

**Tree Inventory,
Assessment, and
Protection Report**

**14335 La Rinconada Drive
Los Gatos, CA 95032**

Prepared for:

Town of Los Gatos

**November 6, 2023
Revised December 5, 2024**

Prepared By:



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Summary

The applicant is requesting approval for demolition of an existing single-family residence and construction of a new single-family residence for Parcel 1 and Parcel 2 site improvements requiring a grading permit on property zoned R-1:8. APN 409-14-026 and APN 409-14-026. Categorically exempt pursuant to CEQA guidelines section 15303: new construction.

The plans are to build two new residences on the subdivided lots. The inventory contains thirty-three (33) trees comprised of eleven (11) different species.. One Peruvian pepper #760 is considered Large Protected (“Large Protected” by aggregate of stems) and five trees are Exempt with four being fruit trees #731, #733, #735, and #751, and one privet #763. There are seventeen trees on Parcel one and sixteen on Parcel 2.

Parcel 1: Six tree will be highly impacted on parcel one and the remaining eleven moderately affected. The plum “moderate-highly” impacted should be removed and is not protected (exempt). The trees retained are primarily along the driveway to Parcel two and one large pepper tree. The applicant will be required to replace three protected trees on Parcel 1.

Parcel 2: Two trees will be highly impacted and removed. The trees to be retained will require protection at their calculated radii and no grading within the TPZ.

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 June 27, 2022. 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				
Proposed Site Plan				
Erosion Control				
Grading and Drainage	Not Dated	C1.0 for both parcels	Yes	SF Civil
Utility Plan and Hook-up locations				
Exterior Elevations				
Landscape Plan				
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).

Plans

The plans are to build two new residences on the subdivided lots.



The inventory contains thirty-three (33) trees comprised of eleven (11) different species.. One Peruvian pepper #760 is considered Large Protected¹ (“Large Protected” by aggregate of stems) and five trees are Exempt² with four being fruit trees #731, #733, #735, and #751, and one privet #763. There are seventeen trees on Parcel one and sixteen on Parcel 2 (Charts 1 and 2).

Chart 1: Species
Distribution Parcel 1

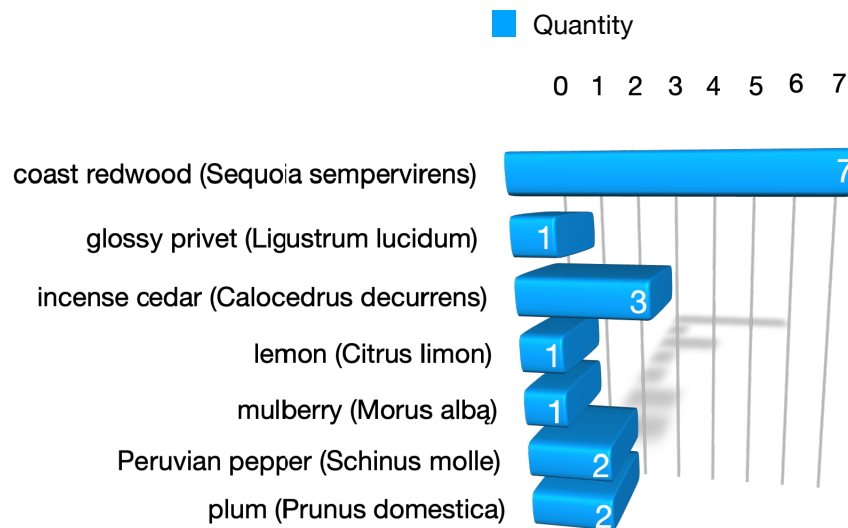
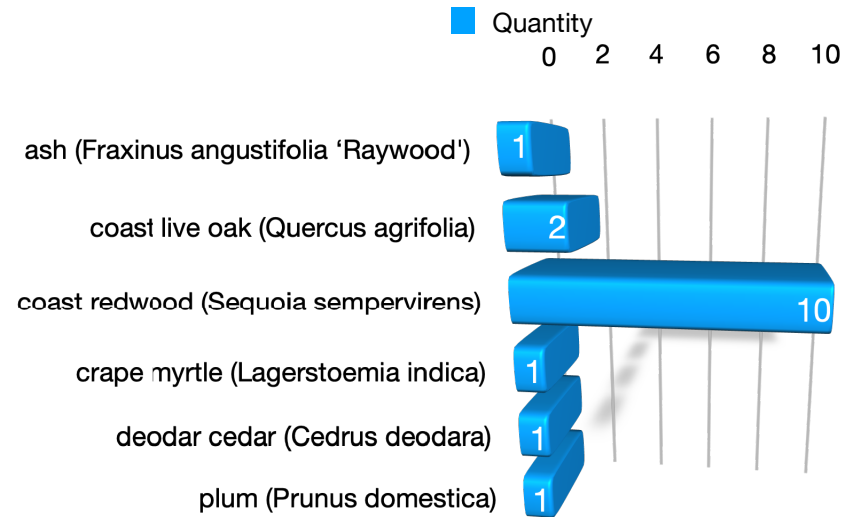


