

# Tree Management Experts

## Consulting Arborists

3109 Sacramento Street  
San Francisco, CA 94115

Member, American Society of Consulting Arborists  
Certified Arborists, Tree Risk Assessment Qualified

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**Puja Kaul**  
**16 Tuscaloosa Avenue**  
**Atherton, CA 94027**

via email: [pujakaul@gmail.com](mailto:pujakaul@gmail.com)

**RE: 20 Tuscaloosa Avenue**  
**Atherton, CA**

**Date: 11/02/22**

## **ARBORIST REPORT and TREE PROTECTION REPORT**

### **Arborist Report**

- Review pre-existing relevant work product, as provided: Architectural drawings, grading plans, landscape plans, utilities plans, previous Arborist Report, communications between parties, etc.
- Visit the Project Site to verify accuracy of preexisting work product, as related to trees.
- Supplement a site plan to identify each tree and tree protection boundaries.
- Identify potential construction impacts to trees and provide recommendations for modifications and/or mitigation to lessen these impacts.
- Develop tree recommendations for site utilization planning for staging and equipment access.
- Develop tree maintenance recommendations.
- Provide a Tree Protection Plan and Arborist Report to incorporate site assessment findings and tree protection and preservation strategies in accordance with the Town of Atherton-Heritage Tree Preservation Standards and Specifications.

### **Background**

The property at 20 Tuscaloosa Avenue is a single-family residence. The owner is currently conducting renovations to the interior of the house and plans to renovate the landscape on site as well. Plans currently include removing an old shed/garage behind the house and a water feature adjacent to that structure. The owners also wish to install a new tennis court in the backyard. The property has a number of large heritage trees as well as smaller trees.

The following documents were reviewed for this report:

- The site survey dated June 2, 2022, prepared by Lea & Braze Engineering, Inc.

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## Observations

I visited the site on October 23, 2022. I inventoried 52 trees on site and on adjacent properties. 26 of these trees were Heritage trees in accordance with the Town of Atherton Tree Protection Standards. Data on these trees and photos of each tree are appended to this report. The trees were located on a site sketch and later marked on the provided site survey.

## Discussion

### *HERITAGE TREE REMOVALS*

Five Heritage Trees are proposed for removal in our inventory they are designated as Trees 17, 18, 22, 27, and 33.

#### Tree 17

Tree 17 is a valley oak (*Quercus lobata*) with a DBH of 27.2 inches. It is severely one-sided. The tree has been suppressed throughout its growth by Tree 48 on the neighboring property at 16 Tuscaloosa. Its limbs are heavily over-extended. The canopy of the tree is declining and thinning. The risk presented by the tree could be mitigated by carrying out heavy reduction pruning, this would necessitate large diameter pruning cuts. However, with the current health and vigor of the tree, it is unlikely that the tree would be able to recover from these pruning wounds and would continue to decline.

#### Tree 18

Tree 18 is a coast live oak (*Quercus agrifolia*) with a DBH of 16.9 inches. The is generally in good condition. It is crowded by the neighboring trees (19 and 20). The planned tennis court will require the removal of this tree, as the tree lies within the footprint of the planned court. The minimum length of the court is 120 feet. With a 100 foot wide lot, the court must be oriented North-South and only the back yard of the property has space for this. Per the Atherton Heritage Tree Ordinance, the owner is applying to remove this tree as part of Planning Commission Review under Atherton Code 8.10.040.D parts 3, 4 and 6.

Parts 3 and 4 of the code speak to good forestry practices, number of trees, and potential negative effects of removing a Heritage Tree. The current layout has three trees closely spaced with competing canopies. Tree 18 is the smallest of the group (18, 19, & 20). Removing it will provide more space for the other two trees to grow and perform better. There is extensive natural regeneration of native oaks in this area, and small sprouts are present throughout the property. The tree is in the backyard and screened from neighboring properties and its removal will have a negligible effect on shading, noise, wind effects, historic value, scenic beauty, health, safety, etc.

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Part 6 of the code allows for the removal of Heritage Trees “to allow reasonable use or other enjoyment of the property when there is no demonstrated feasible alternative to the Removal”. While a tennis court is not a necessity, the owners purchased this property with the intention of installing such an amenity and as the property has a large number of Heritage Trees that will be preserved, the overall impact on the Urban Forest in Atherton will be negligible. Because of the locations of these other Heritage Trees and the space necessary for building the tennis court, there is no alternate location on site for the court.

### Tree 22

Tree 22 is a coast live oak with a DBH of 22.0 inches. This tree is heavily decayed and could collapse at any time. In particular, the top sides of all the scaffold branches are heavily decayed. Angiosperm trees use tension wood to support themselves, the lack of this wood, means that the tree has very little tissue reinforcing it and could fail unpredictably. Because the decay is so advanced, there is no pruning or cabling option that would reinforce the tree. We recommend it be removed as hazard tree.

### Tree 27

Tree 27 is a Canary Island pine (*Pinus canariensis*) with a DBH of 30.7 inches. This tree was topped or lost its top at some point in the past. This has resulted in it having two large scaffold branches growing from its top almost horizontally. These branches are very overextended and one shows a large longitudinal crack likely as a result of excessive end-weight. Because the tree is so disfigured and is in the process of actively failing, we recommend it be removed as a priority hazard removal.

### Tree 33

Tree 33 is a Peruvian pepper (*Schinus molle*) with a DBH of 24.9 inches. This tree is heavily decayed and leaning toward the street. While it is not large enough to strike the pavement, it is growing through the pole-to-pole communication lines running streetside and could strike parked cars. There is no effective mitigation to preserve the tree. It should be removed.-

## GENERAL TREE PROTECTION NOTES

Planned landscaping will encompass most of the yard. The Town of Atherton defines the Tree Protection Zone (TPZ) for construction, grading, trenching and other such soil disturbances to extend in radius ten (10) times the diameter of a heritage tree from the base of that tree. The TPZ for landscaping is a radius three (3) times the diameter of each heritage tree. In addition, no irrigation is allowed within the 10x TPZ of native oaks, as they are predisposed to root rot if their roots are exposed to excess moisture, especially during warm summer months.

These TPZ specifications are listed numerically in the attached data table and graphically in the marked-up site survey. As the exact extent of activities on site are not clear at this time,

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it is for the contractors to determine which TPZ must be used. This report is preliminary and will be revised as the design is refined.

Pruning specifications for trees where appropriate to improve tree health and meet management objectives have been included in the data and should be carried out in accordance with the ANSI A300 Part 3 (Pruning) standards.

This report in its entirety shall be tiled into a plan sheet and shall be a part of the construction drawings for this project.

Tree Management Experts shall be the Project Arborists for this Project.

