

APPENDIX 9.0
OAK TREE SURVEY REPORT



Arborist Report

THE COMMONS AT HIDDEN SPRINGS PROJECT

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EXECUTIVE SUMMARY

Rebecca Latta Consulting conducted a tree survey in areas proposed for development for the Commons at Hidden Springs project, a commercial development in the City of Wildomar, Riverside County, California. During the survey the structure and health of native oaks and cottonwoods was assessed on the development parcels and two adjacent parcels, and a census of sugar gum and willows was also conducted on the development parcels.

A total of 25 oaks and 3 cottonwoods were assessed during the survey, and 18 of the oaks and all 3 of the cottonwoods were located on the project parcels. The 7 additional oaks assessed were on the two adjacent parcels that are within proximity to the proposed development. The trees assessed generally had good health and structure. One tree had been burned only on the south side. A total of 113 sugar gum and 86 willows also occur on the project parcels. Only the smaller trees would be candidates for relocation, if requested.

Based on the proposed Site Plan in Appendix A all the trees on the project parcels will be removed during the survey. However, the 7 oaks on the adjacent parcels could remain in place and would likely be unaffected by project development.

INTRODUCTION

This report includes the results of a tree survey conducted by Rebecca Latta Consulting for the Commons at Hidden Springs Project (project); a proposed commercial development located in the City of Wildomar in Riverside County California. The purpose of this report is to assess trees within the development area in support of planning and permitting efforts for the project. The scope of this report includes a description of the proposed project and survey area, methods used to survey and assess the trees, and a discussion of the proposed project's impacts to trees.

PROJECT LOCATION

As shown in Figures 1 and 2 (see Appendix A), the project site is situated among major commercial developments and residential neighborhoods in the City of Wildomar approximately 1500-feet west of Interstate 15. The project is in the US Geological Survey (USGS) 7.5-minute Murrieta quadrangle map in Section 1, Township 7 South, and Range 4 West. The project site is bound on the south by Clinton Keith Road, on the east by Hidden Springs Road, undeveloped areas are adjacent to the north, single family homes occur to the northwest, and two undeveloped parcels along Stable Lanes Way to the west are contiguous with the project development area.

PROPOSED DEVELOPMENT

As shown in the site plan in Appendix A, the proposed development would occur over the entire project site (APNs: 380-110-004, 009, 010, 014, and 016) and includes five commercial development pads, water detention basins, parking lots, and associated infrastructure. Roadway improvements would be required, including turn lanes and associated improvements to Hidden Springs Road, Clinton Keith Road, and Stable Lanes Road. On-site drainage improvements would also be necessary to control the existing flows from a culvert under Hidden Hills Road that directs flows into a natural drainage channel onto the property.

ENVIRONMENTAL SETTING

The project site is at an elevation ranging from 1,200 – 1,300 feet above mean sea level and slopes toward a tree lined drainage that enters the property from a culvert under Hidden Springs Drive and flows southwest into another culvert that flows under Stable Lanes Way. As shown in Figure 3 (see Appendix A), four vegetation communities occur surrounding the drainage and the remaining upland areas are disturbed by recent tilling and are largely bare soil.

- **Arroyo willow thickets** as described by A Manual of California Vegetation, 2nd Edition (Sawyer et al., 2009) occur at the drainage outlet. This community is dominated by a dense thicket of arroyo willow (*Salix lasiolepis*) and a few mature Gooding's black willow (*Salix goodingii*) also occur. Fremont's cottonwood (*Populus fremontii*) and coast live oak (*Quercus agrifolia*) were also found in this community.
- **Coast live oak woodland** as described by the Manual occurs along the drainage and adjacent uplands immediately south of the arroyo willow thickets. This community is dominated by coast live oak and hybrids with interior live oak (*Quercus wislizeni*).
- **Eucalyptus stands** are the most abundance community in the survey area and are dominated by a dense to open canopy of sugar gum (*Eucalyptus claudocalyx*). Olive (*Olea europaea*) trees and shrubs and coast live oaks occur sporadically in the shrub layer and the other plants are mowed or otherwise managed.
- **California buckwheat scrub** as described by the Manual occurs in upland areas surrounding the forest and woodlands. These areas are a dense mat of California buckwheat (*Eriogonum fasciculatum*).

