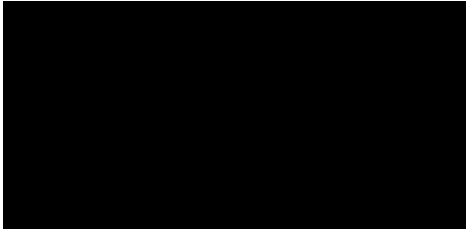




# California Tree and Landscape Consulting, Inc.

August 30 2021



## ARBORIST REPORT & TREE INVENTORY FOR AT 680 TOWNSEND CT, FOLSOM

### Summary:

Mr. Miles Ostemann contacted California Tree and Landscape Consulting, Inc. on July 8, 2021 on behalf of Ms. Hayatdavoudi to inventory and assess the protected trees on the site or within 50' of development. The assessment will be used to evaluate the impacts to the trees from the proposed development plan and provide a tree mitigation proposal. A Tree Preservation Plan is included to protect the trees to remain during the development process. The property is located at 680 Townsend Ct, Lot 106, Folsom.

David Mercado, ISA Certified Arborist #WE-7311A visited the site on August 24, 2021 to provide species identification, measurements of diameter and canopy, field condition notes and arborist ratings. A total of 23 trees were included in the inspection, all of which are protected species on the property and adjacent property according to the City of Folsom Tree Preservation ordinance. The following table summarizes the inspection data.

Tree Species	Trees Inventoried	Trees on the Site[1]	Trees proposed for Removal	Trees impacted by the proposed development and requiring special protection measures	Predicted Impacts
Blue Oak	23	20	10	3	Removal & Encroachment

There are 10 trees proposed for removal. Seven trees were in fair condition, 2 trees were in poor condition and 1 tree was dead. Nine of the 10 trees were inside the building setback. There are 3 trees that will experience encroachment. The encroachment is going to be less than 20% of the crown area, and should allow the trees to continue to grow well with good tree protection. Tree protection measures are included in the report.

The Folsom Tree Mitigation Worksheet was used to calculate the required mitigation. There are 10 trees and 149 diameter inches. After the calculations, there are a total of 66.5 diameter inches. If 66 inches of replacement trees are not going to be planted on site, an in lieu fee of \$16,625 can be paid, or some combination of planting trees and the remainder paid by the in lieu fee.

The following table shows the proposed mitigation calculation:

680 Townsend Ct  
Tree Mitigation Calculation Table

Item No	tree tag #	DSH (inches) base mitigation	Arborist Rating	Adjustment Factor	50% Reduction inside house buildable area	Final Mitigation (inches)	Equivalent in-lieu fee (inches x \$250)
1	4851	8	3	1	0.5	4.00	\$1,000.00
2	4852	11	2	0.5	0.5	2.75	\$687.50
3	4854	18	3	1	1	18.00	\$4,500.00
4	4856	14	3	1	0.5	7.00	\$1,750.00
5	4857	21	2	0.5	0.5	5.25	\$1,312.50
6	4858	20	3	1	0.5	10.00	\$2,500.00
7	4859	18	0	0	0.5	0.00	\$0.00
8	4860	7	3	1	0.5	3.50	\$875.00
9	4861	18	3	1	0.5	9.00	\$2,250.00
10	4862	14	3	1	0.5	7.00	\$1,750.00
	Total	149	~	~	~	66.50	\$16,625.00

#### ASSIGNMENT:

Mr. Miles Ostemann contacted California Tree and Landscape Consulting, Inc. on July 8, 2021 on behalf of Ms. Hayatdavoudi requesting assistance with an arborist site review and report for a proposed home construction at 680 Townsend Ct, Folsom, CA. I provided a proposal and we agreed to a site inspection and completion of the report.

All site information and history were provided by Mr. Ostemann. The grading plan and initial site plan were provided by Mr. Ostemann on August 17, 2021. The assignment requires the following activities: visit the site, verify the trees, list the tree species, diameters, crown radius, condition of the trees, construction impacts to the trees, and tree protection and mitigation options.