### Primary Contact:

Aaron Wang  
Certified Arborist MW-5597A  
847.630.3599  
[aaron@treemanagementexperts.com](mailto:aaron@treemanagementexperts.com)

### Alternate Contact:

Roy Leggitt  
Certified Arborist WE-0564A  
415.606.3610  
[roy@treemanagementexperts.com](mailto:roy@treemanagementexperts.com)

## Appraisal

The heritage trees on site were appraised using the Reproduction Method: Trunk Formula Technique from the Guide to Plant Appraisal (10<sup>th</sup> ed.). As no damage has occur yet, only the depreciated reproduction cost for each tree was used to determine the appraised value, as not damage has yet occurred. Removal/treatment costs were not included, as there is no way to determine the needed mitigation until damage has occurred. These costs would be included in an appraisal should a tree suffer damage and that damage required mitigation.

The results of this appraisal are attached to this report.



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## **Tree Protection**

### **Construction Procedures**

#### *DEMOLITION*

All tree protective fencing, root buffers, and mulch must be in place prior to demolition. Refer to specific sections below for proper installation of each of these items.

At no time is any wheeled or tracked equipment (including wheelbarrows) or an excavator allowed to enter or cross over TPZ areas, except where a temporary root buffer has been installed. Use of a tracked Bobcat® or similar loader may be used within TPZ areas only on required root buffers, within the footprint of existing structures, or when the Project Arborist is on site to determine appropriate access points and to monitor soil and root conditions.

#### *PATHWAY/PATIO CONSTRUCTION*

Because proposed pathways and patios pass through TPZ areas, any clearing of organic material from the surface, placement of base rock and forming activities for pathways must be done by hand and under the direction of the Project Arborist. The subgrade should not be compacted in any way within the TPZ areas and grading should be limited to not more than 6 inches of either fill or cut.

#### *STAGING AREAS*

Staging areas are available outside of TPZ areas throughout the site. Storing and staging within TPZ areas can only be done on top of a required root buffer and with proper trunk protection, as specified in this report.

#### *BACKFILL AND FILL SOIL*

Within TPZ areas, all backfill and fill soil shall be comprised of clean native topsoil. Soil must be placed without tamping, vibration, rolling, saturating or otherwise causing compaction that exceeds 85 percent. No fill soil movement or placement may be done during wet soil conditions. Do not place, store or stage any fill soil within TPZ areas, except where backfilling against the construction perimeter.

### **Tree Protection Measures**

#### *Tree Protection Implementation Methods*

To implement tree protection measures effectively, precise measurement for fence locations is critical. Proper skills and equipment are required to place fences where they belong. Measurement of distances must be to within 6 inches, and cannot be completed properly by

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using either estimated or “paced off” distances. Required equipment will include an appropriate Engineer’s scale and either a laser range finder or a 100-foot tape measure with a helper.

It is recommended that fence posts be installed first. Measure each Tree Protection Zone (TPZ), scaling distances off the Site Plans and marking the TPZ locations with marking paint. Similarly, where root buffers are to be installed, measure the precise location of the footings, scaling distances off the Site Plans and marking the footing locations with marking paint. Measure fence locations at the appropriate distance away from each footing.

Fence boundaries must meet, match and enclose areas defined by existing sidewalk surfaces and property line fences. The exact location of existing sidewalks and fences is not known and must be determined in the field.

Surface installations such as root buffers, irrigation and mulch must be installed in appropriate locations between areas identified by fence posts.

Following surface installations, chain link fencing must be strung tightly and closed off at all locations, including where abutting existing wooden fences.

### Tree Protection Measures for All Areas

#### **TREE PROTECTIVE FENCING AND WARNING SIGNS**

Placement: fence installation lines shall enclose the area defined by the driplines of significant and heritage trees to remain during construction.

Type and Size: 6-foot high chain link fencing shall be placed on 2 inch tubular galvanized iron posts driven a minimum of 2 feet into undisturbed soil and spaced not more than 10 feet on center.

Duration: Tree fencing shall be erected prior to any demolition activity, and shall remain in place for the duration of the project, except where a gap is needed for access to the detached garage.

‘Warning’ Signs: ‘Warning’ signs shall posted on each side of each Tree Protective Fencing and not more than every 20 linear feet-use the attached warning sign at the end of this document.

#### **TRUNK WRAP**

Where root buffers are installed in lieu of Tree Protective Fencing, the trunks of significant and heritage trees shall be protected with one of the following methods:

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Option 1: Planking: The trunk should be wrapped with a minimum of 4 layers of orange plastic snow fencing, then a layer of 2X4 planks set on end, edge-to-edge and wrapped with a minimum of 4 additional layers of orange plastic snow fencing. Do not nail the planks to the trunk.

Option 2: Straw wattle wrap: This method may be easier to install on multi-trunk trees. Wrap the lower 6 feet of the trunk with straw wattles and secure with a layer of orange plastic snow fencing.

Option 3: Plywood box wrap: This method may be easier to install on multi-trunk trees. Build a box out of ½ inch plywood screwed together with 2 x 4 bracing. Place blocking between the plywood box and the trunk to prevent movement, cushioning the blocking with a strip of carpet or ½ inch thick cloth layer.

### *MULCH*

Placement: All areas enclosed by Tree Protective Fencing shall have a 4 to 6-inch deep layer of mulch applied, leaving a 12-inch distance around each tree trunk free of mulch.

Type and Size: Mulch material shall be 2-inch unpainted, untreated wood chip mulch or an approved equal.

Duration: Mulch shall be placed in all designated areas prior to any demolition or construction activity.

### *ROOT BUFFER*

Placement: A temporary protective Root Buffer must be installed before any driving, storing or staging takes place within any TPZ areas.

Type and Size: The Root Buffer shall consist of a base course of tree chips spread over each designated area to a minimum depth of 6 inches. In some cases it may further stabilize the tree chips to place a cap of a base course of 3/4-inch quarry gravel. The root buffer must be covered with a 3/4-inch or thicker layer of plywood. Additional wood chips may be added periodically upon the recommendation of the Project Arborist following monthly inspections.

Duration: All Root Buffers shall remain in place for the duration of the project.

## Construction Impact Mitigation

### *GRADE CHANGES*

Grading changes shall not exceed 6 inches of depth in cuts, or 6 inches of depth in fill where such grade changes are within Tree Protection Zones.

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### UTILITY TRENCHING

If any utility trenches must be excavated through any TPZ area, either directional boring or Air-spade® (or equivalent) excavation is required.

### IRRIGATION TRENCHING

If any irrigation trenches must be excavated through any TPZ area, either hand-digging, directional boring or Air-spade® (or equivalent) excavation is required. If directional boring is to be used it must adhere to the below schedule:

Tree Diameter (dbh) (centered on trunk)	Minimum offset distance	Minimum length of bore hole
15 inches	12 feet	15 feet
20 inches	15 feet	20 feet
25 inches	18 feet	25 feet

## Prohibited Activities

Activities prohibited within the TPZ:

1. Storage or parking vehicles, building materials, refuse, excavated spoils or dumping of poisonous materials, including but not limited to, paint, petroleum products, concrete, stucco mix, dirty water, swimming pool and/or spa water, trailer, container boxes, clean up areas, debris boxes, building materials, Trenching, grade changes, tree houses, and Soil Compaction.
2. The use of tree trunks as a winch support, anchorage, as a temporary power pole, signposts or other similar function.
3. Cutting of tree roots by utility Trenching, foundation digging, placement of curbs and trenches and other miscellaneous excavation.
4. Landscaping and irrigation improvements, unless approved in accordance with Section 2.2.D below.
5. Soil disturbance, Soil Compaction or grade changes.
6. Drainage changes, including swimming pool, spa, and/or water features discharge.
7. Any other activities which cause Disturbance and/or Damage to Heritage trees as defined in Section 1.9 and or as specified in Atherton Municipal Code Section 8.10.020.