Chart 2: Species
Distribution Parcel 2



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).



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 thirty-three trees appraised for a rounded depreciated value of \$81,210.00.

Parcel 1 = seventeen trees \$53,470.00

Parcel 2 = sixteen trees \$27,740.00

Appraisal worksheets are available upon request



Discussion

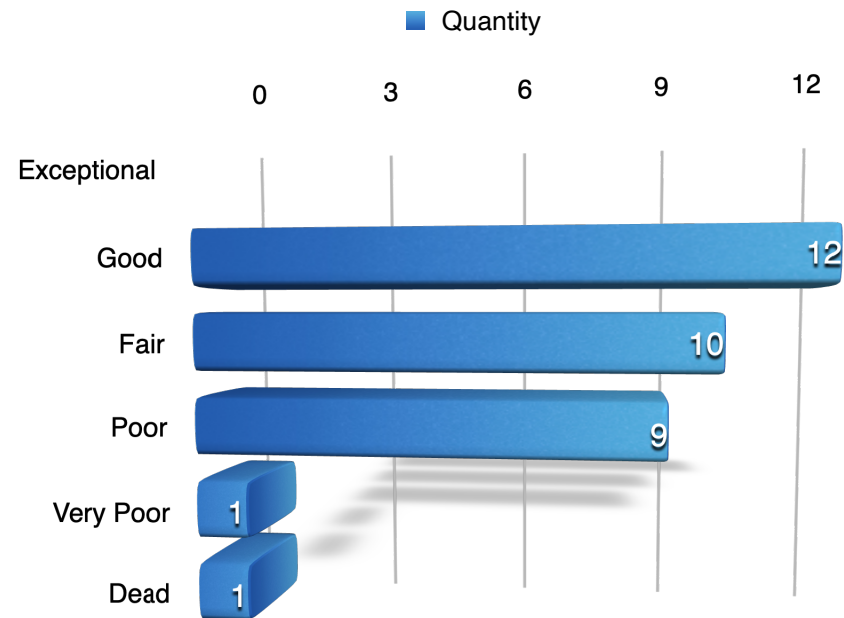
Condition Rating

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.

Twelve trees are in good condition, ten fair, nine poor, one very poor, and one is dead (Chart 3). Trees in poor shape include the neighbor’s incense cedar #732 and the two on the site #734 and #736. Pepper #743 has a large internal cavity that encompasses the entire lower trunk.

Chart 3: Condition Ratings



Expected Impact Level

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.

Parcel 1: Six trees will be highly impacted on parcel one and the remaining eleven moderately affected. The plum “moderate-highly” impacted should be removed and is not protected (exempt). The trees retained are primarily along the driveway to Parcel two and one large pepper tree.

