Gibbons

Arborist Report

5644 Gibbons Dr., Carmichael, CA 95608

Prepared For:

Conti and Associates, Inc.

971 Covenant View Way

Eagle, ID 83616

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Prepared By:

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September 23, 2021

Table of Contents

1. Introduction

Up A Tree Arborist Services was contacted by Antonio Conti of Conti and Associates, Inc. to produce an arborist report for a project located at 5644 Gibbons Dr., Carmichael, CA 95608. The County of Sacramento has made native tree preservation a prerogative during construction activities and requires the arborist report to complete the permitting process. Bryan Hill did a site visit on September 14, 2021 to conduct the tree inventory and this report contains the results.

2. Methodology

This tree survey was completed using the International Society of Arboriculture's Level 2 - Basic Assessment method. This type of assessment consists of the arborist walking the entire parcel looking for trees that fit the criteria outlined by the Department of Planning and Environmental Review. The trees were visually assessed from all sides when possible and the arborist only touched the tree to attach a round tree tag and to measure its trunk diameter when the tree was accessible. All tree locations were then hand-drawn approximately on a map of the parcel by their tree tag number.

All trees on the property are included in the tree inventory with the exception of non-protected trees within the shade of other trees. Non-native trees are required to be inventoried for the purpose of calculating the approximate amount of shade that they provide for the property.

Protected trees are native trees of minimum four inches diameter for single trunks, or ten inches for multiple trunked trees. Protected trees are highlighted in blue on the tree data table. Protected trees with a trunk diameter greater than 19 inches are considered heritage trees and are highlighted in green on the data table.

The following list details the data collected on each surveyed tree within the property or a tree on a neighboring property with a canopy that overhangs the property being surveyed:

1. Tree # - All protected native trees within the property boundaries were identified with a numbered metal tag that is nailed to the tree.
2. Tree name - All trees were identified by both their scientific and common names.
3. Trunk diameter, total (Dbh)- Trees were measured with a diameter graduated tape to the nearest whole inch to determine the diameter of their trunk, or trunks in the case of multiple trunks originating close to the ground. The measurements were made at approximately 4.5 feet from the ground. This is known commonly known as diameter at breast height (Dbh). When the tree forks into two or more scaffold limbs at DSH, the diameter is much larger than below the fork, which gives an over-inflated diameter measurement. The correct method to measure these trees is to measure the trunk at a lower point to get a fairer diameter measurement. Trees measured at a height other than 4.5 feet are denoted with the diameter followed by the height it was measured at (e.g. 23 @ 3', meaning 23 inches measured at three feet from grade). Any tree that is not accessible for measurement (e.g. a tree on an adjacent property or that is covered in poison oak or blackberry) will be given an estimated measurement. The estimated measurement number will be followed by an asterisk (*) indicating it is an approximate estimation.

4. Multi-stem diameter - If the tree has multiple trunks at 4.5 feet, each stem diameter is measured and recorded in the multi-stemmed column on the data table. If the individual stem diameters are simply added together, they produce a total trunk diameter that over-exaggerates the size of the tree compared to a single trunked tree`s size. To correct for this discrepancy the areas of each individual stem are added together and then the square root of that sum produces the total diameter for that tree. For example, take a tree with three individual stems measuring 6, 9, and 15 inches. The areas of those stems are 28.26, 63.585, and 176.625 square inches. They add up to 268.47 square inches. Take the square root of that sum and you get 16.385 inches which gets rounded down to 16 inches. This multi-stemmed tree will have a canopy comparable in size to a single-trunked 16 inch diameter tree.
5. Root protection zone (RPZ) - This measurement was taken by counting the number of approximate three-foot strides that were needed to go from the base of the tree to the farthest branch tip. This is called the root protection zone and it is commonly used for determining tree preservation zones during development.
6. Area of Tree Canopy - The approximate area of the tree canopy is derived from the RPZ radius measurement using the area equation, A = 3.14 x r x r. This measurement is used to calculate the amount of shade provided by each tree.
7. Structure rating - Tree structure describes the physical form of the tree in regard to its potential to fail. Tree structure, from the ground up, includes the roots, trunk, scaffold limbs, and branches of the tree. Five categories are awarded for rating the structure of trees: (5) good, (4) good-fair, (3) fair, (2) fair-poor, and (1) poor. A good rating for structure indicates the tree is well proportioned and very unlikely to have any part fail, such as have a branch or scaffold limb tear off or have the whole tree up-root from the ground. A poor rating would indicate the tree is very likely to have a partial or whole tree

failure. Most trees fall in the fair category. The rating of large trees for hazard potential is often proportionally related to the tree structure rating. Tree structure ratings can often be improved with mitigation, such as structure pruning and end-weight reduction of over-burdened limbs.