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## Landscaping

### *TREE PROTECTION ZONES*

TPZ areas for landscaping extend in a radius 3x the diameter of each heritage tree. No activities beyond those specifically delineated in this report are permitted in this TPZ.

Planting of small plants may occur within the 3x TPZ under the condition that all work be conducted carefully using hand tools and no tree roots be severed.

### *IRRIGATION*

No irrigation is allowed within the 10x TPZ of any heritage native oak tree, as marked on the marked-up site survey. No irrigation trenching shall pass within the 3x TPZ of any heritage tree. Irrigation within this area must be surface mounted. Irrigation trenching shall either be hand-dug, directionally bored, or air-spade excavated.

If sub-surface trenches must be installed, common trenches should be used and they should stay as far away from the trees as possible. A trench running along a radius line directly toward a tree is preferable to a cross trench.

Landscape construction plans are subject to review and comment by the Project Arborist. If extensive trenching is required, Air-spade® excavation may be required.

Care must be taken to keep mulch away from the base of all trees and other woody plants. Similarly, soil grades must be carefully monitored to keep excess soil from accumulating around the base of trees and shrubs.

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## Maintenance and Ongoing Care

Tree maintenance and ongoing care is necessary in preparation for construction, and throughout the entire timeline for construction. Anticipated needs include pruning and tree protection during landscape construction:

### *PRUNING*

Pruning shall be done by a Certified Arborist in accordance with the current ANSI A300 Pruning Standards and International Society of Arboriculture (ISA) Best Management Practices.

Pruning shall be in accordance with that outlined in the data table.

### *DUST CONTROL*

During periods of extended drought, or grading, spray trunk, limbs, and foliage to remove accumulated construction dust.

### *IRRIGATION*

At this point due to the health of the trees on site and the prevalence of native oaks, supplemental irrigation will only be recommended on an as needed basis for trees that show signs of construction related decline. In addition, summer irrigation of native oaks can predispose them to sudden oak death and fungal infections and should not occur under any circumstances.

In cases where irrigation is deemed necessary it shall consist of 1 time per month during the irrigation season (usually March through September, depending on precipitation) in the amount of 10 gallons per inch of trunk diameter to be evenly applied within the dripline.



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### SOIL COMPACTION DAMAGE

Compaction of the soil is significantly detrimental to the long-term viability of Heritage trees on construction sites due to suffocation of roots. If compaction to the upper 12-inch soil within the TPZ has occurred, then one or more of the following mitigation measures shall be implemented as recommended by the Project Arborist and/or the Town Arborist.

#### a. Type 1 Mitigation

If an approved paving, hardscape or other compromising material encroaches within the TPZ, an aeration system shall be designed by a Certified Arborist and used within this area.

#### b. Type 11 Mitigation

If inadvertent compaction of the soil has occurred within the TPZ, the soil shall be loosened by a method approved by the Town Arborist, such as Vertical Mulching or Soil Fracturing.

## Reporting

Any Disturbance and/or Damage or Injury to Heritage trees, whether accidental or otherwise, as verified by the Town Arborist, shall be reported within 6-hours to the Project Arborist and Town Arborist so that mitigation can take place. An Arborist Report shall be required and shall include, but not be limited to, the Disturbance and/or Damage that occurred and identified mitigation. All Injury to branches, trunk or to roots over 2-inches in diameter shall be reported in the Monthly Inspection Report. Any Trenching work 10 x the diameter of the Heritage tree is required to be reported in the monthly arborist report.

### Arborist Report and Appraised Value

An Arborist Report including the Appraised Value of the tree shall be submitted to the Town Arborist. If a Heritage tree is Damaged, a Certified Arborist shall determine the Appraised Value of the Heritage tree. The formula used should also be noted. Refer to Section 1.1.



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### Mitigation

Mitigation for Disturbance and/or Damage or Injury to Heritage trees will be directed and performed under the Project Arborist's supervision.

Typical mitigation efforts for Disturbance and/or Damage may include, but not be limited to, the following:

a. Root injury

If trenches are cut and Heritage tree roots 2-inches or larger are encountered they shall be cleanly cut back to a sound wood lateral root under the supervision of the Project Arborist. The end of the severed root shall be sealed and kept moist. All exposed root areas within the TPZ shall be backfilled or covered within one hour. Exposed roots shall be kept from drying out by temporarily covering the roots and draping layered burlap or carpeting over the upper 3-feet of trench walls. The materials shall be kept wet until backfilled to reduce evaporation from the trench walls.

b. Bark or trunk wounding

Current bark tracing and treatment methods shall be performed by a qualified tree care specialist within two days.

c. Scaffold branch or leaf canopy injury

Remove broken or torn branches back to an appropriate branch capable of resuming terminal growth within five days. If leaves are heat scorched from equipment exhaust pipes, the Project Arborist shall be informed within 6 hours.

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### K. Inspection Schedule

The Project Arborist shall conduct the following required inspections of construction sites containing protected Heritage trees. Inspections shall verify implementation of the approved Tree Protection and Preservation Plan as defined in Section 1.28.

#### 1. Pre -Construction Meeting

Prior to commencement of construction, the applicant or contractor shall conduct a pre-construction meeting to discuss Heritage tree protection and the tree preservation and protections standards and specifications of this document with the job site superintendent, grading equipment operators, Project Arborist, and Town Arborist.

#### 2. Inspection of Protective Tree Fencing

Prior to issuance of a demolition, grading, or building permit, the Project Arborist shall provide the Town Arborist with a written statement verifying that the Project Arborist has conducted a field inspection of the Heritage trees and that the protective tree fencing, and signage is in place.

#### 3. Inspection of Rough Grading

The Project Arborist shall perform an inspection during the course of rough grading adjacent to the TPZ to ensure Heritage trees will not be Injured by compaction, cut or fill, drainage and Trenching, and if required, inspect aeration systems, tree wells, drains and special paving. The contractor shall provide the Project Arborist at least 48 hours advance notice of such activity.

#### 4. Monthly Inspections

The Project Arborist shall perform monthly inspections to monitor changing conditions and Heritage tree health and submit a written report to the Town Arborist, referring to this document by the 15<sup>th</sup> of every month on a form as prescribed by the Town Arborist. If the 15<sup>th</sup> falls on a weekend or holiday, the form shall be submitted on the next working business day. Submission shall be by email to the Town Arborist.