Parcel 2: Two trees will be highly impacted and removed. The remaining trees could be impacted primarily due to the drainage around the site. There appears to be activity around the trees based on the grading plan and more tree protection will need to be added.

Chart 4: Expected Impact Parcel 1

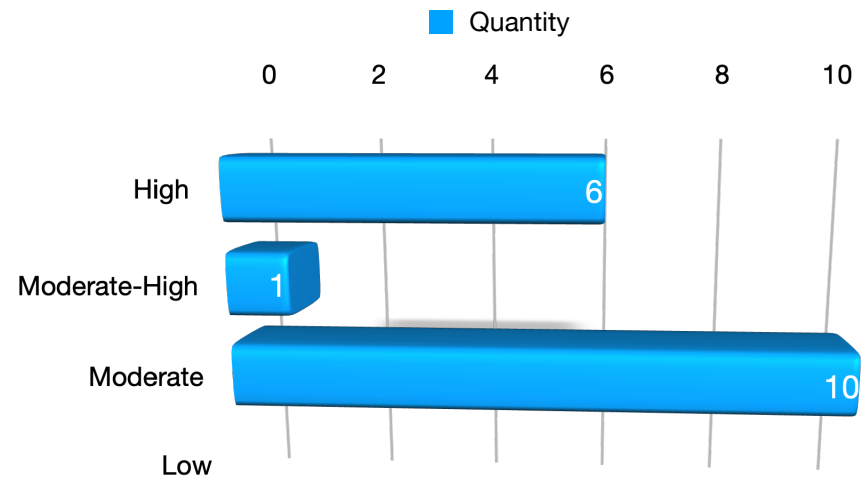
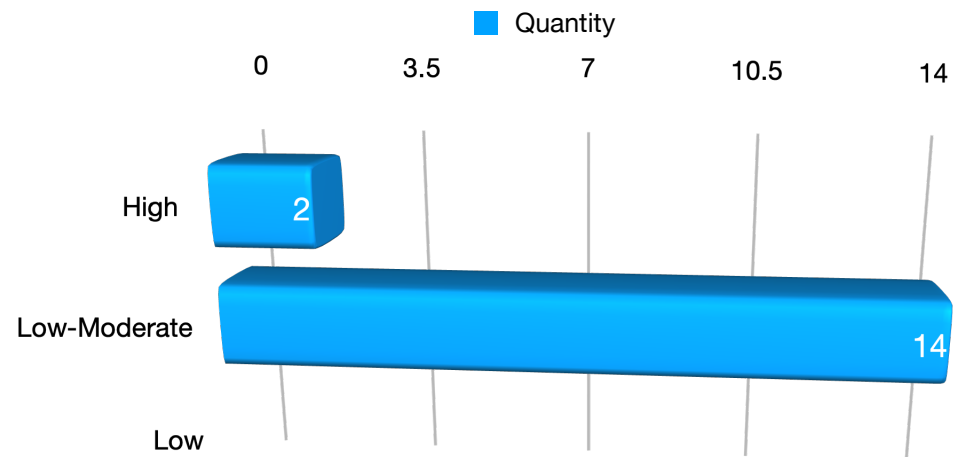


Chart 5: Expected Impact Parcel 2



Mitigation for Removals

The table below indicates the recommended replacement values (Table 2). The applicant will be required to replace three protected trees on Parcel 1 and two on Parcel 2 according to the ordinance. Alternatively it may be possible to create an approved landscape plan or provide an in-lieu payment.

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

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

²Often, 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.

³Single 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.

⁴Replacement 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 Hillside shall comply with the Hillside Development Standards and Guidelines Appendix A and Section 29.10.0987 Special Provisions—Hillsides.



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 and should encompass the critical root zone. There are two tree protection zones determined which include the “calculated” and “specified” tree protection zones. The “calculated” tree protection zone is determined by a multiplication factor based on species tolerance, tree age/vigor/health, and trunk diameter (Table 3). 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).

