Tree Inventory, Assessment, and Protection Report

16405 Kennedy Road
Los Gatos, CA 95032

Prepared for:

Town of Los Gatos

November 19, 2024
Revised December 3, 2024

Prepared By:

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EXHIBIT 4

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Summary

The applicant is requesting approval for construction of a new single-family residence, and site work requiring a grading permit on vacant property zoned R-1:10. APN 532-15-036. Categorically Exempt Pursuant to the California Environmental Quality Act, Section 15303: New Construction or Conversion of Small Structures.

The inventory contains fourteen trees (14) trees comprised of two (2) different species (coast live oak and London plane. There are four (4) Large Protected trees and none are Exempt or Street Trees. Five trees are in good condition, five fair, one poor, and three are in very poor shape. Trees #662, #667, and #669 are all in “very poor” condition.

Seven (7) trees will be highly impacted and caused to be removed although the plans only indicate two.

Tree protection will focus on the area around the adjacent tree #657 which will need all the space between the neighbor fence and the proposed construction (about 14 feet). This area will need to be fenced off. Tree #670 is near some construction and the sewer but the tree is containerized similar to #665. #665 will require trunk protection along with #666.

The applicant will be required to replace seven protected trees and possibly eight. There were fourteen (14) protected trees appraised for a rounded depreciated value of $97,220.00.

Introduction

Background

The Town of Los Gatos asked me to assess the site, trees, and proposed footprint plan, and to provide a report with my findings and recommendations to help satisfy planning requirements.

Assignment

- 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.

Limits of the assignment

- The information in this report is limited to the condition of the trees during my inspection on November 6, 2024. No tree risk assessments were performed.
- Tree heights and canopy diameters are estimates.

- The plans reviewed for this assignment were as follows (Table 1).

Table 1: Plans Reviewed Checklist

Plan	Date	Sheet	Reviewed	Source
Existing Site Topographic	September 2024	1 of 2	Yes	Westfall Engineers
Proposed Site Plan	10/04/2024	C1	Yes	THIS Design
Erosion Control	September 2024	1 of 2	Yes	Westfall Engineers
Grading and Drainage	September 2024	1 of 2	Yes	Westfall Engineers
Utility Plan and Hook-up locations	September 2024	1 of 2	Yes	Westfall Engineers
Exterior Elevations	10/04/2024	C5	Yes	THIS Design
Landscape Plan	10/04/2024	C1	Yes	THIS Design
Irrigation Plan				
T-1 Tree Protection Plan				

Purpose and use of the report

The report is intended to identify all the trees within the plan area that could be affected by a project. The report is to be used by the Town of Los Gatos and the property owners as a reference for existing tree conditions to help satisfy planning requirements.

Observations

Tree Inventory

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. (Appendix A and B). 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).

The inventory contains fourteen trees (14) trees comprised of two (2) different species (coast live oak (*Quercus agrifolia*) and London plane (P*latanus x hispanica*). There are four (4) Large Protected[1] trees and none are Exempt[2] or Street Trees[3] (Table 2).

Table 2: Inventory Characteristics

Tree Species	I.D. Number	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Status
coast live oak (*Quercus agrifolia*)	657	34	35	Large Protected
coast live oak (*Quercus agrifolia*)	658	12	20	Protected
coast live oak (*Quercus agrifolia*)	659	12	20	Protected
coast live oak (*Quercus agrifolia*)	660	7	15	Protected
coast live oak (*Quercus agrifolia*)	661	6	10	Protected
coast live oak (*Quercus agrifolia*)	662	5	8	Protected
coast live oak (*Quercus agrifolia*)	663	20	25	Protected
coast live oak (*Quercus agrifolia*)	664	10	20	Protected
coast live oak (*Quercus agrifolia*)	665	36	30	Large Protected
coast live oak (*Quercus agrifolia*)	666	12	20	Protected
coast live oak (*Quercus agrifolia*)	667	28	15	Large Protected
coast live oak (*Quercus agrifolia*)	668	20, 14	30	Large Protected
coast live oak (*Quercus agrifolia*)	669	16	25	Protected
London plane (*Platens x hispanica*)	670	18	30	Protected

[1] Large protected tree means any oak (*Quercus spp.*), California buckeye (*Aesculus californica*), or Pacific madrone (*Arbutus menziesii*) which has a 24-inch or greater diameter (75-inch circumference); or any other species of tree with a 48-inch or greater diameter (150-inch circumference).

