DAVEY
RESOURCE GROUP
A Division of The Davey Tree Expert Company

October 31, 2016

Corporate Headquarters
1500 North Mantua Street
P.O. Box 5193
Kent, OH 44240-5193
330-673-5685
Toll Free 1-800-828-8312
Fax: 330-673-0860

Mark Kaminski
The Wolff Company
6710 E. Camelback Road, Suite 100
Scottsdale, AZ 85251

Western Region Office
6005 Capistrano Unit A
Atascadero, CA 93422
805-461-7500
Fax: 805-461-8501
Direct 916-899-7917
Lori.Murphy@davey.com

RE: Arborist Report for Potential Development Impacts for the Wolff Project near the intersection of Pacific and Midas Avenues in Rocklin, California.

Dear Mr. Kaminski,

Thank you for contracting with Davey Resource Group regarding the above project. In support of your objectives, Davey Resource Group (DRG) is pleased to provide you with the attached report for the planned construction.

A DRG International Society of Arboriculture (ISA) Certified Arborist conducted the site inspection of the trees located at the above location in Rocklin, California on October 21st, 2016. The trees were assessed for location, size, current condition and overall health. The attached report can be used to make informed decisions about demolition and construction planning, as well as submission to the City of Rocklin for permitting purposes.

The survey determined the following:

- Sixty nine trees on the property were evaluated.
- Twenty-three native oak trees were identified as qualifying for preservation under the City's Oak Preservation Guidelines.
- Six of these had a total DBH of 24 inches or larger and qualify as heritage trees.
- Tree condition ratings ranged from 'Poor' to 'Good'.
- Tree protection fencing will be required

Please feel free to contact me if you have any questions.

Sincerely,

Lori Murphy
Davey Resource Group
Certified Arborist #WE-7844AM
ISA Tree Risk Assessment Qualified

ARBORIST REPORT

Wolff Project

Rocklin, CA

October 2016

Arborist Report
for
Wolff Project
Intersection of Pacific & Midas Avenues
Rocklin, CA

Prepared for

Mark Kaminski
The Wolff Company
6710 E. Camelback Rd, Suite 100
Scottsdale, AZ 85251

October 2016

Prepared by

Davey Resource Group
A Division of The Davey Tree Expert Company
1500 North Mantua Street
Kent, OH 44240

Lori Murphy
Certified Arborist #WE-7844AM
ISA Tree Risk Assessment Qualified
Western Region Office
6005 Capistrano Ave. Suite A
Atascadero, CA 93422
Phone: (916) 899-7917
E-mail: lori.murphy@davey.com

www.daveyresourcegroup.com

Table of Contents

Summary

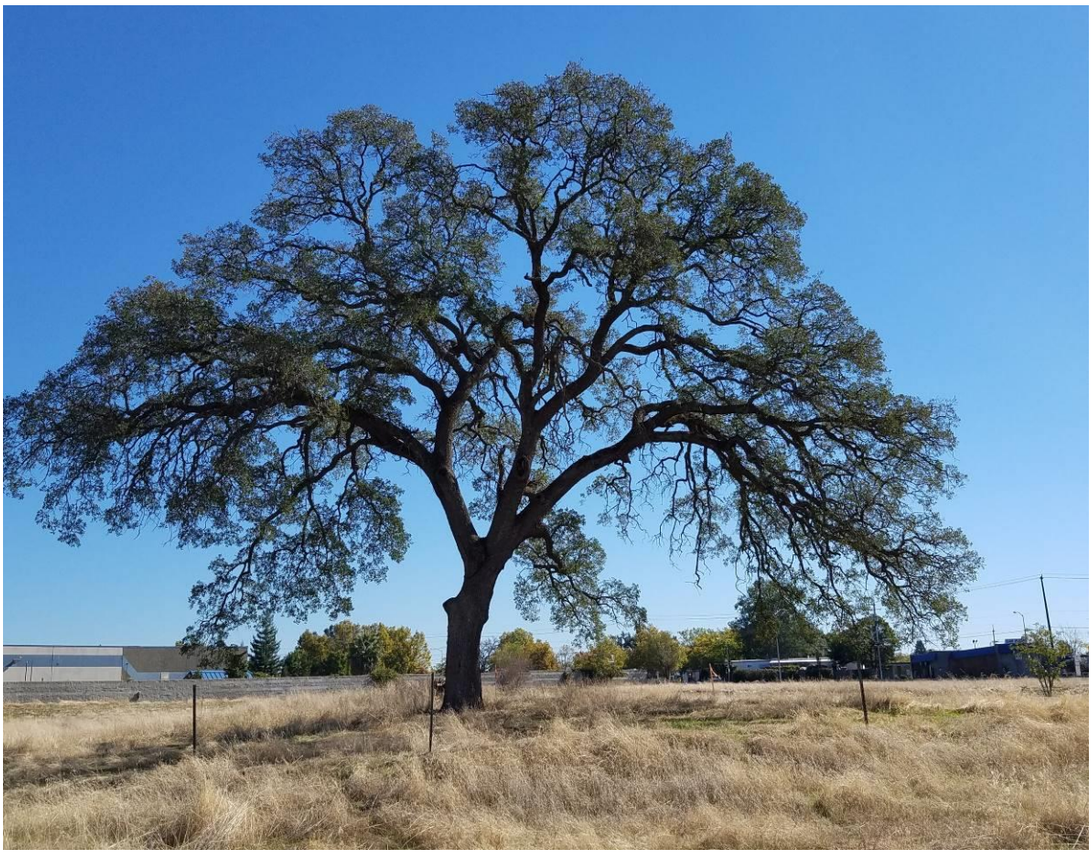
In October 2016, Davey Resource Group (DRG), a division of The Davey Tree Expert Company, was contracted by The Wolff Company to conduct a tree inventory and assessment of native oaks and other trees growing on approximately 6.5 acres of undeveloped land near the intersection of Pacific and Midas Avenues in the City of Rocklin, Placer County, California.