#### 5. Landscape Phase

Heritage tree protection fencing is required to remain in place during the landscape phase of each project. No Trenching for irrigation or plantings shall occur within the TPZ of Heritage trees. No irrigation should be installed within the TPZ of a Heritage Oak tree.

#### 6. Removal of Heritage Tree protection fencing

To request removal of the fencing a report from the Project Arborist is required to be sent to the Town Arborist stating that all work is complete, and no additional use of equipment or Trenching will occur on site.

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## Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. Title and ownership of all property considered are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
2. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes or other governmental regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible. The consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
4. Various diagrams, sketches and photographs in this report are intended as visual aids and are not to scale, unless specifically stated as such on the drawing. These communication tools in no way substitute for nor should be construed as surveys, architectural or engineering drawings.
5. Loss or alteration of any part of this report invalidates the entire report.
6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior written or verbal consent of the consultant.
7. This report is confidential and to be distributed only to the individual or entity to whom it is addressed. Any or all of the contents of this report may be conveyed to another party only with the express prior written or verbal consent of the consultant. Such limitations apply to the original report, a copy, facsimile, scanned image or digital version thereof.
8. This report represents the opinion of the consultant. In no way is the consultant's fee contingent upon a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
9. The consultant shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule, an agreement or a contract.
10. Information contained in this report reflects observations made only to those items described and only reflects the condition of those items at the time of the site visit. Furthermore, the inspection is limited to visual examination of items and elements at the site, unless expressly stated otherwise. There is no expressed or implied warranty or guarantee that problems or deficiencies of the plants or property inspected may not arise in the future.

## Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

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Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. An arborist cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate the trees.

### Certification of Performance

I, Aaron Wang, Certify:

- That we have inspected the trees and/or property evaluated in this report. We have stated findings accurately, insofar as the limitations of the Assignment and within the extent and context identified by this report;
- That we have no current or prospective interest in the vegetation or any real estate that is the subject of this report, and have no personal interest or bias with respect to the parties involved;
- That the analysis, opinions and conclusions stated herein are original and are based on current scientific procedures and facts and according to commonly accepted arboricultural practices;
- That no significant professional assistance was provided, except as indicated by the inclusion of another professional report within this report;
- That compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party.

I am a member and Certified Arborist with the International Society of Arboriculture.

I have attained professional training in all areas of knowledge asserted through this report by completion of a Bachelor of Science degree in Forestry and Natural Resources, by routinely attending pertinent professional conferences and by reading current research from professional journals, books and other media.

I have rendered professional services in a full-time capacity in the field of horticulture and arboriculture for more than 8 years.

*Signed:*

Certified Arborist MW-5597A

*Date:* 11/2/2022

Contact:

Aaron Wang

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20 Tuscaloosa  
Tree Data

Identifying Information									Defects										Recommendations						Tree Protection Radii					Notes				
Tree #	Botanic Name	Common Name	DBH (in)	Regulatory Diameter (in)	Height (ft)	Spread (ft)	Heritage Tree	On Neighboring Property	Condition	Codominant Stems	One-Sided Lean	Declining/Thinning Canopy	Suppressed	Crowded	Low Live Crown Ratio	Buried Root Collar	Included Bark	Basal Scar/Decay	Topped	Weak Attachments	Remove	End-Weight Reduction	Crown Clean	Structural Train/Prune	Balance	Brace	Cable	Root Collar Excavation	10x TPZ Radius (ft)		8x TPZ Radius (ft)	6x TPZ Radius (ft)	5x TPZ Radius (ft)	3x TPZ Radius (ft)
1	Quercus agrifolia	coast live oak	11.8, 10.6, 9.0	21.6	20	35	X		Fair	X	X	X										X	X						18' 0"	14' 5"	10' 10"	9' 0"	5' 5"	
2	Quercus agrifolia	coast live oak	8.0	8.0	15	10			Poor		X		X									X							6' 8"	5' 4"	4' 0"	3' 4"	2' 0"	
3	Quercus lobata	valley oak	4.4	4.4	10	10			Poor		X		X									X							3' 8"	2' 11"	2' 2"	1' 10"	1' 1"	
4	Pinus canariensis	Canary Island pine	50.0	50.0	120	60	X		Fair											X		X	X						41' 8"	33' 4"	25' 0"	20' 10"	12' 6"	
5	Quercus agrifolia	coast live oak	9.2	9.2	15	15			Fair	X			X			X	X						X	X			X		7' 8"	6' 2"	4' 7"	3' 10"	2' 4"	
6	Quercus agrifolia	coast live oak	6.4	6.4	20	10			Poor				X									X							5' 4"	4' 3"	3' 2"	2' 8"	1' 7"	
7	Quercus agrifolia	coast live oak	6.5, 2.3	7.7	20	10			Poor				X									X							6' 5"	5' 2"	3' 10"	3' 3"	1' 11"	
8	Quercus agrifolia	coast live oak	5.6	5.6	20	10			Poor				X									X							4' 8"	3' 9"	2' 10"	2' 4"	1' 5"	
9	Quercus agrifolia	coast live oak	11.3	11.3	25	20			Fair		X												X		X				9' 5"	7' 6"	5' 8"	4' 9"	2' 10"	
10	Juglans hindsii	N. Cal. black walnut	13.4	13.4	30	20			Poor						X							X							11' 2"	8' 11"	6' 8"	5' 7"	3' 4"	cabled to tree 11
11	Quercus agrifolia	coast live oak	13.9	13.9	25	20			Fair		X												X						11' 7"	9' 3"	6' 11"	5' 10"	3' 6"	cabled to tree 10, leaning on AC power drop
12	Umbellularia californica	California bay laurel	22.4	22.4	40	25	X		Fair		X	X											X		X				18' 8"	14' 11"	11' 2"	9' 4"	5' 7"	
13	Quercus agrifolia	coast live oak	13.1	13.1	35	25			Fair	X						X							X	X			X	10' 11"	8' 9"	6' 7"	5' 6"	3' 3"		
14	Quercus agrifolia	coast live oak	27.6	27.6	35	40	X		Fair	X	X					X	X					X	X	X	X	X	X	23' 0"	18' 5"	13' 10"	11' 6"	6' 11"	major bark inclusions, install bracing rod(s)	
15	Quercus agrifolia	coast live oak	12.7	12.7	25	20			Good	X							X					X							10' 7"	8' 6"	6' 4"	5' 4"	3' 2"	
16	Quercus agrifolia	coast live oak	32.7	32.7	40	60	X		Good														X	X			X	27' 3"	21' 10"	16' 4"	13' 8"	8' 2"	concrete around base	
17	Quercus lobata	valley oak	27.2	27.2	20	40	X		Very Poor			X	X									X	X	X					22' 8"	18' 2"	13' 7"	11' 4"	6' 10"	if retained, safety prune with CC/EWR
18	Quercus agrifolia	coast live oak	16.9	16.9	30	25	X		Fair					X		X						X							14' 1"	11' 3"	8' 5"	7' 1"	4' 3"	Conflict with planned tennis court
19	Quercus agrifolia	coast live oak	25.0	25.0	40	50	X		Good													X	X	X					20' 10"	16' 8"	12' 6"	10' 5"	6' 3"	crossing/rubbing branches with tree 20
20	Quercus agrifolia	coast live oak	18.1	18.1	25	30	X		Fair		X		X									X	X	X					15' 1"	12' 1"	9' 1"	7' 7"	4' 6"	crossing/rubbing branches with tree 20
21	Cotoneaster spp.	cotoneaster	8.0	8.0	20	20			Very Poor									X	X		X								6' 8"	5' 4"	4' 0"	3' 4"	2' 0"	
22	Quercus agrifolia	coast live oak	22.0	22.0	30	30	X		Very Poor		X	X								X	X								18' 4"	14' 8"	11' 0"	9' 2"	5' 6"	major decay, aloft hazard tree
23	Quercus agrifolia	coast live oak	13.0	13.0	20	20			Poor	X	X	X										X							10' 10"	8' 8"	6' 6"	5' 5"	3' 3"	chained to tree 24