#### OBSERVATIONS

Dave MerTownsend Ccdo, ISA Certified Arborist #7311A visited the site on August 24, 2021. There were 23 trees included in the inspection and 20 trees were found to be growing on the subject property. The tree numbers are shown on the aerial image in approximate locations with corresponding with the numbers on the 680 Townsend Ct Folsom Tree List.

The tools used were a diameter tape, screwdriver as a probe, mallet, tape measure, hammer, nails, and tree tags. Crown radius was measured by hypsometer. The trunk diameter was measured with a diameter tape. The height the measurement was taken is listed. Typically, diameter is measured at 4.5 feet above grade. Sometimes the shape of the trunk does not allow accurate measurement at 4.5 feet. The optimum height was found on the trunk to best represent the correct trunk diameter and was measured with a diameter tape. The trees were assessed and rated for health and structure, and overall condition considering: leaf quality, size, color and density; vitality; dieback; root impacts; branch structure, branch attachment, crotch structure, trunk flare, surface roots, decay, insects and diseases, growth habit, any physical damages, lean, and other issues that affect the condition of the trees.

Condition Rating	The tree condition rating is based on observations of both the health and structure of the tree. All of the trees were rated for condition, per the recognized protocol set by the Council of Tree and Landscape Appraisers and the International Society of Arboriculture (ISA) using a numeric scale of 5 (being the highest) to 0 (the worst condition) as shown below. The rating was determined in the field at the time of the inspection.			
No problem(s)	Excellent	5	Excellent vigor and crown structure. No significant defects and near perfect form	
No apparent problem(s)	Good	4	The tree has good vigor and crown structure. Few defects and can be mitigated.	
Minor problem(s)	Fair	3	The tree has fair vigor. There are structural or health problems. The defect(s) are not significant and can be mitigated.	
Major or uncorrectable problems (2)	Poor	2	The tree has poor vigor or major structural problems. The tree may be declining. Risk mitigation may be possible, and the health and structure mitigation may not be practical	
Extreme problem(s)	Very Poor	1	The tree has very poor vigor, significant dieback or extreme structural problems. The health or structure conditions can not be mitigated. Other options can be considered to retain on site managing risk.	
Dead	Dead	0	This indicates the tree has no signs of life or living tissue.	

There were 23 Blue Oak (*Quercus douglasii*) trees, growing on the property and adjacent property. One tree was found to be dead. Seventeen trees were found to be in Fair condition and 5 trees were found to be in poor condition. Thirteen trees are proposed to be impacted by the project. Ten trees are proposed for removal, 1 dead, 2 poor, and 7 fair condition trees. Three trees are proposed to be encroached upon by the proposed construction, less than 20% of the crown area. All the data from the inspection is included in the attached 680 Townsend Ct Folsom Tree List.

## DISCUSSION

Ten trees are proposed for removal and will need to be mitigated based on the City of Folsom Tree Mitigation Worksheet. Trees need to be protected from normal construction practices if they are to remain on the site and are expected to survive long term. While construction damage in the root zone typically causes decline and the death of trees, the time from when the damage occurs to when the symptoms begin and/or the tree dies may take from one to several years to occur. Our protection measures are based on industry standards and best practices, our experience, and the local ordinance requirements. The root zone must be protected as an underground ecosystem from the use of heavy equipment to install foundations, driveways, underground utilities, and landscape irrigation systems. Simply walking and driving on soil can have serious compaction consequences to tree health. The Tree Preservation Requirements and General Development Guidelines should be incorporated into the site plans and enforced onsite. The project arborist should be included in the development team during construction to provide expertise and make additional recommendations if additional impacts occur or tree response is poor.