An International Society of Arboriculture (ISA) Certified and ISA Tree Risk Assessment Qualified Arborist from Davey Resource Group conducted the evaluation of the trees on October 21st, 2016. The trees were assessed by their location, size, current condition, and overall health, and consideration for the potential health impacts to the trees due to planned construction. According to Oak Tree Preservation Guidelines as outlined in Section 17.77.100 of the City of Rocklin's Municipal Code, native oaks that have a total diameter at breast height (DBH) of 6 inches or greater are protected under the Oak Preservation Guidelines for the City of Rocklin. Native oaks with a total DBH of 24 inches or greater are considered heritage oaks.

A total of sixty-nine (69) trees were found on the property. The evaluations were analyzed to provide the following recommendations:

- Qualifying oak trees ranged from Good to Poor condition, with most being in Fair condition.
- 23 native oaks fall under the Oak Tree Preservation Guidelines
    - 6 of these qualify as heritage oaks.
    - 15 of should be removed based on health or structure, and three of these are heritage oaks.
- Eight native oaks should be retained either by project re-design, tree protection measures, or transplanting.
- 44 trees on the property do not qualify under the City's preservation guidelines.

For trees being retained, protection fencing should be in place before construction. An arborist should be on site to supervise root pruning, and mulch should be applied after root pruning to protect roots from drying out excessively. No appraised or replacement value was requested or provided for the evaluated trees at this time.



Tree #65 -Example of a "Heritage Oak" on the property that upon investigation is in poor condition and not suitable for retention

Introduction

Background

Development is planned on the parcel at the intersection of Pacific and Midas Avenues in the City of Rocklin, Placer County, California. The primary intent for this project is to identify the native oaks that qualify for preservation under the Oak Tree Preservation Guidelines of the City of Rocklin. Oak trees that are healthy and well developed and contribute to the aesthetic character of the project, and those trees that are the healthiest specimens to ensure the greatest chance for success in their transplanting.

Assignment

Davey Resource Group was contracted to inventory the trees on site and provide an Arborist Report on the existing trees that are potentially protected by the Oak Preservation Guidelines for the City of Rocklin. The survey included a visual assessment of the trees' health and structural condition, and observations of the site conditions in order to assist with upcoming construction planning.

Limits of Assignment

Many factors can limit specific and accurate data when performing evaluations of trees, their conditions, and potential for failure or response to site disturbances. No soil or tissue testing was performed. All observations were made from the ground and no soil excavation to expose roots was performed. The determinations and recommendations presented here are based on current data and conditions that existed at the time of the evaluation and cannot be a predictor of the ultimate outcome for the evaluated trees in the future.

Purpose and Use of Report

The purpose of this report is to provide summary of the evaluations of the trees located on the parcel in Rocklin, California, including an assessment of the current condition and health for all significant and heritage oak trees that may be impacted by construction plans. The findings in this report can be used to make informed decisions on demolition and restoration planning, and be used as the final arborist report to be provided to the City of Rocklin for permitting purposes.