[2] A fruit or nut tree that is less than eighteen (18) inches in diameter (fifty-seven-inch circumference). Species listed in 29.10.0970 subsection (2).

[3] Street tree means a tree in a public place, or along or within a public street or right-of-way.

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).

There were fourteen (14) protected trees appraised for a rounded depreciated value of $97,220.00.

Appraisal worksheets are available upon request.

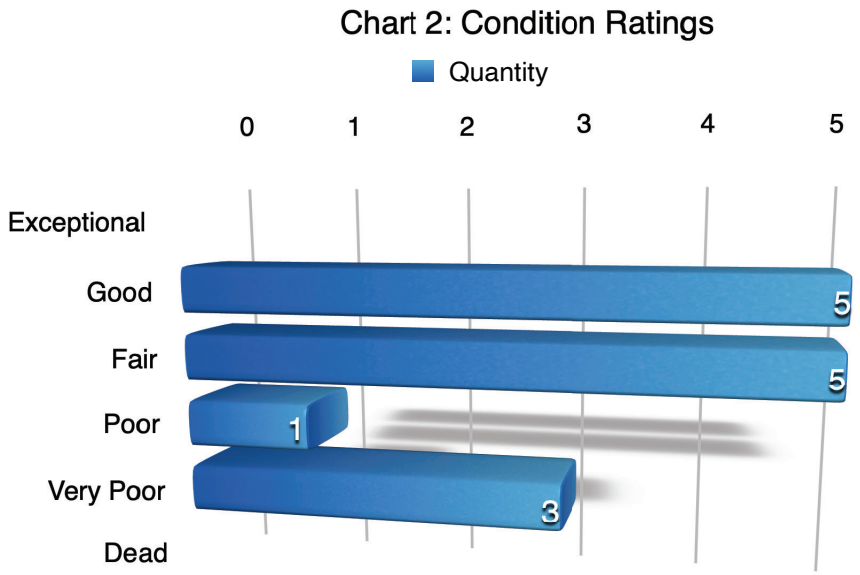
Discussion

Condition Rating

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.

Five trees are in good condition, five fair, one poor, and three are in very poor shape (Chart 2). Trees #662, #667, and #669 are all in very poor condition.



Mitigation for Removals

The table below indicates the recommended replacement values (Table 2). The applicant will be required to replace seven protected trees. Alternatively it may be possible to create an approved landscape plan or provide an in-lieu payment. The landscape plan does not indicate any replacement trees.

Table 2: Town of Los Gatos Tree Canopy - Replacement Standard

Canopy Size of Removed Tree (1)	Replacement Requirement (2)(4)	Single Family Residential Replacement Option (3)(4)
10 feet or less	Two 24 inch box trees	Two 15 gallon trees
More than 10 feet to 25 feet	Three 24 inch box trees	Three 15 gallon trees
More than 25 feet to 40 feet	Four 24 inch box trees or two 36 inch box trees	Four 15 gallon trees
More than 40 feet to 55 feet	Six 24 inch box trees; or three 36 inch box trees	Not available
Greater than 55 feet	Ten 24 inch box trees; or five 36 inch box trees	Not available

[1]To measure an asymmetrical canopy of a tree, the widest measurement shall be used to determine canopy size.

[2]Often, it is not possible to replace a single large, older tree with an equivalent tree(s). In this case, the tree may be replaced with a combination of both the Tree Canopy Replacement Standard and in-lieu payment in an amount set forth by Town Council resolution paid to the Town Tree Replacement Fund.

[3]Single Family Residential Replacement Option is available for developed single family residential lots under 10,000 square feet that are not subject to the Town's Hillside Development Standards and Guidelines. All 15-gallon trees must be planted on-site. Any in-lieu fees for single family residential shall be based on 24" box tree rates as adopted by Town Council.