The trees to be retained will be fenced off to the drip line where no encroachment is approved. For large tree areas one fence can protect several trees. The proposed design of this project shows encroachment into 3 trees, 4850, 4853 and 4855. Encroachment was calculated and found to be less than 20% on any tree. These trees can be protected with tree protection fencing placed as far out to the proposed construction from the trunk as possible to protect the soil and root zone. If any work is proposed in the protected area, 4 inches of

wood chip mulch shall be placed over the soil if people will be walking within the fence. If equipment is going to be used in the tree protection zone, 6 inches of wood chip mulch should be placed on the ground covered with a steel plate or 1" thick plywood. The fencing can be opened to access the approved work area and the fence shall be closed off at the end of each workday. When the approved work in the protected area is completed, the access should be closed for the remainder of the project.

Ten trees were proposed for removal. The total diameter inches is 149. Based on the Folsom Tree Mitigation Worksheet a Tree Mitigation Calculation Table was used to calculate the total mitigation. A total of Tree 6282 a 23-inch fair condition oak would require a planting of 23 inches of native oaks on the site, which the space doesn't allow, or a mitigation payment of \$250 per inch for a total payment of \$5,750.

## SUMMARY OF TREE PROTECTION MEASURES

### For Project Submittal to the City:

- Identify each tree on the final construction drawings, show the root protection zones, and show any calculated encroachment percentage.
- List the name and telephone number of the project arborist on the final construction drawings (grading plans) and a monitoring schedule an inspection in coordination with the work that may impact trees throughout the construction schedule.

### Prior to Onsite Activity:

- The project arborist should inspect the installed tree protection fencing prior to grading and/or grubbing for compliance with the recommended protection zones.
- The project arborist should directly supervise the irrigation, fertilization, placement of mulch and chemical treatments.
- Clearance pruning should include removal of all the lower foliage that may interfere with equipment PRIOR to having grading or other equipment on site. The Project Arborist should approve the extent of foliage elevation and directly oversee the pruning to be performed by a tree care contractor who is an ISA Certified Arborist.

### During Construction:

- All approved work to be performed inside the protected root zone fencing shall be supervised by the project arborist.  
Where people and foot traffic will be working in the tree protection zone, four inches of wood chip mulch shall be placed over the soil in the tree protection zone. Where equipment will be working in the tree protection zone, 6 inches of wood chip mulch shall be placed over the soil in the tree protection zone covered by either steel plates or 1" thick plywood
- The project arborist shall monitor the site a minimum of once per month during development and may require additional measures as a result of changing tree response.

Please contact me at [gordon@mannandtrees.com](mailto:gordon@mannandtrees.com) or 650-740-3461 if there are any questions about this report.

Respectfully submitted,



Gordon Mann



- Appendix 1 – Images
- Appendix 2 – Tree Data
- Appendix 3 – General Development Guidelines
- Appendix 4 – Site Photographs
- Appendix 5- Methods and Terms