Parcel 1: Parcel 1 has one Large Protected Peruvian pepper #760 which would require a tree protection radius of 23 feet. The other trees on this parcel requiring protection will be the row along the south driveway flag to Parcel 2 #737 to #744 and require a radius of seven feet. There will be some driveway excavation adjacent to these trees and monitoring construction will be required. The last tree regarding this parcel is #732 which is located on the adjacent property to the north and calculated tree protection is 19 feet due to the trunk size of this tree. The tree is in poor condition but not under the control of the applicant/owners.

Parcel 2: Parcel 2 has several trees around the perimeter and only one (#759) has protection fence around it indicated on the plans. The remaining trees to be retained will also require fence and no grading within their calculated TPZs.



Conclusion

The plans are to build two new residences on the subdivided lots. The inventory contains thirty-three (33) trees comprised of eleven (11) different species.. One Peruvian pepper #760 is considered Large Protected (“Large Protected” by aggregate of stems) and five trees are Exempt with four being fruit trees #731, #733, #735, and #751, and one privet #763. There are seventeen trees on Parcel one and sixteen on Parcel 2.

Twelve trees are in good condition, ten fair, nine poor, one very poor, and one is dead. Trees in poor shape include the neighbor’s incense cedar #732 and the two on the site #734 and #736. Pepper #743 has a large internal cavity that encompasses the entire lower trunk.

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Parcel 2: Two trees will be highly impacted and removed and fourteen retained.

Parcel 2: Parcel 2 will require tree protection fence at the calculated radii and no grading within those zones

There were thirty-three trees appraised for a rounded depreciated value of \$81,210.00. **Parcel 1** = seventeen trees \$53,470.00; **Parcel 2** = sixteen trees \$27,740.00.

The applicant will be required to replace three protected trees on Parcel 1 and two on Parcel 2 according to the ordinance.



Recommendations

Parcel 1:

- Large Protected Peruvian pepper #760 which would require a tree protection radius of 23 feet which would extend into Parcel 2.
- The south driveway flag to Parcel 2 trees #737 to #744 require a radius of seven feet, which may not be feasible. There will be some driveway excavation adjacent to these trees and monitoring construction will be required.
- Tree #732 which is located on the adjacent property to the north and calculated tree protection is 19 feet due to the trunk size of this tree. The tree is in poor condition but not under the control of the applicant/owners.

Parcel 2:

- Crape myrtle #758 tree protection fence should be placed at least five feet and more if possible.
- It may be possible to save some other trees but the way the C1 sheet is drawn at this time it appears there is drainage and grading requirements around the exterior which would compromise most of the trees. Altering this plan if possible could save some trees.

Both Parcels

1. Place tree numbers on all the plans. Make sure the trees are clearly indicated for removal on all the plans. The trees should also be very clearly marked on site prior to removal.
2. Install temporary irrigation or soaker hoses in all tree protection zones and provide supplemental watering during construction within all TPZ areas. Monitor watering times or amounts to ensure adequate soil saturation. (A 5/8" soaker hose requires about 200 minutes to deliver one inch of water to a garden. This number is affected by the length of the hose and the overall rate of flow from the faucet. A good rule of thumb is to expect about ½ GPM as a standard faucet flow rate.). Infrequent deeper watering is preferred.



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. 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.
5. Place all the tree protection fence locations and guidelines on the plans including the grading, drainage, and utility plans. Alternatively create a separate plan sheet that includes all three protection measures labeled “T-1 Tree Protection Plan.”
6. 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.
7. 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.



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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 form 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.