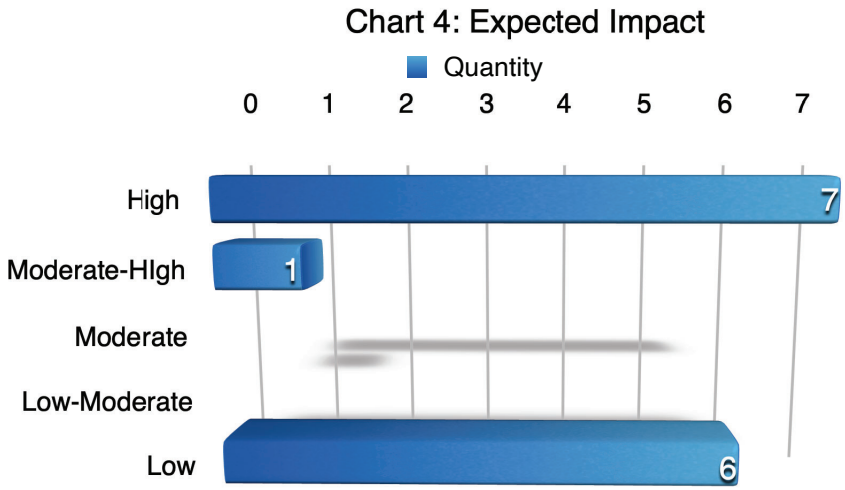
[4]Replacement Trees shall be approved by the Town Arborist and shall be of a species suited to the available planting location, proximity to structures, overhead clearances, soil type, compatibility with surrounding canopy and other relevant factors. Replacement with native species shall be strongly encouraged. Replacement requirements in the Hillsides shall comply with the Hillside Development Standards and Guidelines Appendix A and Section 29.10.0987 Special Provisions—Hillsides.

Expected Impacts

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.

Seven (7) trees will be highly impacted and caused to be removed. The plans only indicate trees two trees, #658 and #659, as removals for the driveway. Tree #660 (not on the survey) is in close proximity to #658 and #659 and will also need to be removed for the driveway. Trees #661, #662, (neither on the survey) and #663 are near the existing utility pole where a joint trench is proposed for gas and electric, these will also require removal. Trees #668 and #669 are indicated as "save" trees but at least #668 will be highly impacted. Tree #668 has impacts on threes sides with the storm drain, driveway, and new garage all between five and eight feet from the trunk on three sides. Although it may survive the construction for some time it may also fall over if roots are removed on three sides as likely to occur. Tree #669 is in a slightly better predicament but the tree itself is in "very poor" condition. This tree should also be removed on its own merits regardless of impacts which are indicated as "moderate-high". The remaining six trees are not likely to be affected including #665 because it is perched on top of a soil cut and wall that are to remain.



Tree Protection

Typically there are three different tree protection schemes which are called Type I (Appendix D1), Type II and Type III (Appendix D2) trunk protection only. The tree protection zone (TPZ) is the defined area in which certain activities are prohibited to minimize potential injury to the tree. There are two tree protection zones determined which include the “calculated” and “specified”. The “calculated” tree protection zone is determined by a multiplication factor based on species tolerance, tree age/vigor/health, and trunk diameter. The “specified” tree protection zone is adjusted in size and shape to accommodate the existing infrastructure, planned construction, and specific site constraints. This “specified” zone includes tree canopy conformation, visible root orientation, size, condition, maturity, and species tolerances (Gilpin, R, Hauer, R, Matheny, N, and Smiley, E.T. 2023).

Tree protection will focus on the area around the adjacent tree #657, which will need all the space between the neighbor fence and the proposed construction (about 14 feet). This area will need to be fenced off. Tree #670 is near some construction and the sewer, but the tree is containerized similar to #665. Tress #665 will require trunk protection along with #666.

Conclusion

The inventory contains fourteen trees (14) trees comprised of two (2) different species (coast live oak and London plane. There are four (4) Large Protected trees and none are Exempt or Street Trees.

Five trees are in good condition, five fair, one poor, and three are in very poor shape. Trees #662, #667, and #669 are all in “very poor” condition.

Seven (7) trees will be highly impacted and caused to be removed although the plans only indicate two.. Tree #660 (not on the survey) is in close proximity to #658 and #659 and will also need to be removed for the driveway. Trees #661, #662, (neither on the survey) and #663 are near the existing utility pole where a joint trench is proposed for gas and electric, these will also require removal and be highly impacted. Trees #668 and #669 are indicated as “save” trees but at least #668 will be highly impacted. Tree #668 has impacts on threes sides with the storm drain, driveway, and new garage all between five and eight feet from the trunk on three sides. Tree #669 is in a slightly better predicament but is in “very poor” condition. This tree should also be removed on its own merits regardless of impacts which are indicated as “moderate-high”. The remaining six trees are not likely to be affected including #665 because it is perched on top of a soil cut and wall that are to remain.