### Bibliography

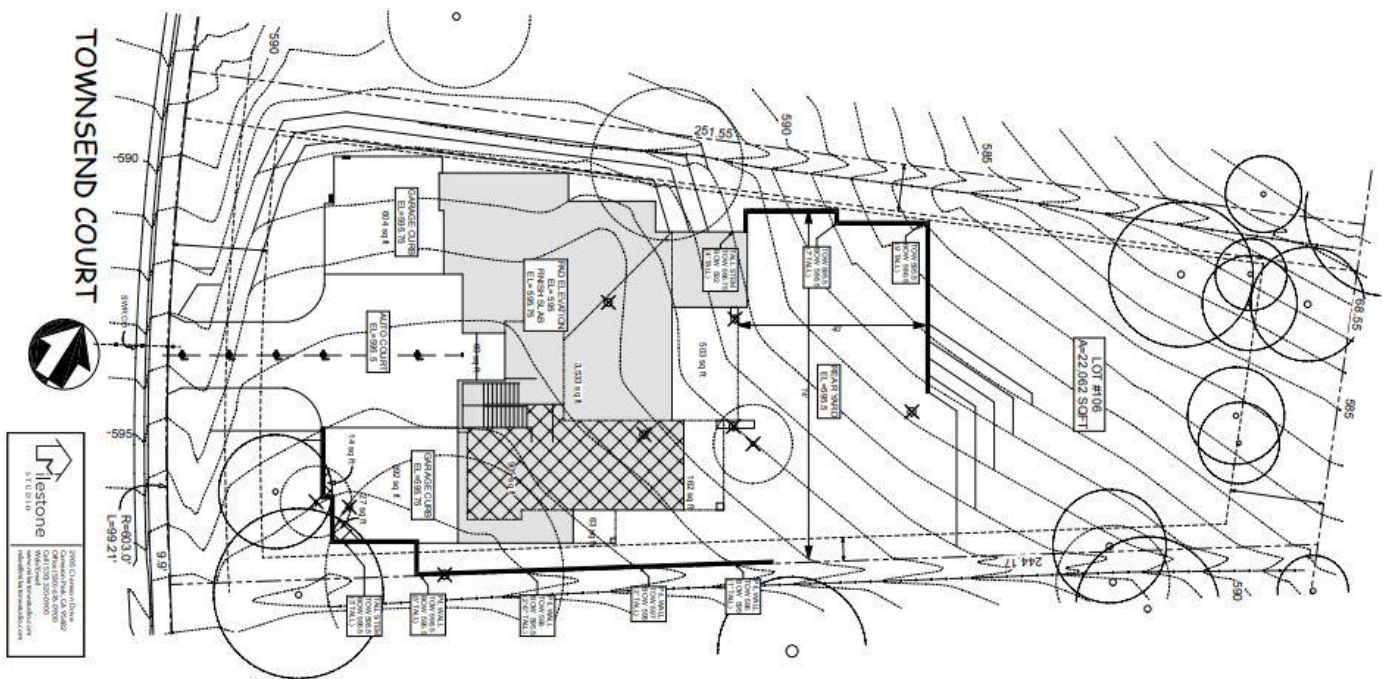
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### APPENDIX 1 – IMAGES



**AERIAL IMAGE WITH TREES NUMBERED IN APPROXIMATE LOCATIONS**

A



PROPOSED SITE PLAN PROVIDED FOR INSPECTION



## APPENDIX 2 TREE INFORMATION DATA

680 Townsend Ct Folsom

Tree List

Tree #	Common Name	Latin Name	DBH (in)	Diameter Measured at (ft)	Crown Radius (ft)	Condition	Condition Rating (%)	Observation Comments	Project Status	Inside Bldg Setback
4850	Blue Oak	Quercus douglasii	16	4.5	18	Fair	55	Flare good, branch structure good, vigor fair, low lateral to the south 20 feet from sidewalk	Retain and protect	yes
4851	Blue Oak	Quercus douglasii	8	4.5	12	Fair	45	Slightly buried root flare, small branch cavity at 6 feet,	Remove and Mitigate	Yes
4852	Blue Oak	Quercus douglasii	11	4.5	15	Poor	50	Slightly buried root flare, branch structure good, vigor poor, tip die back	Remove and Mitigate	Yes
4853	Blue Oak	Quercus douglasii	15	4.5	18	Fair	50	Slightly buried root flare, structure good, vigor fair	Retain and protect	no
4854	Blue Oak	Quercus douglasii	18	2	21	Fair	45	Buried root flare, co dom with inclusion at 5 feet above grade, branch collar cavity at 5 feet.	Remove and Mitigate	No
4855	Blue Oak	Quercus douglasii	17	4.5	15	Fair	50	Root flare good, branch structure good, vigor fair, partially defoliated	Retain and protect	no
4856	Blue Oak	Quercus douglasii	14	4.5	18	Fair	50	Trunk flare good, co dominant at 8 feet, structure fair, vigor fair,	Remove and Mitigate	Yes
4857	Blue Oak	Quercus douglasii	21	4.5	18	Poor	25	Decay at base north side, tip die back, partially defoliated, low vigor, structure fair	Remove and Mitigate	Yes
4858	Blue Oak	Quercus douglasii	20	4.5	21	Fair	45	Trunk flare good, structure fair, vigor fair, co dom at 5 feet above grade,	Remove and Mitigate	Yes
4859	Blue Oak	Quercus douglasii	18	4.5	12	Dead	0	Large decay column in trunk,	Remove and Mitigate	Yes