METHODS

Certified arborists Rebecca Latta and Matthew South conducted a tree survey on October 23, 2019. The tree survey area included the project parcels (APNs: 380-110-004, 009, 010, 014, and 016) and two adjacent parcels (APNs: 380-110-007 and 008). On the project parcels the survey included a basic visual

assessment for each oak (*Quercus* spp) and cottonwood (*Populus fremontii*) and a census of sugar gum (*Eucalyptus claudoalalyx*) and willow (*Salix* spp.). The survey of the two adjacent parcels included a basic visual assessment of only the oak trees, and no other native trees occur on these parcels. The tree inspections were limited to ground level visual observations; root crown inspections and aerial inspections were not conducted.

A basic visual assessment is a 360-degree inspection of the tree conducted from the ground that includes collection of geographical position of the trunk using a Trimble GPS, and height and diameter measurements. Trees are assessed for structure, disease or insect issues, and overall health. The inspection was conducted during daylight hours, under good weather conditions, and in light sufficient for detecting details such as surface decay and leaf color. The influence of adjacent trees and other factors affecting the growth of a subject tree, such as wires, cables, or nesting holes, were also taken into consideration when assessing tree condition.

TREE HEALTH RATINGS

A subjective alphabetical rating (e.g., “A” = best and “F” = worst) was assigned to rank the overall health of the tree(s). This rating is based on the aesthetic, structural and biological functions of the trees. Health ratings are defined as follows:

A – Excellent: Overall healthy appearance with good vigor, shoot growth, leaf color and size, minimal or no disease or insect infestation, no buried crowns (the area where roots join the stem was not covered with soil), good callus tissue formation, and limited or no fire damage.

B – Good: Less than 25% of overall health of tree affected by disease, stress, decay, insect infestation, or fire damage. Tree can have minor correctable defects that could be addressed with pruning or root crown excavations.

C – Fair: Between 25% and 50% of tree significantly affected by disease, stress, decay, insect infestation, or fire damage. Tree can have thinning canopy, circling or poorly developed roots, sunburned bark and borer damage. Tree may have defects, including internal wood decay, insect infestations, and root decay.

D – Struggling: More than 50% of overall health of tree affected by disease, stress, decay, insect infestation, or fire damage. In older trees, significant wood decay may be present.

F – Dead: Exhibits no signs of life or is not expected to recover.

RESULTS

A total of 25 oaks and 3 cottonwoods are in the survey area and shown in Figure 4 (see Appendix A), and a summary of the assessment of the oaks and cottonwoods is in Table 1 below. All 3 of the cottonwoods and 18 of the oaks occur within the proposed development area, and 7 of the oaks occur in the adjacent two parcels that will not be developed. Photos of each tree is provided in Appendix 'B'. It should be noted that several of the oaks were near a homeless encampment and data were estimated in this area and no photo was taken.

A total of 113 sugar gum eucalyptus and 86 willow were counted in the project area, and the sugar gum on the adjacent parcels were not surveyed. The willows were dominated by arroyo willow and only a few large Gooding's black willow were observed.

Twohorned gall wasp (*Dryocosmus dubiosus*), a type of oak gall wasp was present on many of the oak trees. While it can cause unsightly dieback in the leaves, it is not a serious issue. No Gold spotted oak borer or invasive shot hole borers were observed on the oaks.

TABLE 1: OAK & COTTONWOOD ASSESSMENTS

Tree #	Species	Common name	DBH (in)	Height (ft)	Width (ft)	Health (A-F)	Issues Observed
Cottonwood #1	<i>Populus fremontii</i>	Freemont's cottonwood	10	30	20	A	
Cottonwood #2	<i>Populus fremontii</i>	Freemont's cottonwood	6	20	15	B	
Cottonwood #3	<i>Populus fremontii</i>	Freemont's cottonwood	4	15	40	D	multi-trunk, many stems, underneath much larger sugar gum, suppressed, asymmetrical, damage to twig, branch and trunk
Oak #1	<i>Quercus agrifolia</i>	coast live oak	10	25	15	A	angled trunk
Oak #2	<i>Quercus agrifolia</i>	coast live oak	8	25	20	B	angled trunk
Oak #3	<i>Quercus agrifolia</i>	coast live oak	10	25	20	A	lean to the N, wasps
Oak #4	<i>Quercus agrifolia</i>	coast live oak	6	20	15	B	suppressed by nearby oak
Oak #5	<i>Quercus agrifolia</i>	coast live oak	14	15		A	excessive clearance, co-dominant trunks, lean to N
Oak #6	<i>Quercus agrifolia</i>	coast live oak	18, 6	35	25	B	wasps, multi-trunk
Oak #7	<i>Quercus agrifolia</i>	coast live oak	30	50	60	B	trunk burned on one side, soil on trunk, signs of new growth, 25% dead, history of failures, squirrel nest