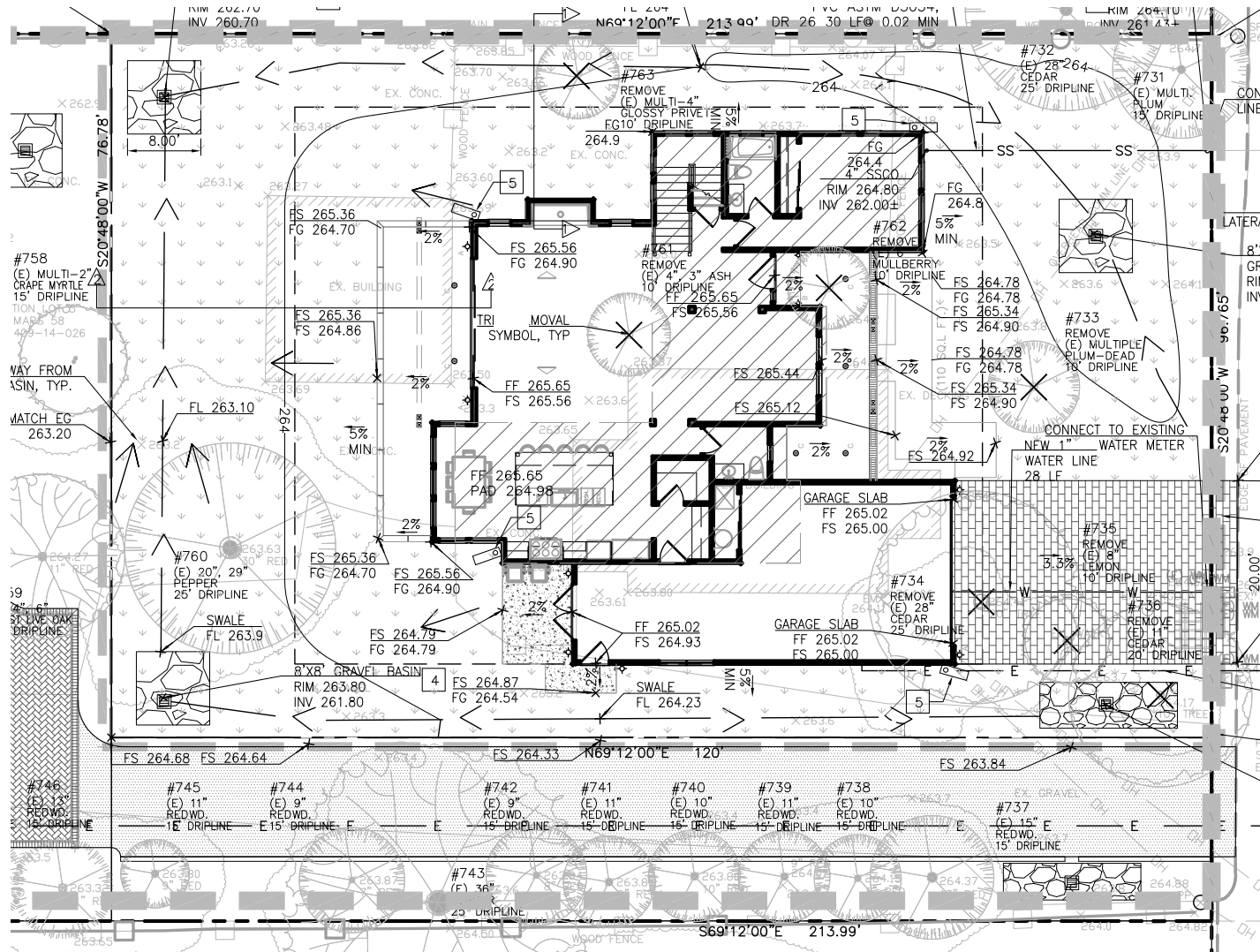
Trunk Formula Technique: Method to appraise the monetary value of trees considered too large to be replaced with nursery or field grown stock. Based on developing a representative unit cost for replacement with the same or comparable species of the same size and in the same place, subject to depreciation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