20 Tuscaloosa  
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Identifying Information										Defects										Recommendations						Tree Protection Radii					Notes				
Tree #	Botanic Name	Common Name	DBH (in)	Regulatory Diameter (in)	Height (ft)	Spread (ft)	Heritage Tree	On Neighboring Property	Condition	Codominant Stems	One-Sided	Lean	Declining/Thinning Canop	Suppressed	Crowded	Low Live Crown Ratio	Buried Root Collar	Included Bark	Basal Scar/Decay	Topped	Weak Attachments	Remove	End-Weight Reduction	Crown Clean	Structural Train/Prune	Balance	Brace	Cable	Root Collar Excavation	10x TPZ Radius (ft)		8x TPZ Radius (ft)	6x TPZ Radius (ft)	5x TPZ Radius (ft)	3x TPZ Radius (ft)
24	<i>Prunus</i> sp.	plum	5.9, 3.4	7.6	15	10			Very Poor				X								X		X							6' 4"	5' 1"	3' 10"	3' 2"	1' 11"	chained to tree 23, disfigured
25	<i>Prunus serrulata</i> 'Kanzan'	Kwanzan cherry	6.7, 4.7	9.1	10	10			Fair														X	X	X					7' 7"	6' 1"	4' 7"	3' 10"	2' 3"	
26	<i>Quercus agrifolia</i>	coast live oak	~16	16.0	30	30	X	X	Good		X	X																		13' 4"	10' 8"	8' 0"	6' 8"	4' 0"	
27	<i>Pinus canariensis</i>	Canary Island pine	30.7	30.7	70	60	X		Very Poor											X		X								25' 7"	20' 6"	15' 4"	12' 9"	7' 8"	hazard beam aloft in main scaffold
28	<i>Calocedrus decurrens</i>	incense-cedar	23.3	23.3	70	40	X		Fair	X													X	X			X			19' 5"	15' 6"	11' 8"	9' 9"	5' 10"	
29	<i>Quercus agrifolia</i>	coast live oak	7.0	7.0	15	15			Fair		X			X									X							5' 10"	4' 8"	3' 6"	2' 11"	1' 9"	
30	<i>Sequoia sempervirens</i>	coast redwood	37.8	37.8	110	50	X		Good															X						31' 6"	25' 2"	18' 11"	15' 9"	9' 5"	
31	<i>Quercus agrifolia</i>	coast live oak	13.6	13.6	30	30			Fair		X	X											X							11' 4"	9' 1"	6' 10"	5' 8"	3' 5"	
32	<i>Quercus agrifolia</i>	coast live oak	13.6	13.6	30	30			Poor				X	X									X							11' 4"	9' 1"	6' 10"	5' 8"	3' 5"	borer damage heavily decayed, tangled in comm lines
33	<i>Schinus molle</i>	Peruvian pepper	24.9	24.9	20	25	X		Very Poor		X	X	X										X							20' 9"	16' 7"	12' 5"	10' 5"	6' 3"	
34	<i>Quercus agrifolia</i>	coast live oak	16.3	16.3	25	20	X		Good															X	X					13' 7"	10' 10"	8' 2"	6' 10"	4' 1"	
35	<i>Quercus agrifolia</i>	coast live oak	8.1	8.1	15	10			Fair		X			X									X							6' 9"	5' 5"	4' 1"	3' 5"	2' 0"	
36	<i>Quercus agrifolia</i>	coast live oak	9.7	9.7	20	20			Good																X	X				8' 1"	6' 6"	4' 10"	4' 1"	2' 5"	
37	<i>Quercus agrifolia</i>	coast live oak	4.9	4.9	10	10			Poor		X			X									X							4' 1"	3' 3"	2' 5"	2' 0"	1' 3"	
38	<i>Robinia pseudoacacia</i>	black locust	9.9, 9.8	14.8	30	20			Very Poor				X			X							X							12' 4"	9' 10"	7' 5"	6' 2"	3' 8"	almost dead
39	<i>Quercus agrifolia</i>	coast live oak	7.2	7.2	30	10			Fair						X										X					6' 0"	4' 10"	3' 7"	3' 0"	1' 10"	
40	<i>Quercus agrifolia</i>	coast live oak	14.8	14.8	20	30			Fair															X	X					12' 4"	9' 10"	7' 5"	6' 2"	3' 8"	utility topped, train away from lines
41	<i>Quercus agrifolia</i>	coast live oak	~8	8.0	20	20		X	Good		X																			6' 8"	5' 4"	4' 0"	3' 4"	2' 0"	
42	<i>Quercus agrifolia</i>	coast live oak	~26	26.0	30	40	X	X	Fair		X													X						21' 8"	17' 4"	13' 0"	10' 10"	6' 6"	crown clean over 20 Tuscaloosa
43	<i>Quercus agrifolia</i>	coast live oak	~7	7.0	15	10		X	Good																					5' 10"	4' 8"	3' 6"	2' 11"	1' 9"	
44	<i>Quercus lobata</i>	valley oak	~40	40.0	50	50	X	X	Fair				X						X											33' 4"	26' 8"	20' 0"	16' 8"	10' 0"	major wound/dead bark on underside of tree
45	<i>Sequoia sempervirens</i>	coast redwood	~18	18.0	80	30	X	X	Good																					15' 0"	12' 0"	9' 0"	7' 6"	4' 6"	
46	<i>Quercus agrifolia</i>	coast live oak	~30	30.0	50	50	X	X	Fair															X						25' 0"	20' 0"	15' 0"	12' 6"	7' 6"	crown clean over 20 Tuscaloosa