Tree protection will focus on the area around the adjacent tree #657 which will need all the space between the neighbor fence and the proposed construction (about 14 feet). This area will need to be fenced off. Tree #670 is near some construction and the sewer but the tree is containerized similar to #665. #665 will require trunk protection along with #666.

The applicant will be required to replace seven protected trees and possibly eight.

There were fourteen (14) protected trees appraised for a rounded depreciated value of $97,220.00.

Recommendations

1. Place tree protection fence around the trees to be retained as indicated in Appendix A.

2. Place tree protection fence inside the site around tree 657 at a radius of 14 feet where possible and no closer than 10.

3. Place straw wattle or vertical timbers around trees #665 and #666.

4. 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.

5. Refer to Appendix D for general tree protection guidelines including recommendations for arborist assistance while working under trees, trenching, or excavation within a trees drip line or designated TPZ/CRZ.

6. Place all the tree protection fence locations and guidelines on the plans including the grading, drainage, and utility plans. Create a separate plan sheet that includes all three protection measures labeled “T-1 Tree Protection Plan.”

7. 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. 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.

Bibliography

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Matheny, Nelda P., Clark, James R. Trees and development: A technical guide to preservation of trees during land development. Bedminster, PA: International Society of Arboriculture 1998.

Smiley, E, Matheny, N, Lilly, S, ISA. *Best Management Practices: Tree Risk Assessment:* International Society of Arboriculture, 2017. Print

Glossary of Terms

calculated tree protection zone: A TPZ calculated using the trunk diameter and a multiplication factor based on species tolerance to construction and tree age. It is often plotted on a plan as a circle or other arbitrary shape and can be used as a guide for establishing the specified TPZ.

critical root zone: a conceptual soil area containing the minimal amount of all the essential parts of the root zone needed to sustain tree health and structural integrity. There are no universally accepted methods to calculate the CRZ.

basic Tree Cost: The cost of replacement for a perfect specimen of a particular species and cross sectional area prior to location and condition depreciation.

cost Approach: An indication of value by adding the land value to the depreciated value of improvements.

defect: An imperfection, weakness, or lack of something necessary. In trees defects are injuries, growth patterns, decay, or other conditions that reduce the tree's structural strength.

diameter at breast height (DBH): Measures at 1.4 meters (4.5 feet) above ground in the United States, Australia (arboriculture), New Zealand, and when using the Guide for Plant Appraisal, 9th edition; at 1.3 meters (4.3 feet) above ground in Australia (forestry), Canada, the European Union, and in UK forestry; and at 1.5 meters (5 feet) above ground in UK arboriculture.

drip Line: Imaginary line defined by the branch spread or a single plant or group of plants. The outer extent of the tree crown.

form: Describes a plant's habit, shape or silhouette defined by its genetics, environment, or management.

health: Assessment is based on the overall appearance of the tree, its leaf and twig growth, and the presence and severity of insects or disease

mechanical damage: Physical damage caused by outside forces such as cutting, chopping or any mechanized device that may strike the tree trunk, roots or branches.

scaffold branches: Permanent or structural branches that for the scaffold architecture or structure of a tree.

specified tree protection zone (specified TPZ): a TPZ that is adjusted in size or shape to accommodate the existing infrastructure, planned construction, and aspects of the site, as well as the tree canopy conformation, visible root orientation, size, condition, maturity, and species response to construction.

straw wattle: also known as straw worms, bio-logs, straw noodles, or straw tubes are man made cylinders of compressed, weed free straw (wheat or rice), 8 to 12 inches in diameter and 20 to 25 feet long. They are encased in jute, nylon, or other photo degradable materials,
and have an average weight of 35 pounds.

structure: Evaluation focused on the crown, trunk, trunk flare, above ground roots and the site conditions contributing to conditions and/or defects that may contribute to failure.

Tree Protection Zone (TPZ): Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, especially during construction or development.