680 Townsend Ct Folsom  
Tree List

Tree #	Common Name	Latin Name	DBH (in)	Diameter Measured at (ft)	Crown Radius (ft)	Condition	Condition Rating (%)	Observation Comments	Project Status	Inside Bldg Setback
4860	Blue Oak	Quercus douglasii	7	4.5	12	Fair	50	Single stem understory, vigor fair	Remove and Mitigate	Yes
4861	Blue Oak	Quercus douglasii	18	4.5	21	Fair	50	Trunk flare good co dom at 10 feet above grade, branch structure good, vigor fair,	Remove and Mitigate	Yes
4862	Blue Oak	Quercus douglasii	14	4.5	15	Fair	55	Trunk flare good structure good vigor fair,	Remove and Mitigate	Yes
4863	Blue Oak	Quercus douglasii	11.4	4.5	12	Fair	50	2 Stems at base 9" & 7"; Trunk flare good, structure fair, vigor fair,	Retain and protect	
4864	Blue Oak	Quercus douglasii	13	4.5	15	Fair	55	Offsite, neighboring tree, flare good, structure fair, vigor fair, 5 feet from property line extends into property 10 feet	Retain and protect	
4865	Blue Oak	Quercus douglasii	10	4.5	15	Fair	50	Offsite, neighboring tree, flare good, structure fair, vigor fair, 8 feet from property line, extends into property 7'	Retain and protect	
4866	Blue Oak	Quercus douglasii	10	4.5	15	Poor	30	Offsite, neighboring tree, flare poor, decay at base structure fair, vigor low, 8 feet from property line	Retain and protect	
4867	Blue Oak	Quercus douglasii	9	4.5	12	Fair	45	Single stem understory, structure fair vigor fair, moderate decay at base	Retain and protect	
4868	Blue Oak	Quercus douglasii	12	4.5	15	Poor	25	Poor trunk taper decay at base, low vigor, tip die back,	Retain and protect	



## 680 Townsend Ct Folsom

## Tree List

Tree #	Common Name	Latin Name	DBH (in)	Diameter Measured at (ft)	Crown Radius (ft)	Condition	Condition Rating (%)	Observation Comments	Project Status	Inside Bldg Setback
4869	Blue Oak	Quercus douglasii	15	4.5	12	Fair	50	Flare good, branch structure good, vigor fair	Retain and protect	
4870	Blue Oak	Quercus douglasii	9	4.5	9	Fair	45	Slightly buried root flare, branch structure good, vigor low	Retain and protect	
4871	Blue Oak	Quercus douglasii	11	4.5	12	Fair	45	Decay at base, 30 percent cambium loss, vigor fair branch structure fair	Retain and protect	
4872	Blue Oak	Quercus douglasii	18.87	4.5	21	Poor	30	Co dom leaders 16" & 10"; inclusion at 12 inches above grade, structure poor, vigor fair	Retain and protect	

23 Total trees; ten trees proposed for removal; 3 trees to experience acceptable encroachment

## **APPENDIX 3**

### **GENERAL DEVELOPMENT GUIDELINES**

#### **Definitions**

**Root zone:** The roots of trees grow fairly close to the surface of the soil, and spread out in a radial direction from the trunk of tree. A general rule of thumb is that they spread 2 to 3 times the radius of the canopy, or 1 to 1 ½ times the height of the tree. It is generally accepted that disturbance to root zones should be kept as far as possible from the trunk of a tree.

**Inner Bark:** The bark on most large trees is quite thick, usually 1" to 2". If the bark is knocked off a tree, the inner bark, or cambial region, is exposed and/or removed. The cambial zone is the area where tissues responsible for adding new layers to the tree each year are located. Removing or damaging this tissue results in a tree that can only grow new tissue from the edges of the wound. In addition, the interior wood of the tree is exposed to decay fungi and becomes susceptible to decay. Tree protection measures require that no activities occur which can knock the bark off the trees.

