

May 5, 2021

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Summary

The project consists of constructing a second story with no expansion into the landscape where the trees are located. There are four trees with trunks greater than four inches which consist of one crape myrtle (*Lagerstroemia indica*) (#159), walnut (*Juglans nigra*) (#160), and two Japanese maples (*Acer palmatum*) (#431 and #432) adjacent to the house. In addition to the four around the house there are thirteen additional trees around the pool and none are Exempt or Large Protected. The crape myrtle is in good condition while the walnut is in poor shape and both Japanese maples are in good condition. No trees are expected to be impacted by this proposed project with the exception of a some clearance pruning on the maples. The project does not encroach into the root zones. For this project the tree protection fence should be placed around the front trees at a radius of 10 feet (six times the trunk diameter of the walnut). The maples will require pruning but there is hard-scape around them where the roots would not be impacted.

Assignment, Limits, Purpose and Use

- Provide an arborist's report including an assessment of the trees within the project area and on the adjacent sites. The assessment is to include the species, size (trunk diameter), condition (health, structure, and form), and suitability for preservation ratings. Affix number tags on the trees for reference on site and on plans.
- Provide tree protection specifications, guidelines, and impact ratings for those affected by the project.
- Provide appraised values using the Trunk Formula Technique.
- The information in this report is limited to the condition of the trees during my inspection on April 20, 2021. No tree risk assessments were performed.
- Tree heights and canopy diameters are estimates.
- The plans reviewed for this assignment are as follows: Site Plan A-2, A-4, A-5, and A-6 provided by Steve Benzing Architect March 8, 2021.



Observations

The inventory consists of trees protected by the Town of Los Gatos located on site and those in close proximity on neighboring properties. Sec. 29.10.0960. - Scope of protected trees. All trees which have a four-inch or greater diameter (twelve and one half-inch circumference) of any trunk, when removal relates to any review for which zoning approval or subdivision approval is required. Los Gatos Town Ordinance 29.10.0970 Exceptions (1) states the following: “A fruit or nut tree that is less than eighteen (18) inches in diameter (fifty-seven-inch circumference).

There are 17 trees comprised of 6 different species with no Large Protected and none Exempt (Table 1). The trees were inventoried clockwise around the back yard and pool area but not placed on the plans.

Table 1: Tree Inventory

Tree Species	I.D. Number	Trunk Diameter (in.)	~ Height (ft.)	~ Canopy Diameter (ft.)
crape myrtle (<i>Lagerstoemia indica</i>)	159	9	15	15
black walnut (<i>Juglans nigra</i>)	160	21.5	20	15
Japanese maple (<i>Acer palmatum</i>)	431	6	15	15
Japanese maple (<i>Acer palmatum</i>)	432	Multi 6	15	15
Italian cypress (<i>Cupressus sempervirens</i>)	433	5	25	3
Queen palm (<i>Syagrus romanzoffiana</i>)	434	11	25	12
Italian cypress (<i>Cupressus sempervirens</i>)	435	5	25	3
Italian cypress (<i>Cupressus sempervirens</i>)	436	3	25	3
Queen palm (<i>Syagrus romanzoffiana</i>)	437	9	25	12
Italian cypress (<i>Cupressus sempervirens</i>)	438	3	25	3
coast redwood (<i>Sequoia sempervirens</i>)	439	38	75	35
coast redwood (<i>Sequoia sempervirens</i>)	440	32	75	35
coast redwood (<i>Sequoia sempervirens</i>)	441	26	75	35
Queen palm (<i>Syagrus romanzoffiana</i>)	442	9, 12, 14	25	20
Queen palm (<i>Syagrus romanzoffiana</i>)	443	9, 9, 8	25	20
Italian cypress (<i>Cupressus sempervirens</i>)	444	6	25	3
Italian cypress (<i>Cupressus sempervirens</i>)	445	5, 4	25	3



Proposed site plan and four tree locations adjacent to house (Image 2).