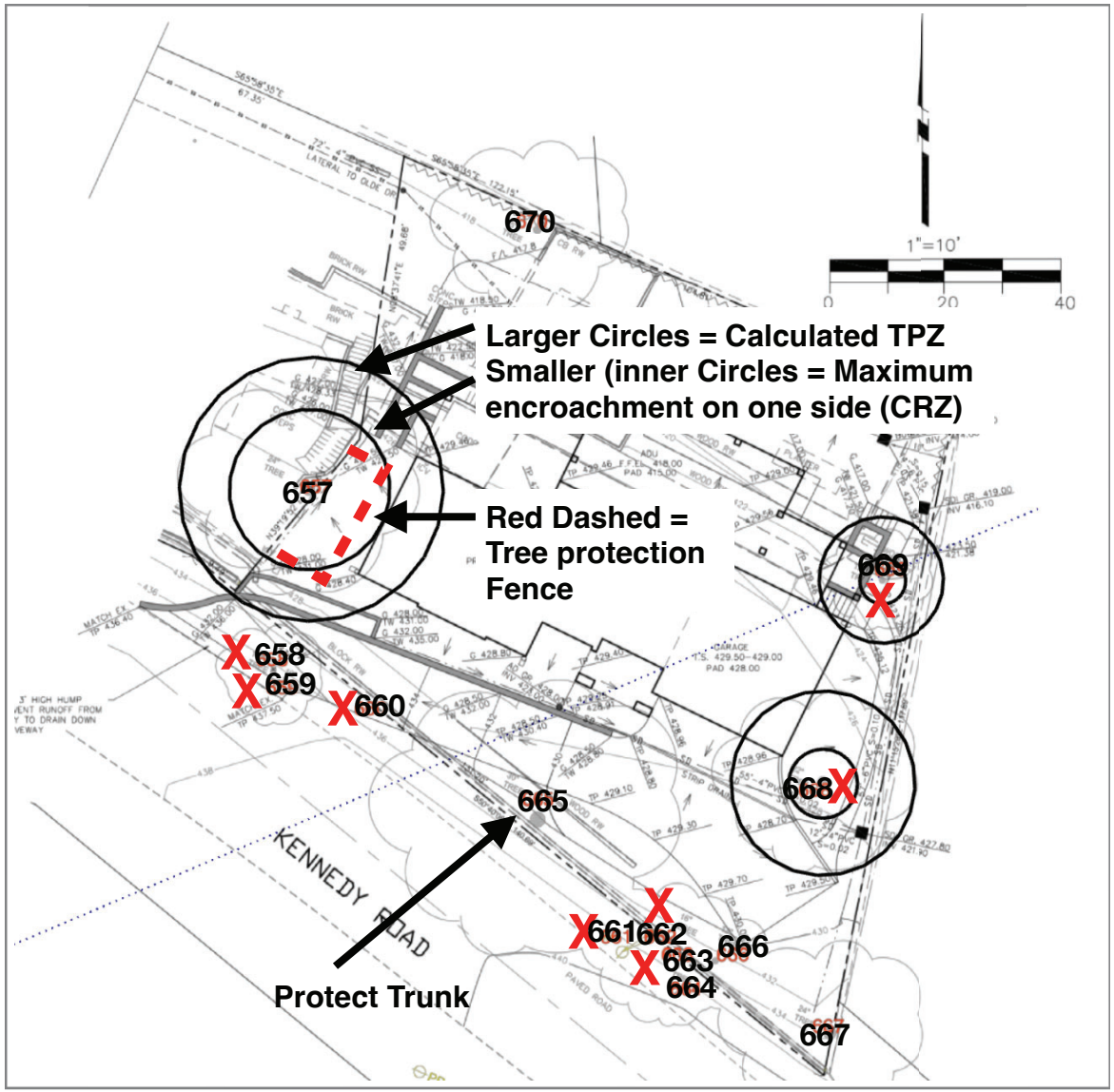
Tree Risk Assessment: Process of evaluating what unexpected things could happen, how likely it is, and what the likely outcomes are. In tree management, the systematic process to determine the level of risk posed by a tree, tree part, or group of trees.

trunk: Stem of a tree.

Trunk Formula Technique: Method to appraise the monetary value of trees considered too large to be replaced with nursery or field grown stock. Based on developing a representative unit cost for replacement with the same or comparable species of the same size and in the same place, subject to depreciation for various factors. Contrast with replacement cost method.

volunteer: A tree, not planted by human hands, that begins to grow on residential or commercial property. Unlike trees that are b drought in and installed on property, volunteer trees usually spring up on their own from seeds placed onto the ground by natural causes or accidental transport by people. Normally, volunteer trees are considered weeds and removed, but many desirable and attractive specimens have gone on to become permanent residents on many public and private grounds.