Tree #	Species	Common name	DBH (in)	Height (ft)	Width (ft)	Health (A-F)	Issues Observed
Oak #8	<i>Quercus agrifolia</i>	coast live oak	5	15	10	D	topped, dead wood caught in canopy, leaf and twig damage, wasps
Oak #9	<i>Quercus agrifolia</i>	coast live oak	24	20	20	B-	lopsided to S and E, history of failures, top is broken, lateral branching is largest
Oak #10	<i>Quercus agrifolia</i>	coast live oak	10	25	25	C	dead branches 25%, fungus, lean to N, suppressed
Oak #11	<i>Quercus agrifolia</i>	coast live oak	11	25	20	B	suppressed, lean to E
Oak #12	<i>Quercus agrifolia</i>	coast live oak	4	20	8	A	multi-trunk
Oak #13	<i>Quercus agrifolia</i>	coast live oak	3	17	10	A	Young tree
Oak #14	<i>Quercus agrifolia</i>	coast live oak	11	30	35	A	co-dominant trunks
Oak #15	<i>Quercus agrifolia x wislizeni</i>	coast live oak	7	25	40	A	dead wood 5%
Oak #16	<i>Quercus agrifolia</i>	coast live oak	7, 14	15	20	B	dieback 10%, low N growth
Oak #17	<i>Quercus agrifolia</i>	coast live oak	4	15	8	B	topped
Oak #18	<i>Quercus agrifolia</i>	coast live oak	10	18	25	C	suppressed
Oak #19	<i>Quercus agrifolia</i>	coast live oak	8	20	20		5 stems, wasps, bacterial canker
Oak #20	<i>Quercus agrifolia x wislizeni</i>	coast live oak	4	12	15	B-	dieback 20%, wasps
Oak #21	<i>Quercus agrifolia</i>	coast live oak	13	25	30	A	co-dominant, low-branching trunks, asymmetrical
Oak #22	<i>Quercus agrifolia</i>	coast live oak	18	40	45	A	deadwood 15%, canopy hitting ground, wasps, co-dominant trunks
Oak #23	<i>Quercus agrifolia</i>	coast live oak	10	30	25		suppressed, wood rat midden at base, 3 trunks
Oak #24	<i>Quercus agrifolia</i>	coast live oak	17	35	35	B	dieback 15%, soil on trunk, co-dominant leaders
Oak #25	<i>Quercus agrifolia</i>	coast live oak	17	35	35	B-	suppressed, deadwood 20%, good new growth

IMPACTS ANALYSIS

Based on the Site Plan in Appendix A, the entire project area will be developed, and as a result, all the trees will be removed. Trees that would be removed include Cottonwood #'s 1-3, Oaks #'s 1-18, all 86 willows, and 113 sugar gum trees identified during the survey on the project site. Only the smallest oaks would be candidates for relocation. The position of the trees on slopes and proximity to other trees may

make relocation infeasible. Mitigation trees should be of local genetic stock from locally collected acorns.

Oak #'s 19-25 are outside of the proposed development area and based on the distance from proposed development, it is likely that these trees would avoid impacts during construction and operation of the project.

RECOMMENDATIONS

Tree protection begins in the design phase of any project. Actual tree canopy and trunks shown on design plans can help to identify any conflicts. The project arborist can determine impacts and design protection measures for trees adjacent to proposed construction. If changes are made to the design, it is important to reevaluate impacts and protection measures as needed during the construction phase of the project.

Most trees have roots in the top 2-3 feet of soil. Structural roots are close to the trunk and lateral and feeder roots can extend well past the canopy of the tree. Damage to these roots can cause significant and permanent damage to the tree that may show up immediately, or over time.