8. Health rating - Tree health describes how vigorous the tree appears. Like tree structure, five categories are used to rate tree health: (5) good, (4) good-fair, (3) fair, (2) fair-poor, (1) poor, and (0) dead. A tree with good health would have full foliage for its species and no dead limbs or twigs. A tree with poor health is usually dead or dying. It is often difficult to improve a tree's health rating through mitigation. Usually multiple factors contribute to an unhealthy tree's condition and trees often show no signs of what is stressing them.
9. Overall tree condition - Based on the combination of the structure and health assessment. The county recommends using the following rating system: (0) dead, (1) severe decline, (2) declining, (3) fair, (4) good, and (5) excellent. One flaw to this rating system is that decline is a term related to health. For example, a tree that is splitting at its base (indicating poor structure) but has healthy foliage (indicating good health) cannot receive a rating less than fair for overall tree condition because the tree appears healthy and is not in decline. This report uses (0) dead, (1) poor, (2) fair-poor, (3) fair, (4) good-fair, and (5) good. Trees rated overall as good, good-fair, and fair are considered average or better specimens. Trees rated as fair-poor or poor are considered below average specimens.
10. Dripline environment - Brief description of the growing condition within the root protection zone. Some examples are grass, road, driveway, concrete, poison oak, structure, etc.
11. Prune or remove tree recommendation - Based on the overall tree condition a recommendation was given to either prune the tree or remove the tree. If the tree was

recommended for removal, it was given a brief description for the basis of the recommendation in the General Recommendation column.

12. General recommendations - Any additional pertinent information was listed here including specific observations that influenced the structure and/or health condition ratings and recommendations for pruning or removal.

III. Results

There was a total of 25 trees surveyed for this parcel. 4 of those trees are protected, native trees and included one valley oak (*Quercus lobata*), one interior live oak (*Quercus wizlizenii*), and two coast live oaks (*Quercus* agrifolia). The valley oak is designated as a heritage tree by the County of Sacramento because it has a trunk diameter of 19 inches or greater. The total protected tree diameter inches of the four native trees are 63 inches. The total area of shade provided by the 25 trees surveyed is 20,542 square feet.

IV. Discussion

The survey was conducted on a warm day in the middle of a drought. All the trees on this property look very dry. All trees to be retained on this property would benefit from a deep watering administered once per month in the absence of significant rainfall.

The heritage valley oak (tag # 297) is mostly dead. The green leaves it still exhibits are tiny and clustered in small patches in various spots in the canopy. Upon approaching this tree I had the impression it had been poisoned since I have seen these tiny, clustered leaves before on trees with herbicide poisoning. Upon inspection of the trunk, a drilled hole was observed on the east side of the trunk at ground level. Also at three different spots on the trunk are areas where the bark had been axed away to expose the wood beneath. These four wounds are where I believe an herbicide was administered to kill this tree. See the photos below.

There are 4 small trees on the west side of the existing house that are mostly dead and not included in the tree data because they do not offer any shade. They are only included on the tree map in case they show up on an aerial photo of the property.

See the data table for specific recommendations for each tree.

The following outlines recommendations to minimize impacts to trees not subject to removal as part of the project:

Required Tree Preservation Measures for Protected Trees

Tree Protection Zone (TPZ) – the area around a tree within the outermost circumference of the canopy or as set forth in a tree protection plan.

1) Trees to be preserved within or adjacent to the construction area shall be protected from disturbance prior to and throughout construction by the following methods or as approved by the project arborist:
   a) Placing chain link fencing at the edge of the TPZ. Minimum fencing height is 60 inches.
   b) When the full TPZ cannot be enclosed by chain link fencing, the applicant shall provide protection for the trunk and the soil within then root zone as approved by the project arborist. Accepted practices may be to wrap foam around the trunk and securing 2x4's vertically around all sides in addition to 4-6 inches of wood chip mulch, ¾" plywood, or trench plates on the ground within the TPZ.
2) Protection measures shall remain in place throughout the duration of the project, including landscape installation.
3) Any necessary tree pruning, including pruning for clearance for equipment or for structures shall be supervised or performed by the project arborist who shall be an International Society of Arboriculture (ISA) Certified Arborist or an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist.
4) Excavation, grading, or trenching within the TPZ shall employ one of the following methods: hydro-excavation, pneumatic excavation, or hand digging.
5) Grading operations, including cuts, fills, trenching, or other excavations are not allowed unless separately permitted by the County and supervised by the project arborist.
6) Where grading is necessary within the tree protection zone and permitted, the work shall be done under the supervision of the project arborist with prior approval by the County. In some cases, boring or drilling may be required. Where grading is approved, the natural topography shall remain as undisturbed as possible.