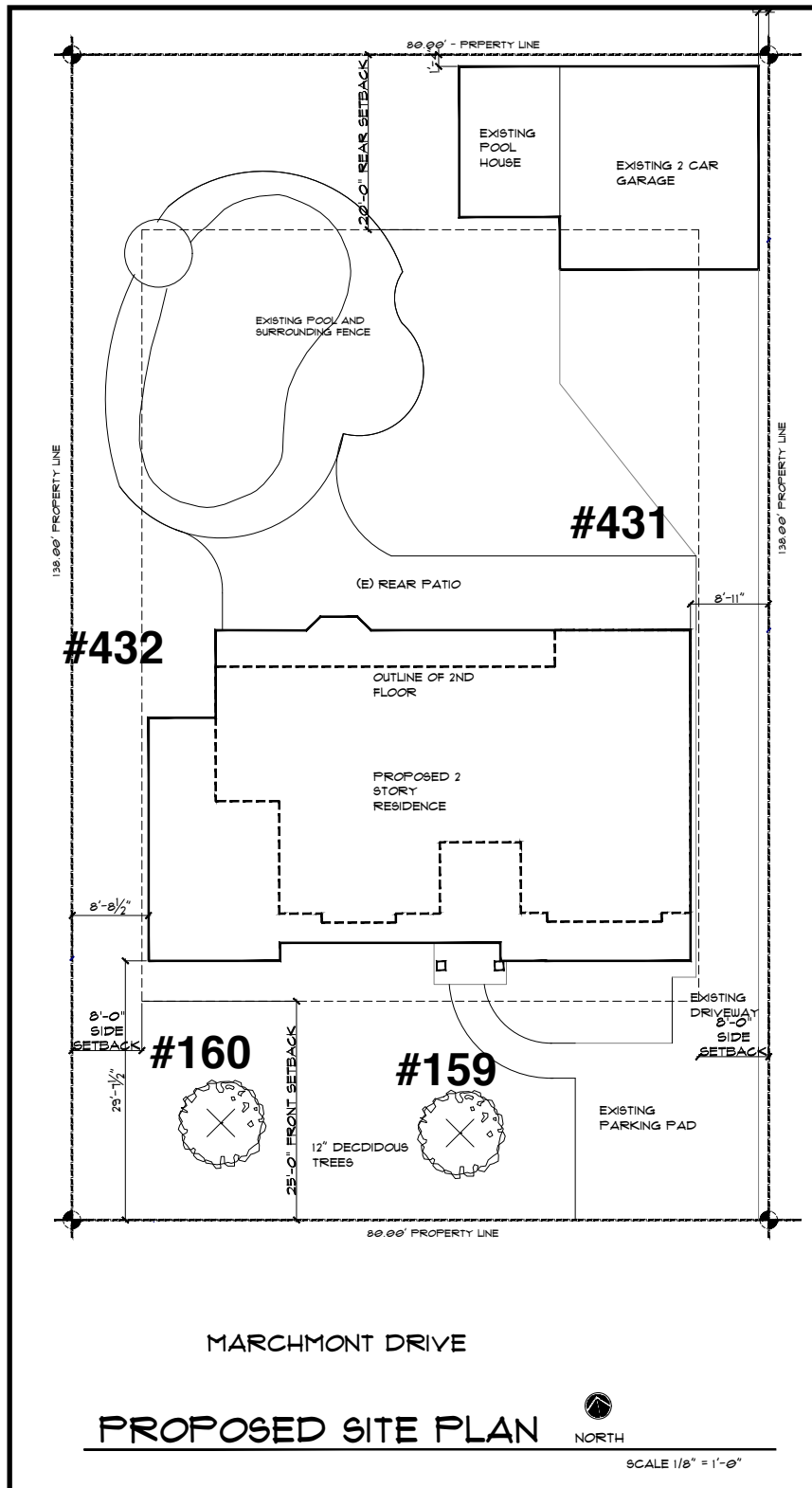


IMAGE 2: TREE LOCATIONS AND PROPOSED SITE PLAN



Analysis

Tree appraisal was performed according to the Council of Tree & Landscape Appraisers *Guide for Plant Appraisal 10th Edition, 2019* (CLTA) along with Western Chapter International Society of Arboriculture *Species Classification and Group Assignment, 2004*. The trees were appraised using the “Cost Approach” and more specifically the “Trunk Formula Technique” (Appendix B).

“Trunk Formula Technique” is calculated as follows: Basic Tree Cost = (Unit tree cost x Appraised trunk area), Appraised Value = (Basic tree cost X functional Limitations (percentage) X Condition (percentage) X External Limitations (percentage)).