The following recommendations were developed to minimize any preventable construction related damage to the trees. It is important to preserve soil structure and fertility by physically protecting the soil from compaction and other maintenance activities that destroy fine roots.

Oaks that are on the two parcels adjacent to proposed construction should remain in place. The Tree Protected Zone (TPZ) of these oaks (defined as the area under the canopy and 5 feet beyond the canopy edge), should be protected during construction using protected fencing as described below.

1. Provide protective fencing at 5 feet beyond the dripline for all trees to be retained. Fencing should be installed and inspected by the project arborist prior to the beginning of work on site and should be placed between proposed construction and the trees TPZ (Root Protection Zone).
 - a. Fencing should consist of highly visible protective barrier and should be maintained throughout all construction.
 - b. Fencing locations that need to be adjusted during different stages of construction should be done so after consulting a qualified arborist.
2. No construction staging or disposal of construction materials or byproducts should be placed within the TPZ of oaks that will remain in place. Avoid storing soil or material on unprotected natural grade.
3. Staging areas should be established before construction for materials and equipment. Washout areas should be provided for paint/stucco and concrete or other substances to contain the chemicals. These chemicals can harm tree roots. The washout and staging areas should be

outside of the protected zone of protected trees and dripline of trees to be retained. The purpose is to limit preventable compaction to tree roots. Compaction reduces soil air space and limits gas exchange required for healthy tree growth.

4. Equipment should not idle under the driplines of trees to be preserved. Significant burn can occur to leaves and bark from exhaust and heat.
5. The tree/root protection zone should be irrigated sufficiently (usually monthly) with clean, potable water to keep the tree in good health and vigor before, during and after construction. Trees should be soaked so that water reaches a depth of 2 to 3 feet and then allowed to dry out between watering.
6. Mulch in the form of bark chips is recommended for application over the surface of the soil to 4 inches deep to preserve moisture and improve soil condition.
7. Trenching should occur prior to construction work to assess the impacts on the tree. This work is required to assess the size and volume of roots impacted by construction. Hand trench, keeping all roots 2" and greater intact.
8. If roots need to be cut it is recommended that the area be dug out and the roots cut back 1 to 2 inches behind the soil line. After the cut is made, recover the cut root with moist soil. The cut should be made with a sharpened, sterilized hand-pruning tool (not a chainsaw or sawzall).
 - a. Roots should be pruned at the branch bark ridge, when possible. Indiscriminate cuts can cause vigorous resprouting toward hardscape.
 - b. Extensive root loss can destabilize trees and cause them to go into decline. Removing large roots takes significant root mass and feeder roots. All root pruning is recommended for supervision by the project arborist.
 - c. Wherever feasible, utility lines should be run outside the protected zone of trees. Any lines within the protected zone should be tunneled or run underneath existing roots rather than through them.
9. Trees should be pruned by qualified arborist using Best Management Pruning Practices (2008) part of ANZI A300 or equivalent. Trees should be pruned as needed, not on a set schedule. More information is available at www.isa-arbor.com.
10. The project arborist should be involved in determining pruning treatments and be on-site for pruning work to observe. Trees should be pruned by qualified arborist using Best Management Pruning Practices (2008) part of ANZI A300 or equivalent. Trees should be pruned as needed, not on a set schedule. More information is available at www.isa-arbor.com.

CERTIFICATE OF PERFORMANCE

I, Rebecca Latta certify that:

- I have personally inspected the trees described in this report and have accurately stated my findings. The extent of the evaluation is stated in the attached report;
- I have no current or future interest in the vegetation or the property that is the subject of the report and no bias with respect to the parties involved;
- The analysis, opinions, evaluation, investigation and conclusions have been prepared using accepted arboricultural practices;
- I performed the work myself and prepared the report and reviewed the report, except as specifically indicated in the report;
- That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party nor the results if the assignment, attainment of stipulated results or the occurrence of any subsequent events.
- I further state that I am a member in good standing with American Society of Consulting Arborists and the International Society of Arboriculture. I have been involved in the practice of arboriculture and the care and study of trees for 25 years.