20 Tuscaloosa  
Tree Data

Identifying Information										Defects										Recommendations						Tree Protection Radii									
Tree #	Botanic Name	Common Name	DBH (in)	Regulatory Diameter (in)	Height (ft)	Spread (ft)	Heritage Tree	On Neighboring Property	Condition	Codominant Stems	One-Sided	Lean	Declining/Thinning Canop	Suppressed	Crowded	Low Live Crown Ratio	Buried Root Collar	Included Bark	Basal Scar/Decay	Topped	Weak Attachments	Remove	End-Weight Reduction	Crown Clean	Structural Train/Prune	Balance	Brace	Cable	Root Collar Excavation	10x TPZ Radius (ft)	8x TPZ Radius (ft)	6x TPZ Radius (ft)	5x TPZ Radius (ft)	3x TPZ Radius (ft)	Notes
47	Quercus agrifolia	coast live oak	~20	20.0	60	30	X	X	Fair														X							16' 8"	13' 4"	10' 0"	8' 4"	5' 0"	remove overextended branch over 20 Tuscaloosa
48	Quercus lobata	valley oak	29.9	29.9	50	45	X	X	Good													X	X							24' 11"	19' 11"	14' 11"	12' 6"	7' 6"	
49	Sequoia sempervirens	coast redwood	54.9	54.9	100	45	X	X	Good															X						45' 9"	36' 7"	27' 5"	22' 11"	13' 9"	
50	Sequoia sempervirens	coast redwood	36.0	36.0	70	40	X	X	Fair															X						30' 0"	24' 0"	18' 0"	15' 0"	9' 0"	
51	Sequoia sempervirens	coast redwood	28.1	28.1	110	40	X	X	Fair															X						23' 5"	18' 9"	14' 1"	11' 9"	7' 0"	
52	Cedrus deodara	cedar	36.1	36.1	90	40	X	X	Fair	X													X	X						30' 1"	24' 1"	18' 1"	15' 0"	9' 0"	



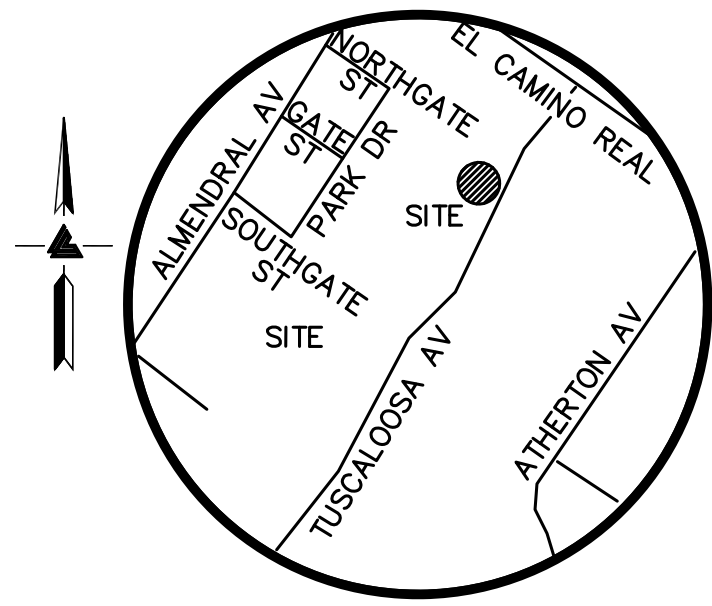
20 Tuscaloosa  
Tree Appraisals

Tree #	Trunk Area (sq in)	Condition	Functional Limitation	External Limitations	N CA Group #	Replacement Diameter (in)	Replacement Trunk Area	Replacement Cost	Unit Tree Cost	Basic Cost	Depreciated Cost	Replacement Tree Install	Aftercare	Total Additional Costs	Total Costs (Appraised Value)
1	366.44	60%	60%	40%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 38,096.10	\$ 5,485.84	\$175.00	\$250.00	\$425.00	\$ 5,900.00
2	50.27	40%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 5,225.80	\$ 1,128.77	\$175.00	\$250.00	\$425.00	\$ 1,600.00
3	15.21	40%	60%	90%	2	1.69	2.24	\$395.00	\$ 176.18	\$ 2,678.86	\$ 578.63	\$175.00	\$250.00	\$425.00	\$ 1,000.00
4	1963.50	60%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$204,132.89	\$ 66,139.06	\$175.00	\$250.00	\$425.00	\$67,000.00
5	66.48	60%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 6,911.12	\$ 1,741.60	\$175.00	\$250.00	\$425.00	\$ 2,200.00
6	32.17	40%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 3,344.51	\$ 722.41	\$175.00	\$250.00	\$425.00	\$ 1,150.00
7	46.57	40%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 4,841.22	\$ 1,045.70	\$175.00	\$250.00	\$425.00	\$ 1,500.00
8	24.63	40%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 2,560.64	\$ 553.10	\$175.00	\$250.00	\$425.00	\$ 980.00
9	100.29	60%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 10,426.29	\$ 3,378.12	\$175.00	\$250.00	\$425.00	\$ 3,800.00
10	141.03	40%	60%	90%	2	1.69	2.24	\$395.00	\$ 176.18	\$ 24,845.89	\$ 5,366.71	\$175.00	\$250.00	\$425.00	\$ 5,800.00
11	151.75	60%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 15,776.21	\$ 5,111.49	\$175.00	\$250.00	\$425.00	\$ 5,500.00
12	394.08	60%	60%	70%	2	1.69	2.24	\$395.00	\$ 176.18	\$ 69,429.01	\$ 17,496.11	\$175.00	\$250.00	\$425.00	\$18,000.00
13	134.78	60%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 14,012.50	\$ 4,540.05	\$175.00	\$250.00	\$425.00	\$ 5,000.00
14	598.29	60%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 62,200.11	\$ 15,674.43	\$175.00	\$250.00	\$425.00	\$16,000.00
15	126.68	80%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 13,169.84	\$ 5,689.37	\$175.00	\$250.00	\$425.00	\$ 6,100.00
16	839.82	80%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 87,310.90	\$ 29,336.46	\$175.00	\$250.00	\$425.00	\$30,000.00
17	581.07	20%	60%	70%	2	1.69	2.24	\$395.00	\$ 176.18	\$102,372.36	\$ 8,599.28	\$175.00	\$250.00	\$425.00	\$ 9,000.00
18	224.32	60%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 23,320.96	\$ 5,876.88	\$175.00	\$250.00	\$425.00	\$ 6,300.00
19	490.88	80%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 51,033.22	\$ 17,147.16	\$175.00	\$250.00	\$425.00	\$18,000.00
20	257.30	40%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 26,750.39	\$ 4,494.07	\$175.00	\$250.00	\$425.00	\$ 4,900.00
21	50.27	20%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 5,225.80	\$ 438.97	\$175.00	\$250.00	\$425.00	\$ 860.00
22	380.13	20%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 39,520.13	\$ 3,319.69	\$175.00	\$250.00	\$425.00	\$ 3,700.00
23	132.73	40%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 13,799.38	\$ 2,980.67	\$175.00	\$250.00	\$425.00	\$ 3,400.00
24	45.36	20%	60%	70%	2	1.69	2.24	\$395.00	\$ 176.18	\$ 7,992.31	\$ 671.35	\$175.00	\$250.00	\$425.00	\$ 1,100.00
25	65.04	60%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 6,761.70	\$ 2,190.79	\$175.00	\$250.00	\$425.00	\$ 2,600.00
26	201.06	80%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 20,903.21	\$ 7,023.48	\$175.00	\$250.00	\$425.00	\$ 7,400.00
27	740.23	20%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 76,957.28	\$ 6,464.41	\$175.00	\$250.00	\$425.00	\$ 6,900.00
28	426.39	60%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 44,328.68	\$ 11,170.83	\$175.00	\$250.00	\$425.00	\$12,000.00