7) Storage of any materials, parking vehicles or equipment, fueling and other actions detrimental to the condition of the tree are not allowed within the TPZ.
8) All trees shall be watered regularly throughout the construction process per the project arborist's recommendations.

V. Conclusion

The condition of all trees was recorded as perceived at the time of the survey and it should be noted that trees can have dramatic changes to their current condition due to many factors, such as drought, vandalism, and failure due to defects not visible to the arborist. For questions regarding this survey please contact Bryan Hill, Certified Arborist WE-5382A, at (916) 718-3021 or upatreearborist@gmail.com

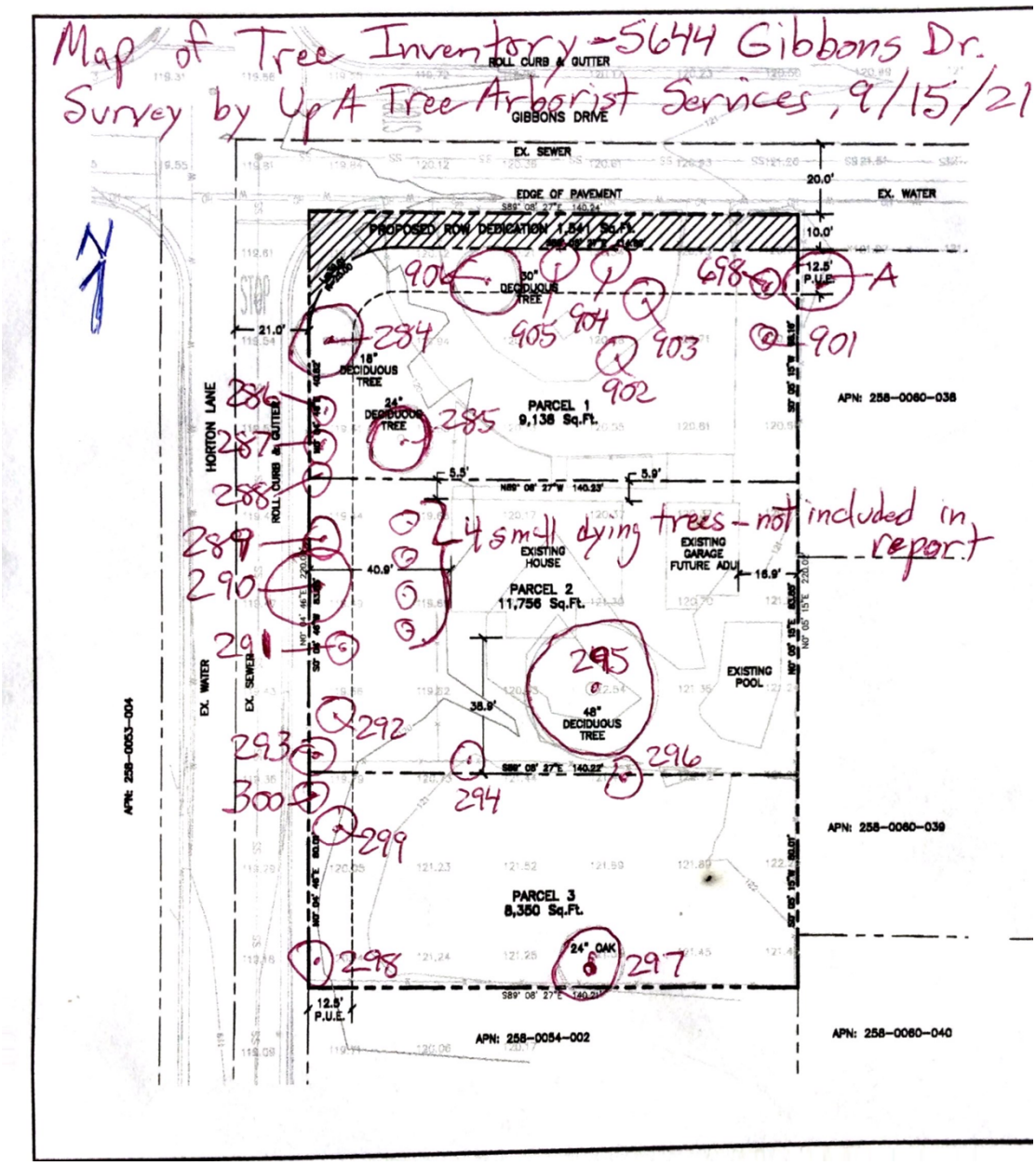
Photos of heritage valley oak (tree# 297)

Photo 1: This tree's canopy is mostly bare except for patchy clusters of shrunken leaves.