Signed: 

Date: November 12, 2019

APPENDIX 'A'

SITE PLAN AND FIGURES

(SEPARATELY PROVIDED)

The Commons at Hidden Springs
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APPENDIX 'B'

PHOTOGRAPH EXHIBIT



Cottonwood #1



Cottonwood #3



Oak #2



Oak #3



Oak #4



Oak #5



Oak #7



Oak #8



Oak #9



Oak #10



Oak #11



Oak #12



Oak #13



Oak #14



Oak #15



Oak #16



Oak #17



Oak #18



Oak #19



Oak #20



Oak #21



Oak #22



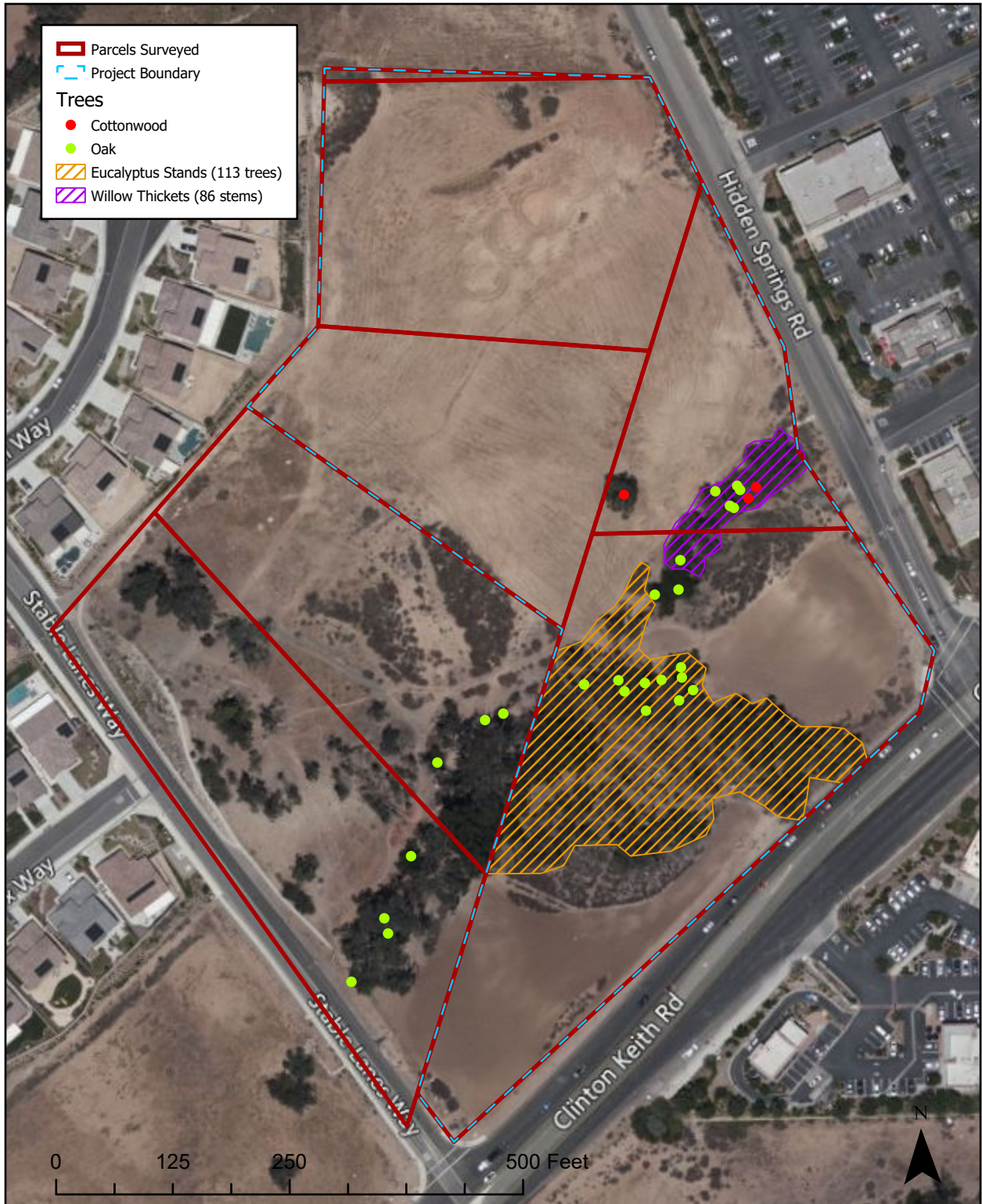
Oak #23



Oak #24



Oak #25



Source: ESRI Bing Aerial Photo Basemap 2019

Wildomar Tree Survey

Figure 4. Tree Survey



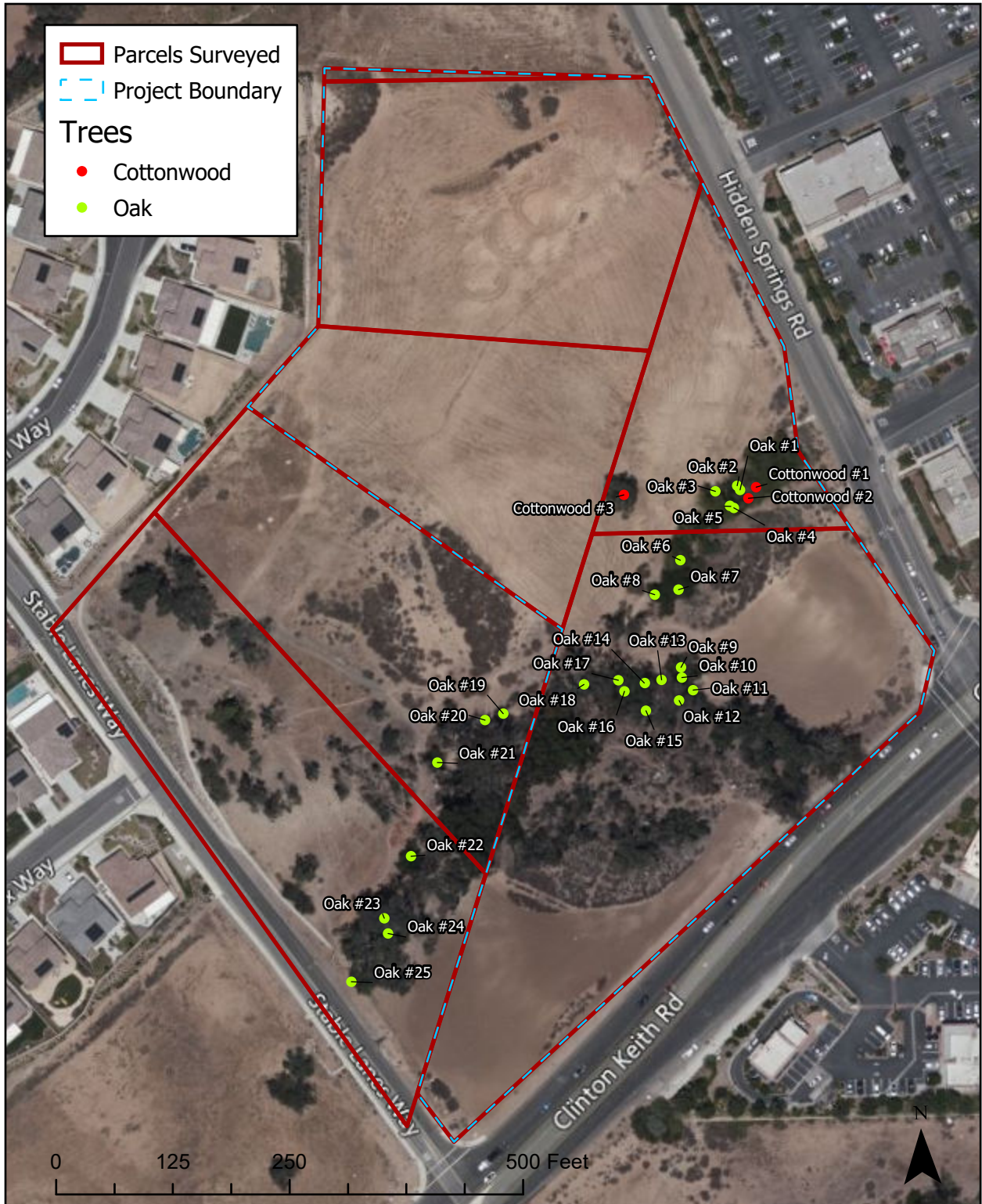


Figure 5. Oaks and Cottonwoods