20 Tuscaloosa  
Tree Appraisals

Tree #	Trunk Area (sq in)	Condition	Functional Limitation	External Limitations	N CA Group #	Replacement Diameter (in)	Replacement Trunk Area	Replacement Cost	Unit Tree Cost	Basic Cost	Depreciated Cost	Replacement Tree Install	Aftercare	Total Additional Costs	Total Costs (Appraised Value)
29	38.48	60%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 4,001.00	\$ 1,296.33	\$175.00	\$250.00	\$425.00	\$ 1,700.00
30	1122.21	80%	60%	70%	4	2.46	4.75	\$395.00	\$ 83.15	\$ 93,310.76	\$ 31,352.41	\$175.00	\$250.00	\$425.00	\$32,000.00
31	145.27	60%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 15,102.57	\$ 4,893.23	\$175.00	\$250.00	\$425.00	\$ 5,300.00
32	145.27	40%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 15,102.57	\$ 3,262.15	\$175.00	\$250.00	\$425.00	\$ 3,700.00
33	486.96	20%	60%	50%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 50,625.77	\$ 3,037.55	\$175.00	\$250.00	\$425.00	\$ 3,500.00
34	208.67	80%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 21,694.43	\$ 7,289.33	\$175.00	\$250.00	\$425.00	\$ 7,700.00
35	51.53	60%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 5,357.26	\$ 1,735.75	\$175.00	\$250.00	\$425.00	\$ 2,200.00
36	73.90	80%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 7,682.75	\$ 3,318.95	\$175.00	\$250.00	\$425.00	\$ 3,700.00
37	18.86	40%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 1,960.49	\$ 423.47	\$175.00	\$250.00	\$425.00	\$ 850.00
38	172.03	20%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 17,885.31	\$ 1,931.61	\$175.00	\$250.00	\$425.00	\$ 2,400.00
39	40.72	60%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 4,232.90	\$ 1,371.46	\$175.00	\$250.00	\$425.00	\$ 1,800.00
40	172.03	60%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 17,885.31	\$ 5,794.84	\$175.00	\$250.00	\$425.00	\$ 6,200.00
41	50.27	80%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 5,225.80	\$ 2,257.55	\$175.00	\$250.00	\$425.00	\$ 2,700.00
42	530.93	60%	60%	50%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 55,197.53	\$ 9,935.56	\$175.00	\$250.00	\$425.00	\$10,400.00
43	38.48	80%	60%	90%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 4,001.00	\$ 1,728.43	\$175.00	\$250.00	\$425.00	\$ 2,200.00
44	1256.64	60%	60%	70%	2	1.69	2.24	\$395.00	\$ 176.18	\$221,393.52	\$ 55,791.17	\$175.00	\$250.00	\$425.00	\$56,000.00
45	254.47	80%	60%	70%	4	2.46	4.75	\$395.00	\$ 83.15	\$ 21,158.90	\$ 7,109.39	\$175.00	\$250.00	\$425.00	\$ 7,500.00
46	706.86	60%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 73,487.84	\$ 18,518.94	\$175.00	\$250.00	\$425.00	\$19,000.00
47	314.16	60%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$ 32,661.26	\$ 8,230.64	\$175.00	\$250.00	\$425.00	\$ 8,700.00
48	702.16	80%	60%	70%	2	1.69	2.24	\$395.00	\$ 176.18	\$123,705.01	\$ 41,564.88	\$175.00	\$250.00	\$425.00	\$42,000.00
49	2367.20	80%	60%	70%	4	2.46	4.75	\$395.00	\$ 83.15	\$196,830.69	\$ 66,135.11	\$175.00	\$250.00	\$425.00	\$67,000.00
50	1017.88	60%	60%	70%	4	2.46	4.75	\$395.00	\$ 83.15	\$ 84,635.61	\$ 21,328.17	\$175.00	\$250.00	\$425.00	\$22,000.00
51	620.16	60%	60%	70%	4	2.46	4.75	\$395.00	\$ 83.15	\$ 51,565.68	\$ 12,994.55	\$175.00	\$250.00	\$425.00	\$13,000.00
52	1023.54	60%	60%	70%	3	2.20	3.80	\$395.00	\$ 103.96	\$106,411.21	\$ 26,815.62	\$175.00	\$250.00	\$425.00	\$27,000.00





VICINITY MAP  
NO SCALE

## NOTES

ALL DISTANCES AND DIMENSIONS ARE IN FEET AND DECIMALS.

BUILDING FOOTPRINTS ARE SHOWN TO FINISHED MATERIAL (STUCCO/SIDING) AT GROUND LEVEL.

FINISH FLOOR ELEVATIONS ARE TAKEN AT DOOR THRESHOLD (EXTERIOR).

THE AREA OF THE SURVEYED LOT IS 35,175± SQUARE FEET / 0.80± ACRES

## EASEMENT NOTE

A CURRENT TITLE REPORT FOR THE SUBJECT PROPERTY HAS NOT BEEN EXAMINED BY LEA & BRAZE ENGINEERING, INC. EASEMENTS OF RECORD MAY EXIST THAT ARE NOT SHOWN ON THIS MAP.

## UTILITY NOTE

ALL UNDERGROUND PIPE TYPES, SIZES AND LOCATION SHOWN ON THIS SURVEY ARE BASED ON VISUAL OBSERVATION. ANY USE OF THIS INFORMATION SHOULD BE VERIFIED, BEFORE ITS USE, WITH THE CONTROLLING MUNICIPALITY OR UTILITY PROVIDER. THIS SURVEY MAKES NO GUARANTEE OF THE INSTALLED ACTUAL LOCATION, DEPTHS OR SIZE.

## TREE NOTE

TREE SIZE, TYPE AND DRIPLINES ARE BASED ON A VISUAL OBSERVATION. FINAL DETERMINATION SHOULD BE MADE BY THE PROJECT ARBORIST.