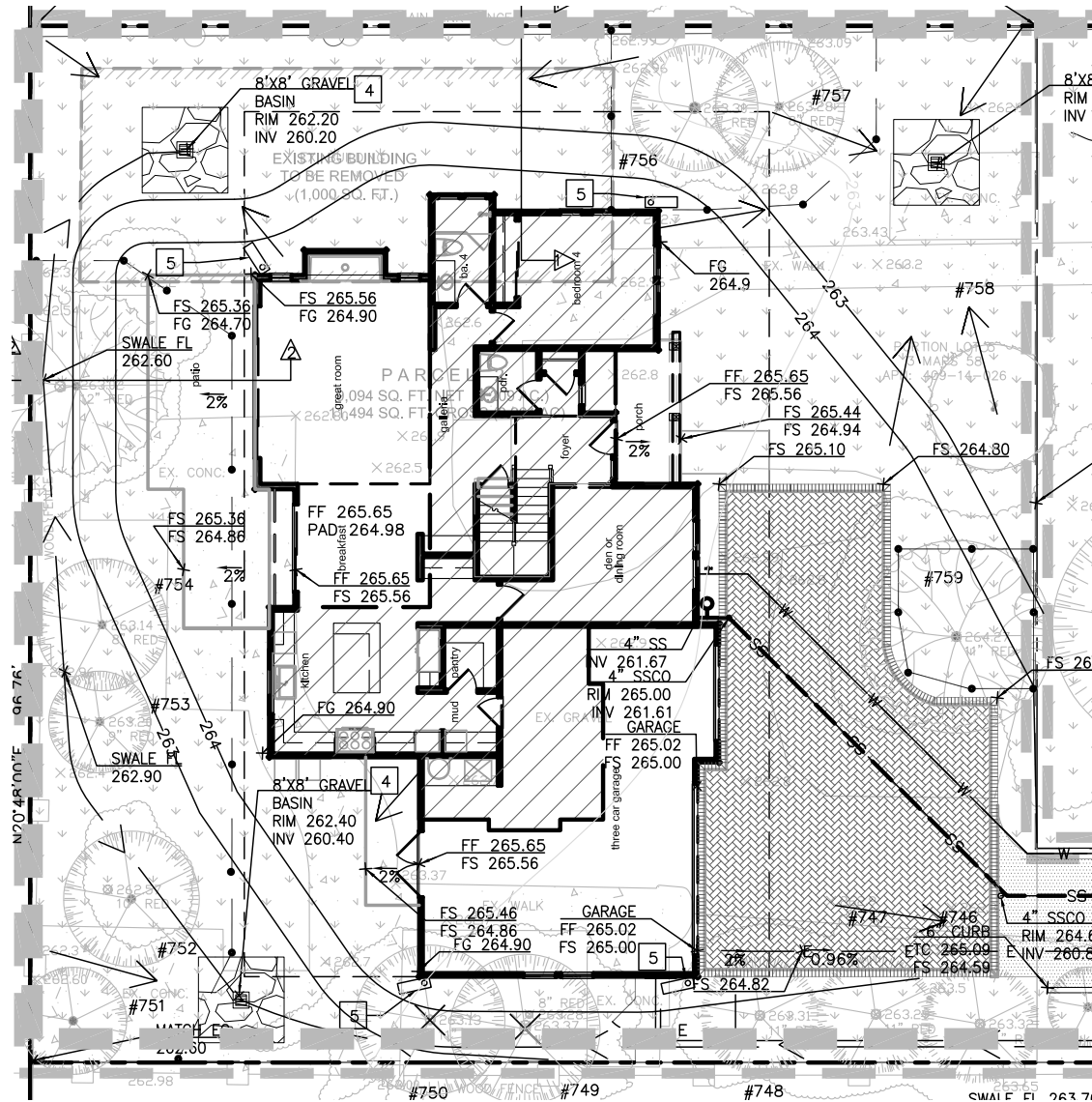


Appendix A: Tree Inventory Map and Proposed Grading and Drainage Plan

A1: Parcel 1



A2: Parcel 2



Appendix B: Tree Inventory and Assessment Tables

B1: Summary Parcel 1

Table 3: Inventory and Assessment Summary Parcel 1

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Protection Status	Rounded Depreciated Value	Calculated TPZ (8X DBH ft.)
plum (<i>Prunus domestica</i>)	731	Multi 4	15	Very poor	Moderate-High	Exempt	\$360.00	5
incense cedar (<i>Calocedrus decurrens</i>)	732	28	25	Poor	Moderate	Protected	\$7,300.00	19
plum (<i>Prunus domestica</i>)	733	Multi 4	10	Dead/ Unstable	High	Exempt	\$0.00	5
incense cedar (<i>Calocedrus decurrens</i>)	734	28	25	Poor	High	Protected	\$7,300.00	19
lemon (<i>Citrus limon</i>)	735	6	10	Poor	High	Exempt	\$570.00	4
incense cedar (<i>Calocedrus decurrens</i>)	736	11	20	Poor	High	Protected	\$1,120.00	7
coast redwood (<i>Sequoia sempervirens</i>)	737	15	15	Good	Moderate	Protected	\$3,900.00	10
coast redwood (<i>Sequoia sempervirens</i>)	738	10	15	Good	Moderate	Protected	\$1,730.00	7
coast redwood (<i>Sequoia sempervirens</i>)	739	11	15	Good	Moderate	Protected	\$2,100.00	7
coast redwood (<i>Sequoia sempervirens</i>)	740	10	15	Good	Moderate	Protected	\$1,730.00	7
coast redwood (<i>Sequoia sempervirens</i>)	741	11	15	Good	Moderate	Protected	\$2,100.00	7



Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Protection Status	Rounded Depreciated Value	Calculated TPZ (8X DBH ft.)
coast redwood (<i>Sequoia sempervirens</i>)	742	9	15	Good	Moderate	Protected	\$1,400.00	6