Appendix A: Tree Inventory, Site Plan, and Protection



Appendix B: Tree Inventory and Assessment Tables

Table 3: Inventory and Assessment Summary

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Protection Status	Rounded Depreciated Value	Calculated Protection Radii (ft.)
coast live oak (*Quercus agrifolia*)	657	34	35	Good	Low	Large Protected	$32,200.00	23
coast live oak (*Quercus agrifolia*)	658	12	20	Good	High	Protected	$4,010.00	8
coast live oak (*Quercus agrifolia*)	659	12	20	Good	High	Protected	$4,010.00	8
coast live oak (*Quercus agrifolia*)	660	7	15	Good	High	Protected	$1,360.00	5
coast live oak (*Quercus agrifolia*)	661	6	10	Poor	High	Protected	$430.00	4
coast live oak (*Quercus agrifolia*)	662	5	8	Very poor	High	Protected	$150.00	3
coast live oak (*Quercus agrifolia*)	663	20	25	Fair	High	Protected	$8,000.00	13
coast live oak (*Quercus agrifolia*)	664	10	20	Fair	Low	Protected	$1,990.00	7
coast live oak (*Quercus agrifolia*)	665	36	30	Fair	Low	Large Protected	$25,800.00	24
coast live oak (*Quercus agrifolia*)	666	12	20	Fair	Low	Protected	$2,860.00	8
coast live oak (*Quercus agrifolia*)	667	28	15	Very poor	Low	Large Protected	$4,680.00	19
coast live oak (*Quercus agrifolia*)	668	20, 14	30	Fair	High	Large Protected	$11,500.00	16
coast live oak (*Quercus agrifolia*)	669	16	25	Very poor	Moderate-high	Protected	$1,530.00	11

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Protection Status	Rounded Depreciated Value	Calculated Protection Radii (ft.)
London plane (*Platens x hispanica*)	670	18	30	Good	Low	Protected	$9,000.00	12