Observations

Methods

Only a visual inspection was used to develop the findings, conclusions, and recommendations found in this report. Data collection included measuring the total diameter of trees at approximately 54 inches above grade (DBH), summing and noting the number of stems, and a visual assessment of tree condition, structure and health, and a photographic record. Additionally, exhibits utilizing GIS and Global Positioning System (GPS) data as well as digital photographic records were created and identify the precise location and condition of each tree. No physical inspection of the upper canopy, sounding, root crown excavation, resistograph or other technologies were used in the evaluation of the trees.

Site Observations

The surveyed site is an undeveloped parcel of 6.5 acres. Sixty-nine trees were inventoried and evaluated, and twenty-three were identified as native oaks with a total trunk diameter over 6 inches. Six of these have a total trunk diameter of 24 inches or greater. Forty four of the trees surveyed do not fall under the City's preservation guidelines.

Visual assessments determined tree condition ratings ranged from 'Poor' to 'Good. The majority of trees were in Fair condition. Tree diameters ranged from 6 inches up to 36 inches, with the average diameter being approximately 18 inches. Tree photographs, a complete Tree Inventory and Condition Assessment, and site map can be found in Appendices A, B, and C.

Analysis and Discussion

The surveyed trees are of a mixed size (age) class. Trees were found to be from Good to Poor condition based on the observed decay and crowded conditions of trees in clusters. The majority are in Fair condition.

Recommendations were made to help select healthy oaks that were deemed quality specimens. These trees could potentially be accommodated by either project re-design or transplanted in the final landscape design. As part of selecting trees to retain, focus was on specimens that are well developed and that are healthiest. This would help to ensure the greatest chance for success in transplanting or construction impacts.

During the selection process, several trees growing in tight groups were eliminated as potential candidates to retain based on their appearance and hazard potential. These oak trees typically exhibited a lean or poorly developed canopy as a result of competition for available resources. Trees in this condition would be better to replace with healthy nursery specimens in accordance with City ordinance and mitigation requirements.

The diameters of the surveyed trees can be used to illustrate the potential critical root zone (CRZ) of each tree. The CRZ is considered the maximum possible radius of the root zone of a tree. The CRZ can be calculated by multiplying the DBH by 1.5 feet. For instance, tree #1 has a DBH of 12 inches and a calculated CRZ of 18 feet (12 x 1.5). This distance may extend beyond the tree canopy dripline and is normally considered the tree protection zone (TPZ). Tree protection fencing is normally installed to protect the CRZ, but at a minimum should be installed at the dripline.

Similar to the CRZ, the structural root zone (SRZ) can be calculated using a commonly accepted method established by Dr. Kim Coder in *Construction Damage Assessments: Trees and Sites.*[1] In this method, the root plate size (i.e. pedestal roots, zone of rapid taper area, and roots under compression) and limit of disruption based upon tree DBH is considered as a minimum distance that any disruption should occur during construction. Significant risk of catastrophic tree failure exists if structural roots within this given radius are destroyed or severely damaged. The SRZ is the area minimal or no disturbance should occur without arborist supervision.

[1] Dr. Kim D. Coder, University of Georgia June 1996

Conclusion and Recommendations

Based on visual evaluations and the construction impacts, it was determined that twenty three native oak trees on the property qualify under the City's Oak Preservation Guideline Ordinance. Six of these have a trunk diameter of 24 inches or greater and are considered heritage trees by the City of Rocklin. It appears that all of the trees will be impacted by the site design plan.

Of the 23 oak trees within the project site boundary, fifteen (15) should be removed because of their declining health or poor structure or canopy development and will require mitigation. These include tree numbers 6, 9, 11, 23, 25, 35, 45, 46, 53, 55, 56, 58, 62, 64, and 65. Three of these fifteen trees to be removed are heritage oak trees. Given the large stature of these heritage trees as well as the expense and the survival risk associated with their relocation, impacts resulting from their removal should be mitigated with the plantings of healthy nursery stock. The remaining eight oak trees (#1, 7, 13, 22, 24, 48, 57, and 63) will be directly impacted by the project. Three of the seven impacted oak trees are heritage trees (all are valley oaks).