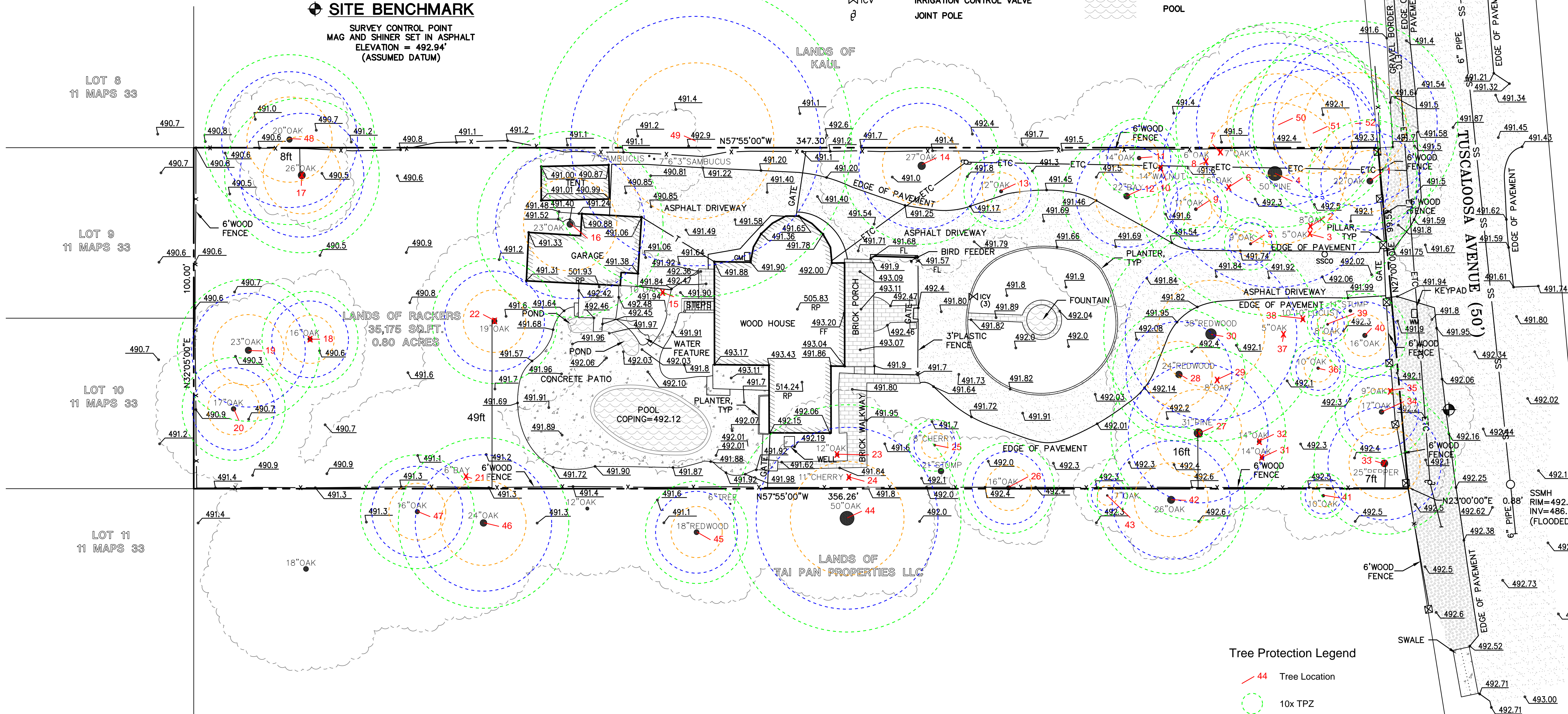
## LEGEND AND NOTES

---	BOUNDARY LINE
---	ETC
T	ELECTRICAL/TELEPHONE/ CABLE TV OVERHEAD LINE
---	TELEPHONE OVERHEAD LINE
x	FENCE LINE
---	FLOW LINE
SS	SANITARY SEWER LINE
---	STORM DRAIN LINE
FF	BENCHMARK
FF	FINISH FLOOR
FL	FIRE HYDRANT
GM	FLOW LINE
INV	GAS METER
ICV	INVERT
ICV	IRRIGATION CONTROL VALVE
JP	JOINT POLE

⊠	PILLAR, OR SIMILAR
RP	ROOF PEAK
SSCO	SANITARY SEWER CLEAN-OUT
SSMH	SANITARY SEWER MAINTENANCE HOLE
WM	WATER METER
XXX.XX	SPOTGRADE
	ASPHALT
	BRICK
	CONCRETE
	GRAVEL
	POOL

## SITE BENCHMARK

SURVEY CONTROL POINT  
MAG AND SHINER SET IN ASPHALT  
ELEVATION = 492.94'  
(ASSUMED DATUM)

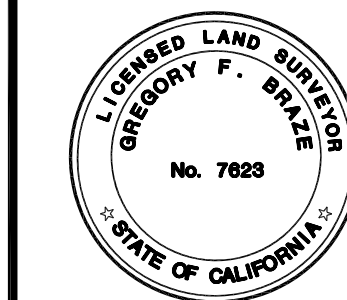
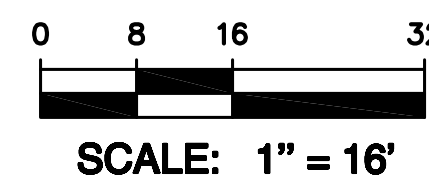


### Tree Protection Legend

- 44 Tree Location
- 10x TPZ
- 8x TPZ
- 5x TPZ
- x Tree Removal

### Tree Management Experts Consulting Arborists

Certified Arborists, Certified Tree Risk Assessors  
Contractor's License No. 885953, D-40 Tree Service  
(415) 606-3610 Roy@treemanagementexperts.com



**LEA & BRAZE ENGINEERING, INC.**  
CIVIL ENGINEERS & LAND SURVEYORS  
REGIONAL OFFICES:  
MAIN OFFICE: 2495 INDUSTRIAL PKWY WEST  
HAYWARD, CALIFORNIA 94545  
(510) 887-4086  
WWW.LEABRAZE.COM

20 TUSCALOOSA AVENUE  
ATHERTON  
CALIFORNIA

TOPOGRAPHIC SURVEY

REVISIONS	BY
JOB NO: 2220657	
DATE: 6-2-22	
SCALE: 1"=16'	
BNDR BY: MT	
FIELD BY: DR	
DRAWN BY: ZB	
SHEET NO:	

**SU1**





01.jpg





02,03.jpg





04,52.jpg





05.jpg





06,07,08,09.jpg





10.jpg





11.jpg





12.jpg





13.jpg





14.jpg





15.jpg





16.jpg





17,48.jpg





18.jpg





19.jpg





20-1.jpg





20-2.jpg





21.jpg





22-1.jpg





22-2.jpg





22-3.jpg





22-4.jpg





23,24.jpg





25.jpg





26.jpg





27.jpg





28,30.jpg





29.jpg





31,32.jpg





33-1.jpg





33-2.jpg





33-3.jpg





34,35,36.jpg





37.jpg





38.jpg





39.jpg









41.jpg





42.jpg





43.jpg





45.jpg





46.jpg





47.jpg





49.jpg





50,51.jpg