Appendix C: Photographs

C1: Coast live oak #657



C2: Coast live oaks #658, #659, and #657



C3: Trees #661 - #664



C4: Tree #665



C5: Tree #669

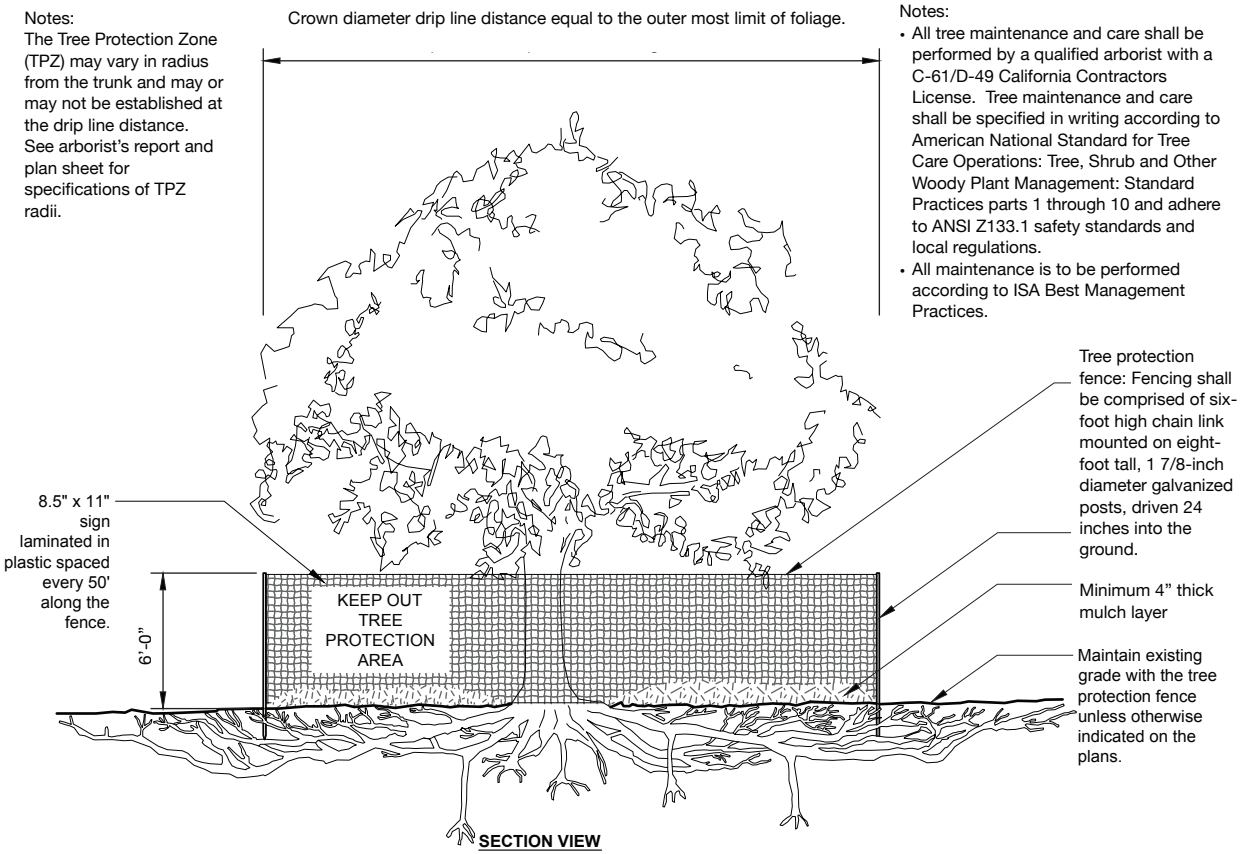


C6: Tree #668



Appendix D: Tree Protection Guidelines

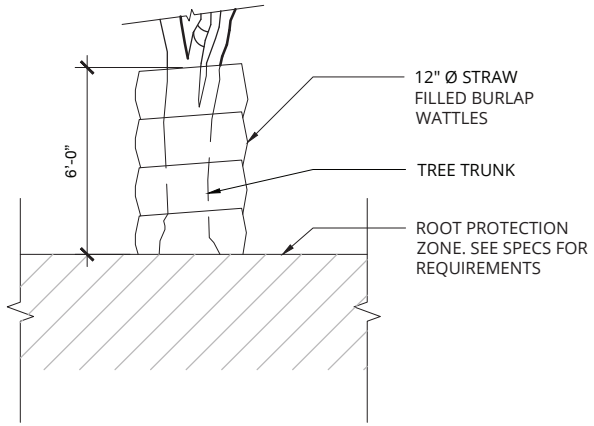
D1: Plan Sheet Detail S-X (Type I)



S-X TREE PROTECTION

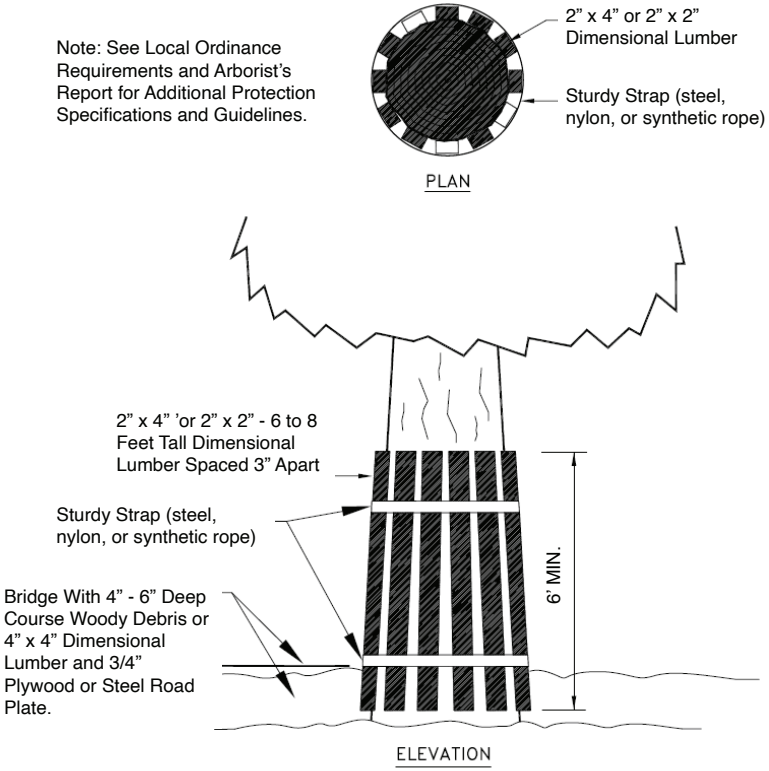
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D2: Plan Sheet Detail S-Y (Type III)



SECTION VIEW

S-Y TRUNK PROTECTION WITH WATTLE



Trunk Protection Vertical Timber Detail

D3: 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.

Appendix E: Tree Protection Signs

E1: English

Warning
Tree Protection Zone

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

E2: Spanish

Cuidado
Zona De Arbol Pretejido

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

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®. 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

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