#### **Methods Used in Tree Protection:**

No matter how detailed Tree Protection Measures are in the initial Arborist Report, they will not accomplish their stated purpose unless they are applied correctly and a Project Arborist oversees the construction. The Project Arborist should have the ability to enforce the Protection Measures. It is advisable for the Project Arborist to be present at the Pre-Construction meeting to answer questions the contractors may have about Tree Protection Measures. This also lets the contractors know how important tree preservation is to the developer.

**Root Protection Zone (RPZ):** Since in most construction projects it is not possible to protect the entire root zone of a tree, a Root Protection Zone is established for each tree to be preserved. The minimum Root Protection Zone is the area calculated as 1 to 1.25' for every inch of trunk diameter (ie. A 10" diameter tree will have an RPZ of 10') or the dripline if required by local ordinance. The Project Arborist must approve work within the RPZ.

**Irrigate, Fertilize, Mulch:** Prior to grading on the site near any tree, if specified by the project arborist, the area within the Tree Protection fence should be fertilized with 4 pounds of nitrogen per 1000 square feet, and the fertilizer irrigated in. The irrigation should percolate at least 24 inches into the soil. This should be done no less than 2 weeks prior to grading or other root disturbing activities. After irrigating, cover the RPZ with at least 12" of leaf and twig mulch. Such mulch can be obtained from chipping or grinding the limbs of any trees removed on the site. Acceptable mulches can be obtained from nurseries or other commercial sources. Fibrous or shredded redwood or cedar bark mulch shall not be used anywhere on site.

**Fence:** Fence around the Root Protection Zone and restrict activity therein to prevent soil compaction by vehicles, foot traffic or material storage. The fenced area shall be off limits to all construction equipment, unless there is express written notification provided by the Project Arborist, and impacts are discussed and mitigated prior to work commencing.

No storage or cleaning of equipment or materials, or parking of any equipment can take place within the fenced off area, known as the RPZ.

The fence should be highly visible, and stout enough to keep vehicles and other equipment out. I recommend the fence be made of orange plastic protective fencing, kept in place by t-posts set no farther apart than 6'.

In areas of intense impact, a 6' chain link fence is preferred.

In areas with many trees, the RPZ can be fenced as one unit, rather than separately for each tree.

Where tree trunks are within 3' of the construction area, place 2" by 4" boards vertically against the tree trunks, even if fenced off. Hold the boards in place with wire. Do not nail them directly to the tree. The purpose of the boards is to protect the trunk, should any equipment stray into the RPZ.

Elevate Foliage: Where indicated, remove lower foliage from a tree to prevent limb breakage by equipment. Low foliage can usually be removed without harming the tree, unless more than 25% of the foliage is removed. Branches need to be removed at the anatomically correct location in order to prevent decay organisms from entering the trunk. For this reason, a contractor who is an ISA Certified Arborist should perform all pruning on protected trees.<sup>1</sup>

Expose and Cut Roots: Breaking roots with a backhoe, or crushing them with a grader, causes significant injury, which may subject the roots to decay. Ripping roots may cause them to splinter toward the base of the tree, creating much more injury than a clean cut would make. At any location where the root zone of a tree will be impacted by a trench or a cut (including a cut required for a fill and compaction), the roots shall be exposed with either a backhoe digging radially to the trunk, by hand digging, or by a hydraulic air spade, and then cut cleanly with a sharp instrument, such as chainsaw with a carbide chain. Once the roots are severed, the area behind the cut should be moistened and mulched. A root protection fence should also be erected to protect the remaining roots, if it is not already in place. Further grading or backhoe work required outside the established RPZ can then continue without further protection measures.

Protect Roots in Deeper Trenches: The location of utilities on the site can be very detrimental to trees. Design the project to use as few trenches as possible, and to keep them away from the major trees to be protected. Wherever possible, in areas where trenches will be very deep, consider boring under the roots of the trees, rather than digging the trench through the roots. This technique can be quite useful for utility trenches and pipelines.