Photo 2: Close up of small leaf clusters on twigs of valley oak (tree # 297). These leaves are approximately one-tenth their healthy size.

Photo 3: Hole drilled into the east side of the base of the tree (# 297). The hole is approximately ¾” in diameter.

Photo 4: One of the three areas of bark on tree # 297 that was axed away to expose the wood underneath. These wounds would allow an herbicide to be introduced systemically into the tree's vascular system.



Tree map: All trees locations and canopy size approximated.

La Vista Tank Replacement Tree Data

Tree #	Common Name	*Scientific Name*	Diameter, total inches	Diameter of individual stems, inches	Root Protection Zone (r), ft.	Area of Tree Canopy (A = 3.14r x r), sq. ft.	Tree Structure	Tree Health	Overall Tree Condition	Drip line environment	Preserve or Remove	General Recommendations
284	London plane	*Plantanus x acerifolia*	18	18	18	1017	good-fair	fair-poor	2	grass	Preserve	Tree exhibitimg some limb tip die back. Prune to remove dead limbs.
285	Modesto ash	*Fraxinus velutina 'Modesto'*	23	23	24	1809	fair-poor	fair-poor	2	grass	Preserve or Remove	Tree exhibitimg poor vigor, many dead branches visible
286	Chinese hackberry	*Celtis sinensis*	6	4+3+3+4	12	452	poor	poor	1	grass	Remove	Tree is many stems sprouted from cut stump. Poor vigor observed.
287	Chinese hackberry	*Celtis sinensis*	4	2+2+2+2+2	9	254	poor	poor	1	grass	Remove	Tree is many stems sprouted from cut stump. Poor vigor observed.
288	Bay laurel	Laurus nobilis	2	1+1+1+1+1	3	28	poor	poor	1	grass	Remove	Tree is many stems sprouted from cut stump. Poor vigor observed.
289	Plum	*Prunus spp.*	7	4+3+2+2+2+2+2+3	18	1017	poor	poor	1	grass	Remove	Tree is many stems sprouted from cut stump. Poor vigor observed.

La Vista Tank Replacement Tree Data

Tree #	Common Name	*Scientific Name*	Diameter, total inches	Diameter of individual stems, inches	Root Protection Zone (r), ft.	Area of Tree Canopy (A = 3.14r x r), sq. ft.	Tree Structure	Tree Health	Overall Tree Condition	Drip line environment	Preserve or Remove	General Recommendations
290	Coast live oak	*Quercus agrifolia*	18	10+13+12	21	1385	fair	good-fair	3	grass, asphalt	Preserve	Tree exhibits good vigor. Included bark visible where 3 trunks divide. Recommend prunimg tree to shorten longer limbs.
291	Glossy privet	*Lingustum lucidum*	8	6+4+3+4+1	15	707	poor	poor	1	grass	Remove	Tree is many stems sprouted from cut stump. Poor vigor observed.
292	Silver maplr	*Acer saccharinu m*	7	5+4+2+4	12	452	poor	poor	1	grass	Remove	Tree is many stems sprouted from cut stump. Poor vigor observed.
293	Coast live oak	*Quercus agrifolia*	10	10	18	1017	fair	good-fair	3	grass, asphalt	Preserve	Tree has 30 degree lean towards W. Canopy shows good vigor. Structure prune tree.
294	Plum	*Prunus spp.*	13	11+7+7	18	1017	poor	poor	1	grass	Preserve or Remove	Tree is many stems sprouted from cut stump. Fair vigor observed.

La Vista Tank Replacement Tree Data

Tree #	Common Name	*Scientific Name*	Diameter, total inches	Diameter of individual stems, inches	Root Protection Zone (r), ft.	Area of Tree Canopy (A = 3.14r x r), sq. ft.	Tree Structure	Tree Health	Overall Tree Condition	Drip line environment	Preserve or Remove	General Recommendations
295	Modesto ash	*Fraxinus velutina 'Modesto'*	40	40	36	4069	fair-poor	fair	2	grass, brick, house	Preserve or Remove	Tree has included bark between most scaffold limbs, with pockets of decay visible between the stems. Many long and heavy limbs present. Mistletoe observed. If tree is preserved,.prune tree to shorten longer limbs and remove mistletoe.
296	Glossy privet	*Lingustum lucidum*	7	5+3+3+3+3+3	12	452	poor	poor	1	grass	Remove	Tree is many stems sprouted from cut stump. Poor vigor observed.