The trunk formula valuations are based on four tree factors; size (trunk cross sectional area), condition, functional limitations, and external limitations. There are two steps to determine the overall value. The first step is to determine the “Basic Tree Cost” based on size and unit tree cost. Unit tree cost is calculated by dividing the nursery wholesale cost of a 24 inch box specimen and its replacement size (cost per square inch trunk caliper) which is determined by the *Species Classification and Group Assignment, 2004 Western Chapter Regional Supplement*. The cost of the 24 inch box wholesale specimen was determined through personal communications with BrightView and Normans nurseries in Farmington and Central Wholesale in San Jose for an average of \$214.00.

The second part is to depreciate the tree’s Basic Cost through an assessment of condition, functional limitations, and external limitations. The condition assessment guidelines and percentages are defined in the “Condition Rating” section of this report. Functional limitations are based on factors associated with the tree’s interaction to its planting site that would affect condition, limit development, or reduce the utility in the future and include genetics, placement, and site conditions for the individual tree. External limitations are outside the property, out of control of the owner and also affect condition, limit development, or reduce the utility in the future (i.e power lines, municipal restrictions, drought adaptations, or species susceptibility to pests).

Seventeen trees were appraised for a depreciated value of \$41,930.00 using the Trunk Formula Technique.



Discussion

A tree's condition is a determination of its overall health, structure, and form. The assessment considered all three criteria for a combined condition rating.

- 100% - Exceptional = Good health and structure with significant size, location or quality.
- 61-80% - Good = Normal vigor, well-developed structure, function and aesthetics not compromised with good longevity for the site.
- 41-60 % - Fair = Reduced vigor, damage, dieback, or pest problems, at least one significant structural problem or multiple moderate defects requiring treatment. Major asymmetry or deviation from the species normal habit, function and aesthetics compromised.
- 21-40% - Poor = Unhealthy and declining appearance with poor vigor, abnormal foliar color, size or density with potential irreversible decline. One serious structural defect or multiple significant defects that cannot be corrected and failure may occur at any time. Significant asymmetry and compromised aesthetics and intended use.
- 6-20% - Very Poor = Poor vigor and dying with little foliage in irreversible decline. Severe defects with the likelihood of failure being probable or imminent. Aesthetically poor with little or no function in the landscape.
- 0-5% - Dead/Unstable = Dead or imminently ready to fail.

The crape myrtle and Japanese maples are young small trees in good condition while the walnut is a remnant orchard tree in poor shape. The remaining trees in back around the pool are all in good condition.

Impact level defines how a tree may be affected by construction activity and proximity to the tree, and is described as low, moderate, or high. The following scale defines the impact rating:

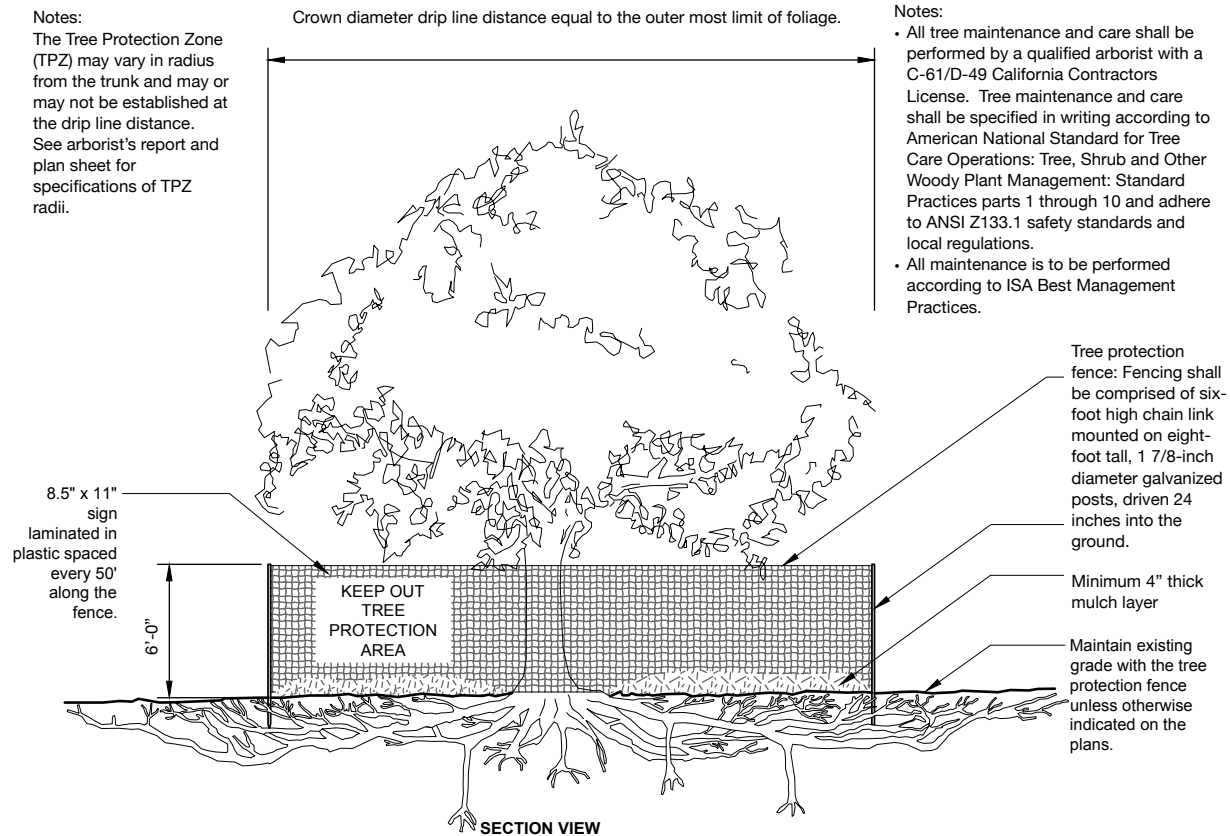
- Low = The construction activity will have little influence on the tree.
- Moderate = The construction may cause future health or structural problems, and steps must be taken to protect the tree to reduce future problems.
- High = Tree structure and health will be compromised and removal is recommended, or other actions must be taken for the tree to remain. The tree is located in the building envelope.