Protect Roots in Small Trenches: After all construction is complete on a site, it is not unusual for the landscape contractor to come in and sever a large number of "preserved" roots during the installation of irrigation systems. The Project Arborist must therefore approve the landscape and irrigation plans. The irrigation system needs to be designed so the main lines are located outside the root zone of major trees, and the secondary lines are either laid on the surface (drip systems), or carefully dug with a hydraulic air spade, and the flexible pipe fed underneath the major roots.

Design the irrigation system so it can slowly apply water (no more than ¼" to ½" of water per hour) over a longer period of time. This allows deep soaking of root zones. The system also needs to accommodate infrequent irrigation settings of once or twice a month, rather than several times a week.

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<sup>1</sup> International Society of Arboriculture (ISA), maintains a program of Certifying individuals. Each Certified Arborist has a number and must maintain continuing education credits to remain Certified.

Monitoring Tree Health During and After Construction: The Project Arborist should visit the site at least twice a month during construction to be certain the tree protection measures are being followed, to monitor the health of impacted trees, and make recommendations as to irrigation or other needs. After construction is complete, the arborist should monitor the site monthly for one year and make recommendations for care where needed.

Chemical Treatments: The owner or developer shall be responsible to contact an arborist with a pesticide applicators license to arrange for an application of a root enhancing hormone, such as Paclobutrazol, to mitigate the stress produced by the development **prior to grading**. Additionally, at the discretion of the project arborist, an insect infestation preventative for both boring insects and leaf feeding insects and/or fungal preventative for leaf surfaces may be required. Roots pruned during the course of performing a cut may be required to be treated with a biofungicide such as Bio-Tam.

#### APPENDIX 4 – SITE PHOTOGRAPHS



**TREE 4850**



**TREE 4853**



**TREE 4855****TREE 4861**

## APPENDIX 5 – METHODS AND TERMS

The following definitions will further explain our methods and findings.

The protected trees evaluated as part of this report have a numbered tag that was placed on each one that is 1-1/8" x 1-3/8", green anodized aluminum, "acorn" shaped, and labeled: ABACUS, Auburn, CA with 1/4" pre-stamped tree number and Tree Tag. They are attached with a natural colored aluminum 10d nail, installed at approximately 6 feet above ground level on the approximate north side of the tree. The tag should last ~10 – 20+ years depending on the species, before it is enveloped by the trees' normal growth cycle.

A Level 2 – Basic Visual Assessment was performed in accordance with the International Society of Arboriculture's best management practices. This assessment level is limited to the observation of conditions and defects which are readily visible. Additional limiting factors, such as blackberries, poison oak, and/or debris piled at the base of a tree can inhibit the visual assessment.

**Tree Location:** The GPS location of each tree was collected using the ESRI's ArcGIS collector application on an Apple iPhone or Samsung. The data was then processed in ESRI's ArcMap by Julie McNamara, M.S. GISci, to produce the tree location map.

**Tree Measurements:** DBH (diameter breast high) is normally measured at 4'6" (above the average ground height for "Urban Forestry"), but if that varies then the location where it is measured is noted. A steel diameter tape was used to measure the DBH for all trees. A Stanley laser distance meter was used to measure distances and/or pacing was used to estimate canopy measurements. Canopy radius measurements may also have been estimated due to obstructions, such as steep slopes or other trees.