All work in the TPZ should be supervised by a Certified Arborist. Arborist supervision is strongly recommended during the demolition phase for root pruning. Temporary root protection is recommended by using a four-inch layer of mulch. Additional root protection with plywood over mulch should be used to allow for construction equipment access as needed

Appendix A – Tree Photographs

Photo 1. Cluster of trees near high voltage wires

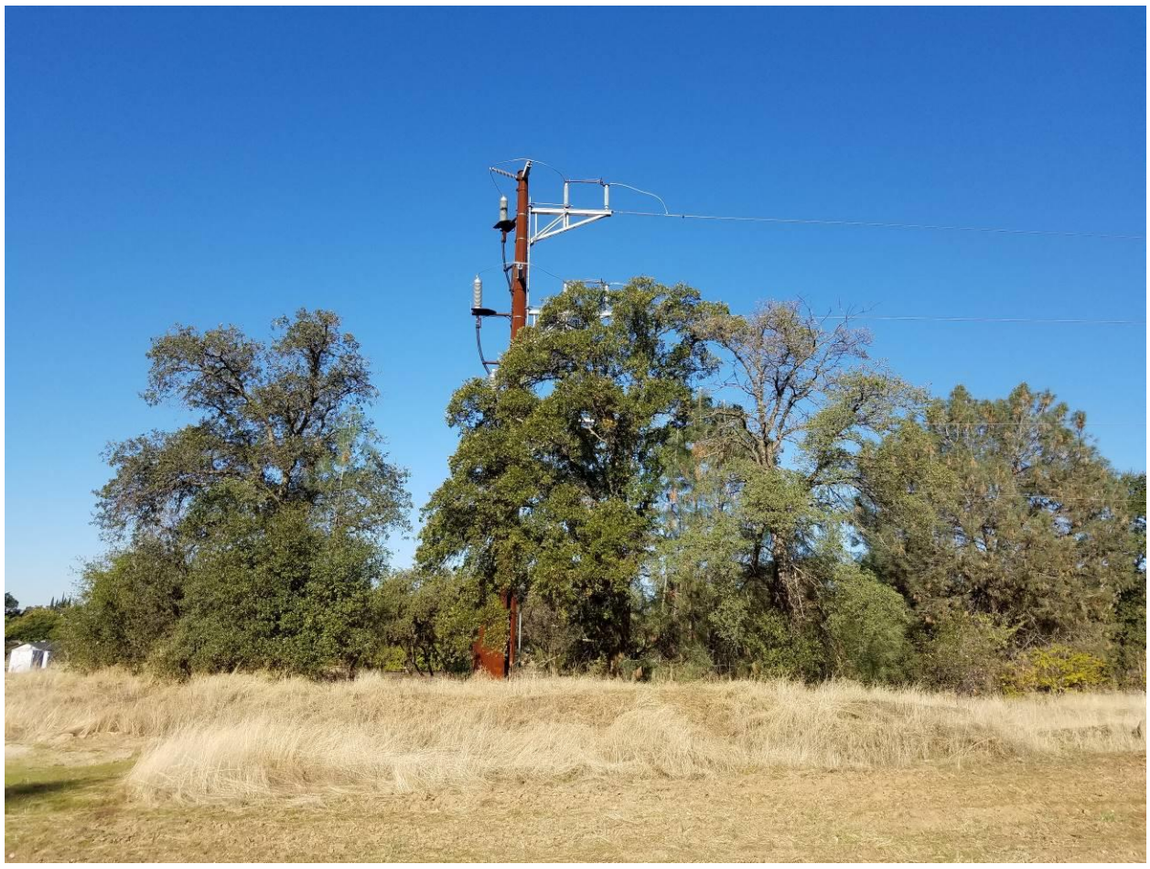


Photo 2. Cluster of trees near Midas Ave.

