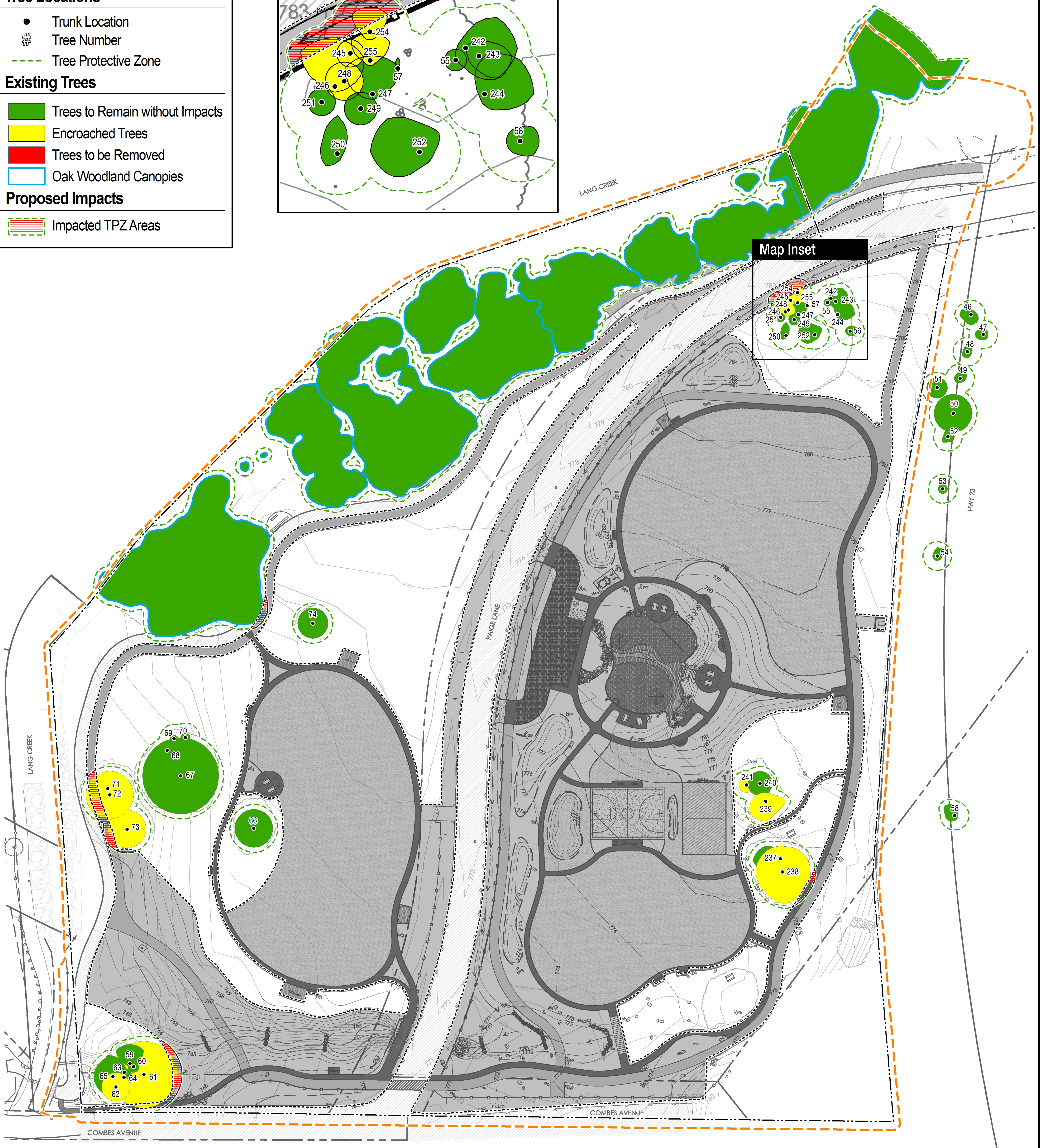
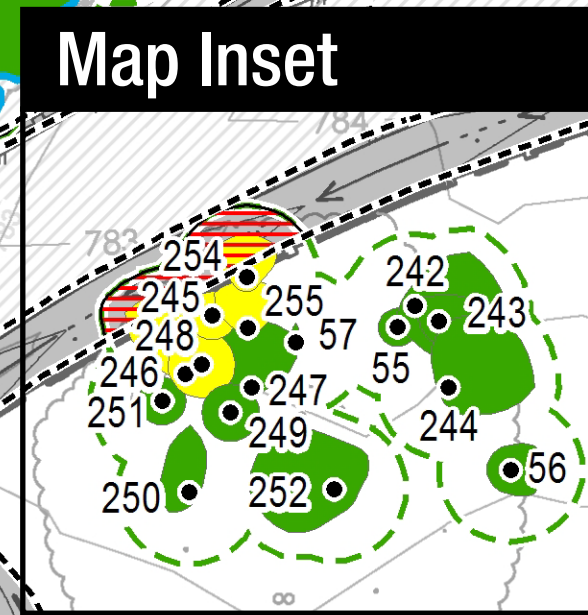
Proposed Impacts

- Impacted TPZ Areas

Map Inset



Map Inset



Site Plan Source: RRM Design Group, October 8, 2018.