## Terms

Actions	Recommended actions to increase health and longevity.			Re
Field Tag #	The pre-stamped tree number on the tag which is installed at approximately 6 feet above ground level on the north side of the tree.			
Old Tag #	If additional field tags are found on the trees and are legible, they are listed here.			
Species	The species of a tree is listed by our local and correct common name and botanical name by genus (capitalized) and species (lower case). Oaks frequently cross-pollinate and hybridize, but the identification is towards the strongest characteristics.			
DBH	Diameter Breast Height is normally measured at 4.5' above grade for optimum trunk diameter. The measurement height may vary if the tree has growth characteristics such as co-dominant stems or leaders, low branches, or trunk deformations below 4.5'. When those are present the height is measured usually below or rarely above the characteristic and the height the diameter is measured at is noted.			
Canopy radius	The farthest extent of the crown composed of leaves and living twigs. Most trees are not evenly balanced. This measurement represents the longest extension from the center of the trunk to the outer canopy. The dripline measurement is from the center point of the tree and is shown on the Tree Location Map as a circle. This measurement is typically displayed as a circle around the center point of the trunk.			
Protected Root Zone	The radius of the protected root zone is a circle equal to the trunk diameter inches converted to feet and factored by tree age, condition and health pursuant to the industry standard. Best Management Practices: Managing Trees During Construction, the companion publication to the Approved American National Standard, provides guidance regarding minimum tree root protection zones for long term survival. In instances where a tree is multi-stemmed the protected root zone is equal to the extrapolated diameter (sum of the area of each stem converted to a single stem) factored by tree age, condition and health.			
Condition Rating	The tree condition is based on observations of both the health and structure of the tree. All of the trees were rated for condition, per the recognized protocol set by the Council of Tree and Landscape Appraisers and the International Society of Arboriculture (ISA) using a numeric scale of 5 (being the highest) to 0 (the worst condition) as shown below. The rating was determined in the field at the time of the inspection.			
	No problem(s)	Excellent	<b>5</b>	Excellent vigor and crown structure. No significant defects and near perfect form
	No apparent problem(s)	Good	<b>4</b>	The tree has good vigor and crown structure. Few defects and can be mitigated.
	Minor problem(s)	Fair	<b>3</b>	The tree has fair vigor. There are structural or health problems. The defect(s) are not significant and can be mitigated.
	Major or uncorrectable problems (2)	Poor	<b>2</b>	The tree has poor vigor or major structural problems. The tree may be declining. Risk mitigation may be possible, and the health and structure mitigation may not be practical
	Extreme problem(s)	Very Poor	<b>1</b>	The tree has very poor vigor, significant dieback or extreme structural problems. The health or structure conditions can not

Dead	Dead	0	be mitigated. Other options can be considered to retain on site managing risk. This indicates the tree has no signs of life or living tissue.
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**Notes or Comments:** Provide notable details about each tree which are factors considered in the determination of the tree rating including: (a) condition of root crown and/or roots; (b) condition of trunk; (c) condition of limbs and structure; (d) growth history and twig condition; (e) leaf appearance; and (f) dripline environment. Notes also indicate if the standard tree evaluation procedure was not followed (for example - why dbh may have been measured at a location other than the standard 54"). Additionally, notes will list any evaluation limiting factors such as debris at the base of a tree.

**Development Impacts** Projected development impacts are based solely on distance relationships between tree location and grading. Field inspections and findings during the project at the time of grading and trenching can change relative impacts. Closely followed guidelines and requirements can result in a higher chance of survival, while requirements that are overlooked can result in a dramatically lower chance of survival. Impacts are measured as follows:

**Impact Term:****Long Term Result of Impact:**

Negligible	Tree is unlikely to show any symptoms. Chance of survival post development is excellent. Impacts to the Protected Root Zone are less than 5%.
Minor	Tree is likely to show minor symptoms. Chance of survival post development is good. Impacts to the Protected Root Zone are less than 15% and species tolerance is good.
Moderate	Tree is likely to show moderate symptoms. Chance of survival post development is fair. Impacts to the Protected Root Zone are less than 35% and species tolerance is good or moderate.
Severe	Tree is likely to show moderate symptoms annually and a pattern of decline. Chance of long-term survival post development is low. Impacts to the Protected Root Zone are up to 50% and species tolerance is moderate to poor.
Critical	Tree is likely to show moderate to severe symptoms annually and a pattern of decline. Chance of long-term survival post development is negligible. Impacts to the Protected Root Zone are up to 80%.