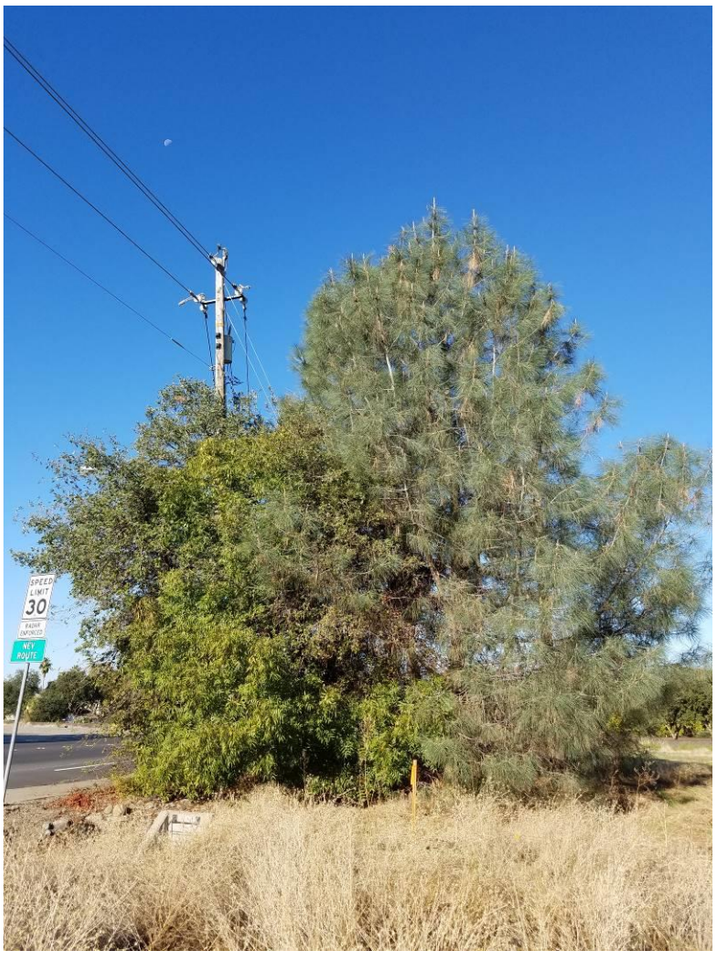


Photo 3. Tree #62, Interior live oak with poor structure is