None of the trees are expected to be impacted by this proposed project. The project does not encroach into the root zones, which results in a rating of low. The two maples may require some clearance pruning but would only be impacted aesthetically.



Typically there are three different tree protection schemes which are called Type I Type II and Type III trunk protection only. Tree protection focuses on avoiding damage to the roots, trunk, or scaffold branches. The most current accepted method for determining the TPZ is to use a formula based on species tolerance, tree age/vigor, and trunk diameter (Matheny, N. and Clark, J. 1998) (Fite, K, and Smiley, E. T., 2016). Preventing mechanical damage to the trunk from equipment or hand tools can be accomplished by wrapping the main stem with straw wattle or using vertical timbers.

For this project the tree protection fence should be placed around the crape myrtle and walnut at a radius of 10 feet enclosed as a group.



TREE PROTECTION

URBAN TREE FOUNDATION © 2014
OPEN SOURCE FREE TO USE
Modified by Monarch Consulting
Arborists LLC, 2019



Conclusion

The project consists of constructing a second story with no expansion into the landscape where the trees are located. There are 17 trees comprised of 6 different species with no Large Protected and none Exempt. The crape myrtle and Japanese maples are young small trees in good condition while the walnut is a remnant orchard tree in poor shape. The remaining trees in back around the pool are all in good condition. None of the trees are expected to be impacted by this proposed project. The project does not encroach into the root zones, which results in a rating of low. The two maples may require some clearance pruning but would only be impacted aesthetically. For this project the tree protection fence should be placed around the crape myrtle and walnut at a radius of 10 feet enclosed as a group. Tree pruning should be performed according to the *ISA Best Management Practices: Pruning (Third Edition)* (2019) and specified in writing by the tree care contractor in accordance with ANSI A300 Part 1 (2017).

Recommendations

1. Place tree numbers and tree protection fence locations and guidelines on the plans including the grading, drainage, and utility plans to create the required T-1 Sheet.
2. Place tree protection fence around the crape myrtle and walnut to be retained in front of the site. Fence should be at a radius of ten feet and enclose both trees. Place temporary irrigation within the tree protection zone or maintain the current watering scheme.
3. All tree maintenance and care shall be performed by a qualified arborist with a C-61/D-49 California Contractors License. Tree maintenance and care shall be specified in writing according to American National Standard for Tree Care Operations: *Tree, Shrub and Other Woody Plant Management: Standard Practices* parts 1 through 10 and adhere to ANSI Z133.1 safety standards and local regulations. All maintenance is to be performed according to ISA Best Management Practices.
4. Provide a copy of this report to all contractors and project managers, including the architect, civil engineer, and landscape designer or architect. It is the responsibility of the owner to ensure all parties are familiar with this document.
5. Arrange a pre-construction meeting with the project arborist or landscape architect to verify tree protection is in place, with the correct materials, and at the proper distances.