La Vista Tank Replacement Tree Data

Tree #	Common Name	*Scientific Name*	Diameter, total inches	Diameter of individual stems, inches	Root Protection Zone (r), ft.	Area of Tree Canopy (A = 3.14r x r), sq. ft.	Tree Structure	Tree Health	Overall Tree Condition	Drip line environment	Preserve or Remove	General Recommendations
297	Valley oak	*Quercus lobata*	21	21	24	1809	fair-poor	poor	1	grass, neighbors house	Remove	Tree has included bark between main scaffold limbs. Tree is mostly dead except for patchy spots of tiny green leaves that are typical of trees with herbicide poisoning. A approximately 3/4" hole has been drilled into the E side of the base of the tree and there are 3 spots observed were the bark has been axed away, most likely where the poison was administered to the tree.
298	Interior live oak	*Quercus wizlizenii*	6	5+5	12	452	fair-poor	good-fair	3	grass	Preserve	Tree has grown through a chainlink fence. Remove ivy.

La Vista Tank Replacement Tree Data

Tree #	Common Name	*Scientific Name*	Diameter, total inches	Diameter of individual stems, inches	Root Protection Zone (r), ft.	Area of Tree Canopy (A = 3.14r x r), sq. ft.	Tree Structure	Tree Health	Overall Tree Condition	Drip line environment	Preserve or Remove	General Recommendations
299	Almond	*Prunus dulcis*	7	7	12	452	fair-poor	fair	3	grass	Preserve or Remove	Tree trunk has 60 degree lean toward SW. Tree vigor is fair. If preserved, prune tree to shorten longer branches.
300	Almond	*Prunus dulcis*	8	8	9	254	fair	poor	0	grass	Remove	Tree has only one slightly living sucker left amd the rest of the tree is dead.
698	Apple	*Malus spp.*	8	7+5	12	452	fair-poor	fair	3	grass	Preserve or Remove	If preserved, prune for apple production.
A	Silver maplr	*Acer saccharinu m*	~18	~18	12	452	fair-poor	poor	1	grass, bare soil	Remove	Neighbors tree to E of property. Tree is > 50 % dead and declinimg.
901	Apple	*Malus spp.*	4	3+3	9	254	fair-poor	fair	3	grass	Preserve or Remove	If preserved, prune for apple production.
902	Italian stone pine	*Pinus pinea*	9	9	15	707	fair	fair	3	grass	Preserve or Remove	Tree trunk has 25 degree lean toward S. Small canopy for trunk diameter indicates lack of vigor.

La Vista Tank Replacement Tree Data

Tree #	Common Name	*Scientific Name*	Diameter, total inches	Diameter of individual stems, inches	Root Protection Zone (r), ft.	Area of Tree Canopy (A = 3.14r x r), sq. ft.	Tree Structure	Tree Health	Overall Tree Condition	Drip line environment	Preserve or Remove	General Recommendations
903	Modesto ash	*Fraxinus velutina 'Modesto'*	22	22	6	113	poor	fair-poor	1	grass	Remove	Tree has been cut down to 5' from the ground. The stump has now sprouted into a small ball of leaves.
904	Crape myrtle	*Lagerstroemia indica*	10	9+3+3+6+4	12	452	fair	fair-poor	2	grass	Preserve or Remove	Tree is lacking vigor.
905	Crape myrtle	*Lagerstroemia indica*	10	9+6+4+3+3	12	452	fair	fair-poor	2	grass	Preserve or Remove	Tree is lacking vigor.
906	Modesto ash	*Fraxinus velutina 'Modesto'*	25	25	18	1017	fair-poor	fair-poor	2	grass	Preserve or Remove	Tree exhibitimg poor vigor, many dead branches visible
				Total area of shade(sq. ft.)		20542						
			~ = approximately									
	Trees in green are heritage oaks = native oaks with a trunk 19” or larger DSH											
	Trees in blue are protected, non-heritage native trees = single trunk 4-18”dsh, multi-trunk 10-18”dsh											
	Trees in white are non-native and not protected trees											
	Total protected tree diameter inches = 63 inches											