a heritage tree

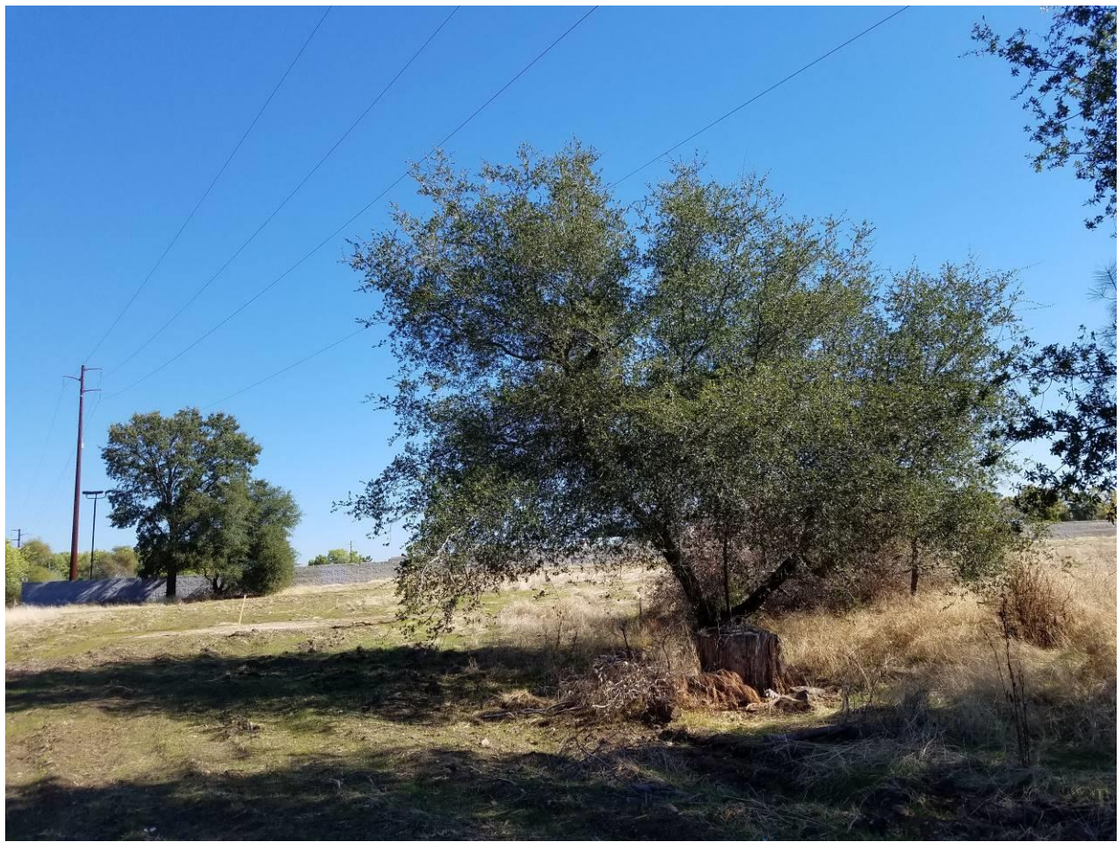
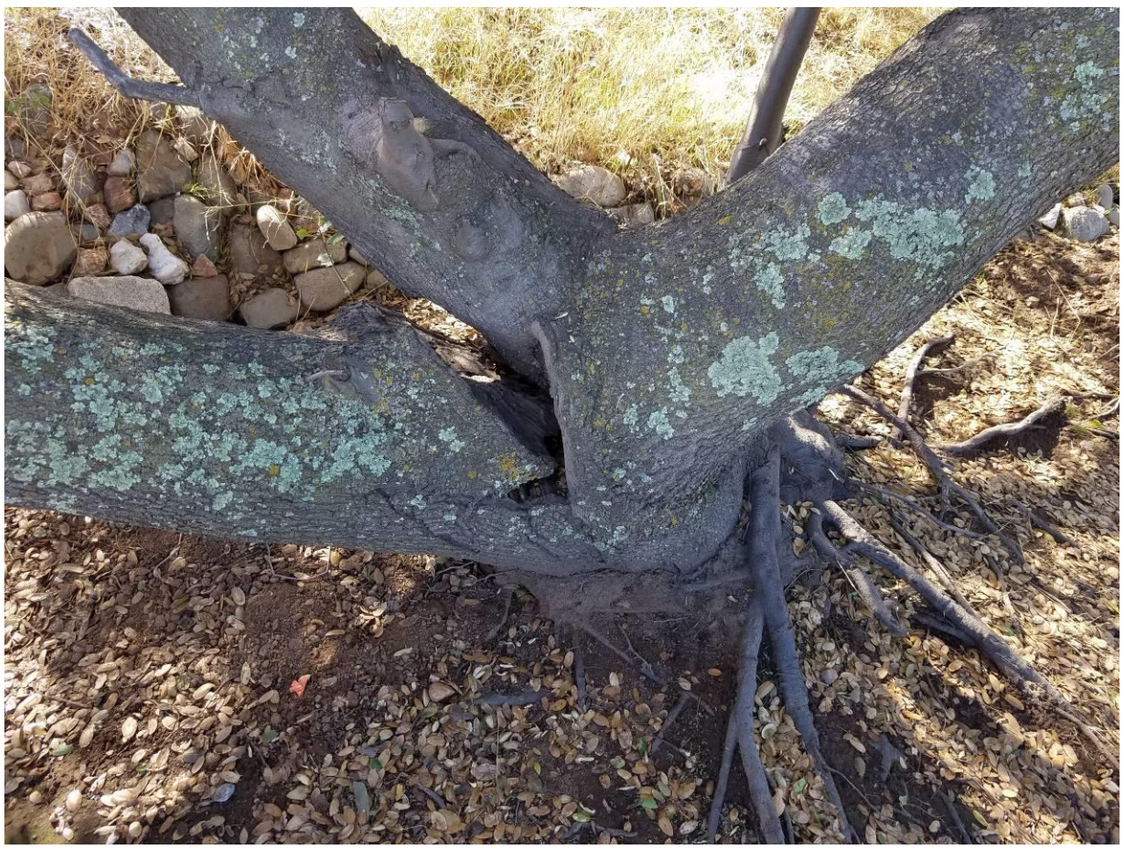