Appendix A: Tree Protection Guidelines

Section 29.10.1005. - Protection of Trees During Construction

Tree Protection Zones and Fence Specifications

1. **Size and materials:** Six (6) foot high chain link fencing, mounted on two-inch diameter galvanized iron posts, shall be driven into the ground to a depth of at least two (2) feet at no more than ten-foot spacing. For paving area that will not be demolished and when stipulated in a tree preservation plan, posts may be supported by a concrete base.
2. **Area type to be fenced:** Type I: Enclosure with chain link fencing of either the entire dripline area or at the tree protection zone (TPZ), when specified by a certified or consulting arborist. Type II: Enclosure for street trees located in a planter strip: chain link fence around the entire planter strip to the outer branches. Type III: Protection for a tree located in a small planter cutout only (such as downtown): orange plastic fencing shall be wrapped around the trunk from the ground to the first branch with two-inch wooden boards bound securely on the outside. Caution shall be used to avoid damaging any bark or branches.
3. **Duration of Type I, II, III fencing:** Fencing shall be erected before demolition, grading or construction permits are issued and remain in place until the work is completed. Contractor shall first obtain the approval of the project arborist on record prior to removing a tree protection fence.
4. **Warning Sign:** Each tree fence shall have prominently displayed an eight and one-half-inch by eleven-inch sign stating: "Warning—Tree Protection Zone—This fence shall not be removed and is subject to penalty according to Town Code 29.10.1025." Text on the signs should be in both English and Spanish (Appendix E).



All persons, shall comply with the following precautions

1. Prior to the commencement of construction, install the fence at the dripline, or tree protection zone (TPZ) when specified in an approved arborist report, around any tree and/or vegetation to be retained which could be affected by the construction and prohibit any storage of construction materials or other materials, equipment cleaning, or parking of vehicles within the TPZ. The dripline shall not be altered in any way so as to increase the encroachment of the construction.
2. Prohibit all construction activities within the TPZ, including but not limited to: excavation, grading, drainage and leveling within the dripline of the tree unless approved by the Director.
3. Prohibit disposal or depositing of oil, gasoline, chemicals or other harmful materials within the dripline of or in drainage channels, swales or areas that may lead to the dripline of a protected tree.
4. Prohibit the attachment of wires, signs or ropes to any protected tree.
5. Design utility services and irrigation lines to be located outside of the dripline when feasible.
6. Retain the services of a certified or consulting arborist who shall serve as the project arborist for periodic monitoring of the project site and the health of those trees to be preserved. The project arborist shall be present whenever activities occur which may pose a potential threat to the health of the trees to be preserved and shall document all site visits.
7. The Director and project arborist shall be notified of any damage that occurs to a protected tree during construction so that proper treatment may be administered.

Prohibited Activities

The following are prohibited activities within the TPZ:

- Grade changes (e.g. soil cuts, fills);
- Trenches;
- Root cuts;
- Pedestrian and equipment traffic that could compact the soil or physically damage roots;
- Parking vehicles or equipment;
- Burning of brush and woody debris;
- Storing soil, construction materials, petroleum products, water, or building refuse; and,
- Disposing of wash water, fuel or other potentially damaging liquids.



Monitoring

Any trenching, construction or demolition that is expected to damage or encounter tree roots should be monitored by the project arborist or a qualified ISA Certified Arborist and should be documented.

The site should be evaluated by the project arborist or a qualified ISA Certified Arborist after construction is complete, and any necessary remedial work that needs to be performed should be noted.

Root Pruning

Roots greater than two inches in diameter shall not be cut. When roots over two inches in diameter are encountered and are authorized to be cut or removed, they should be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. Roots should be cut beyond sinker roots or outside root branch junctions and be supervised by the project arborist. When completed, exposed roots should be kept moist with burlap or backfilled within one hour.

Boring or Tunneling

Boring machines should be set up outside the drip line or established Tree Protection Zone. Boring may also be performed by digging a trench on both sides of the tree until roots one inch in diameter are encountered and then hand dug or excavated with an Air Spade® or similar air or water excavation tool. Bore holes should be adjacent to the trunk and never go directly under the main stem to avoid oblique (heart) roots. Bore holes should be a minimum of three feet deep.

Tree Pruning and Removal Operations

All tree pruning or removals should be performed by a qualified arborist with a C-61/D-49 California Contractors License. Treatment, including pruning, shall be specified in writing according to the most recent ANSI A-300A Standards and Limitations and performed according to ISA Best Management Practices while adhering to ANSI Z133.1 safety standards. Trees that need to be removed or pruned should be identified in the pre-construction walk through.