Photo 4. Split stem of tree #62



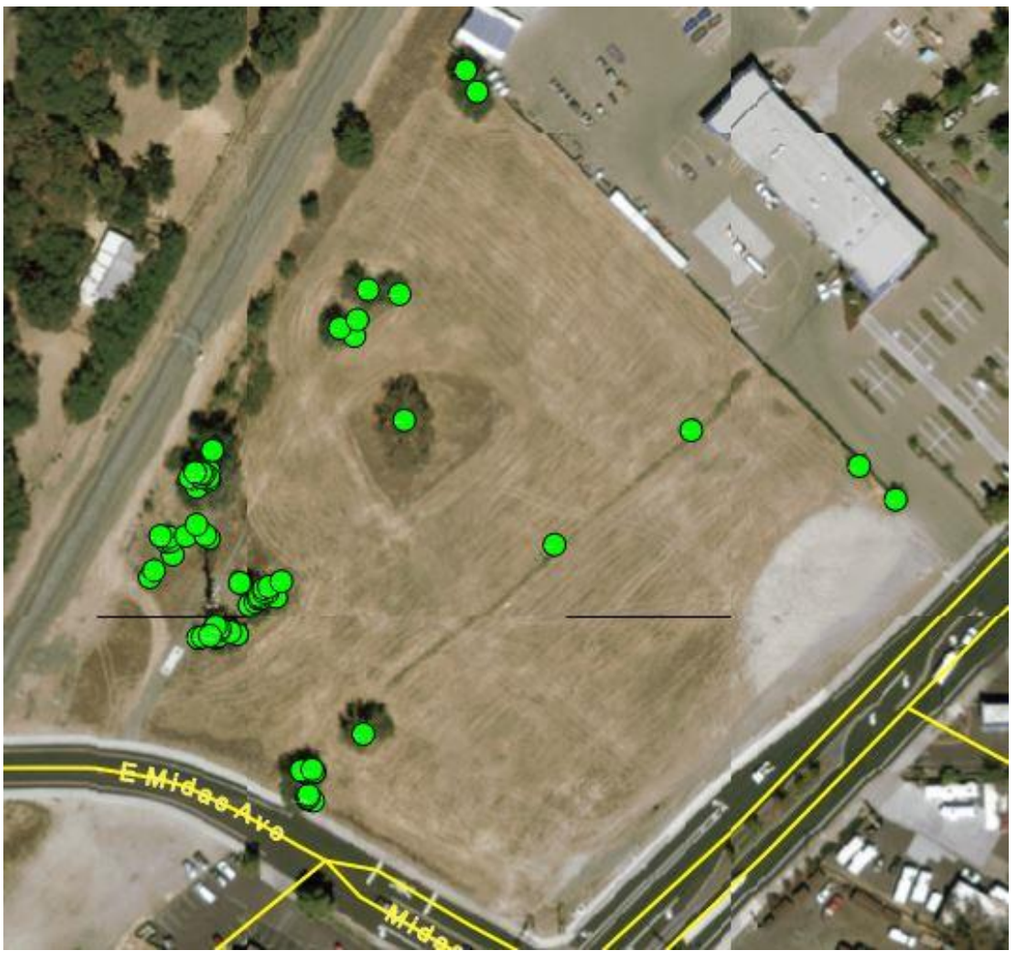
Appendix B – Tree Inventory and Condition Assessment

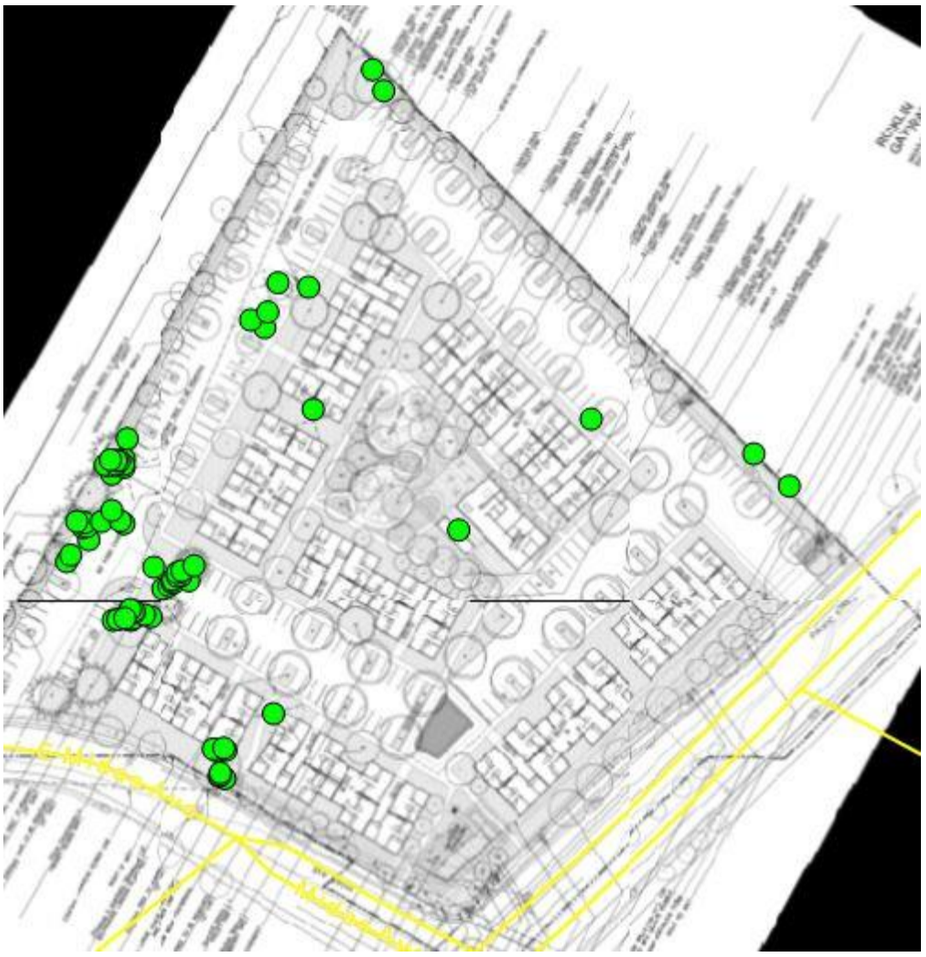
Tree #	DBH (in.)	Number of Stems	Species	Condition	Clearance Issues	Remove because of health or structure	Comments
1	12.0	1	*Quercus douglasii*	Fair	Building	No	Codominant leaders ; unbalanced crown
6	7.0	1	*Quercus lobata*	Fair	Other (comments)	Yes	sidewalk clearance ; suppressed
7	11.0	1	*Quercus douglasii*	Good	Road	No	unbalanced crown
9	10.0	3	*Quercus wislizeni*	Fair	No issues	Yes	Poor structure, crowded: 3 stems @ 5”, 4”, 1”
11	13.0	4	*Quercus wislizeni*	Fair	No issues	Yes	unbalanced crown: 4 stems @ 4”, 3.5”, 3.5”, 2”
13	33.0	2	*Quercus lobata*	Fair	Parking	No	co-dominant leaders ; tag 464 , 505 , 195; minor die back; 2 stems @ 18”, 17.5”
22	8.5	1	*Quercus lobata*	Good	No issues	No	unbalanced crown ; co-dominant leaders
23	8.5	3	*Quercus wislizeni*	Good	No issues	Yes	co-dominant leaders ; unbalanced crown; 3 stems @ 4”, 2.5”, 2”
24	29.0	2	*Quercus lobata*	Fair	Road	No	poor structure; 2 stems @ 17”, 12”
25	15.0	1	*Quercus douglasii*	Poor	Road	Yes	crown die back ; upper trunk wound
35	8.5	2	*Quercus wislizeni*	Fair	Road	Yes	Codominant ; near high voltage wires
45	7.5	6	*Quercus wislizeni*	Fair	Road	Yes	poor structure
46	8.5	6	*Quercus wislizeni*	Fair	Road	Yes	poor structure
48	10.0	1	*Quercus douglasii*	Fair	Parking	No	poor structure
53	12.0	2	*Quercus wislizeni*	Fair	Parking	Yes	poor structure; 2 stems @ 6” each
55	7.5	3	*Quercus wislizeni*	Fair	Parking	Yes	poor structure
56	13.0	1	*Quercus wislizeni*	Fair	Parking	Yes	Poor structure ; unbalanced crown
57	16.0.	1	*Quercus lobata*	Fair	Parking	No	Unbalanced crown ; fair to good
58	27.5	3	*Quercus wislizeni*	Fair	Parking	Yes	leaning ; included bark
62	36.5	3	*Quercus wislizeni*	Poor	Parking	Yes	one stem has split at base, dead except for lower epicormics

Tree #	DBH (in.)	Number of Stems	Species	Condition	Clearance Issues	Remove because of health or structure	Comments
63	24	1	*Quercus lobata*	Good	No issues	No	Tag #s 203 , 485; under high voltage wires
64	21	4	*Quercus wislizeni*	Fair	Parking	Yes	crowded by adjacent tree ; poor structure
65	29.5	1	*Quercus douglasii*	Poor	Building	Yes	Cavity / decay & borers @ old pruning wounds ; sparse foliage ; 5-6 " diameter deadwood ; tag 472

Appendix C. Site Plan Comparison

The following two images relate the general locations of all 69 tree inspections to the site plan





Appendix D. Inventory Map

The following inventory map detail shows the location and site number of the 23 oak trees of interest.