Warning

Tree Protection Zone

**This Fence Shall Not Be Removed
And Is Subject To Penalty According To
Town Code 29.10.1025**

Cuidado

Zona De Arbol Pretejido

**Esta valla no podrán ser sacados
Y está sujeta a sanción en función de
Código Ciudad del 29.101025**



Appendix B: Assessment Summary Table

No trees will be highly impacted or caused to be removed, none are Large Protected or Exempt.

Table 2: Summary Table

Tree Species	Number	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Value
crape myrtle (<i>Lagerstoemia indica</i>)	159	9	15	Good	\$1,140.00
black walnut (<i>Juglans nigra</i>)	160	21.5	15	Poor	\$2,790.00
Japanese maple (<i>Acer palmatum</i>)	431	6	15	Good	\$470.00
Japanese maple (<i>Acer palmatum</i>)	432	Multi 6	15	Good	\$2,650.00
Italian cypress (<i>Cupressus sempervirens</i>)	433	5	3	Good	\$190.00
Queen palm (<i>Syagrus romanzoffiana</i>)	434	11	12	Good	\$940.00
Italian cypress (<i>Cupressus sempervirens</i>)	435	5	3	Good	\$190.00
Italian cypress (<i>Cupressus sempervirens</i>)	436	3	3	Good	\$70.00
Queen palm (<i>Syagrus romanzoffiana</i>)	437	9	12	Good	\$630.00
Italian cypress (<i>Cupressus sempervirens</i>)	438	3	3	Good	\$70.00
coast redwood (<i>Sequoia sempervirens</i>)	439	38	35	Good	\$12,500.00
coast redwood (<i>Sequoia sempervirens</i>)	440	32	35	Good	\$8,900.00
coast redwood (<i>Sequoia sempervirens</i>)	441	26	35	Good	\$5,900.00
Queen palm (<i>Syagrus romanzoffiana</i>)	442	9, 12, 14	20	Good	\$3,090.00
Queen palm (<i>Syagrus romanzoffiana</i>)	443	9, 9, 8	20	Good	\$1,740.00
Italian cypress (<i>Cupressus sempervirens</i>)	444	6	3	Good	\$280.00
Italian cypress (<i>Cupressus sempervirens</i>)	445	5, 4	3	Good	\$380.00



Qualifications, Assumptions, and Limiting Conditions

Any legal description provided to the consultant is assumed to be correct. Any titles or ownership of properties are assumed to be good and marketable. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

All property is presumed to be in conformance with applicable codes, ordinances, statutes, or other regulations.

Care has been taken to obtain information from reliable sources. However, the consultant cannot be responsible for the accuracy of information provided by others.

The consultant shall not be required to give testimony or attend meetings, hearings, conferences, mediations, arbitration, or trials by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

This report and any appraisal value expressed herein represent the opinion of the consultant, and the consultant's fee is not contingent upon the reporting of a specified appraisal value, a stipulated result, or the occurrence of a subsequent event.

Sketches, drawings, and photographs in this report are intended for use as visual aids, are not necessarily to scale, and should not be construed as engineering or architectural reports or surveys. The reproduction of information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is only for coordination and ease of reference. Inclusion of said information with any drawings or other documents does not constitute a representation as to the sufficiency or accuracy of said information.

Unless otherwise expressed: a) this report covers only examined items and their condition at the time of inspection; and b) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that structural problems or deficiencies of plants or property may not arise in the future.



Certification of Performance

I Richard Gessner, Certify:

That I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation and/or appraisal is stated in the attached report and Terms of Assignment;

That I have no current or prospective interest in the vegetation or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;

That the analysis, opinions and conclusions stated herein are my own;

That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted Arboricultural practices;

That no one provided significant professional assistance to the consultant, except as indicated within the report.

That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any other subsequent events;

I further certify that I am a Registered Consulting Arborist® with the American Society of Consulting Arborists, and that I acknowledge, accept and adhere to the ASCA Standards of Professional Practice. I am an International Society of Arboriculture Board Certified Master Arborist® and Tree Risk Assessor Qualified. I have been involved with the practice of Arboriculture and the care and study of trees since 1998.

Richard J. Gessner



ASCA Registered Consulting Arborist® #496
ISA Board Certified Master Arborist® WE-4341B
ISA Tree Risk Assessor Qualified



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