Peruvian pepper (<i>Schinus molle</i>)	743	36	25	Poor	Moderate	Protected	\$8,600.00	24
coast redwood (<i>Sequoia sempervirens</i>)	744	9	15	Fair	Moderate	Protected	\$1,000.00	6
Peruvian pepper (<i>Schinus molle</i>)	760	29, 20	25	Fair	Moderate	Large Protected	\$13,500.00	23
mulberry (<i>Morus alba</i>)	762	6	10	Good	High	Protected	\$560.00	4
glossy privet (<i>Ligustrum lucidum</i>)	763	Multi 4	10	Good	High	Exempt	\$200.00	5



B2: Parcel 2

Table 4: Inventory and Assessment Summary Parcel 2

Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Protection Status	Rounded Depreciated Value	Calculated TPZ (8X DBH ft.)
coast redwood (<i>Sequoia sempervirens</i>)	745	11	15	Fair	Low-moderate	Protected	\$1,500.00	7
coast redwood (<i>Sequoia sempervirens</i>)	746	13	15	Fair	Low-moderate	Protected	\$2,090.00	9
coast redwood (<i>Sequoia sempervirens</i>)	747	12	15	Fair	Low-moderate	Protected	\$1,780.00	8
coast redwood (<i>Sequoia sempervirens</i>)	748	11	15	Fair	Low-moderate	Protected	\$1,500.00	7
coast redwood (<i>Sequoia sempervirens</i>)	749	9, 13	15	Fair	High	Protected	\$3,170.00	11
deodar cedar (<i>Cedrus deodara</i>)	750	13	15	Good	High	Protected	\$3,660.00	9
plum (<i>Prunus domestica</i>)	751	4	10	Good	Low-moderate	Exempt	\$420.00	3
coast redwood (<i>Sequoia sempervirens</i>)	752	9	15	Poor	Low-moderate	Protected	\$600.00	6
coast redwood (<i>Sequoia sempervirens</i>)	753	11	15	Poor	Low-moderate	Protected	\$900.00	7
coast redwood (<i>Sequoia sempervirens</i>)	754	8	15	Poor	Low-moderate	Protected	\$480.00	5
coast live oak (<i>Quercus agrifolia</i>)	755	13	25	Fair	Low-moderate	Protected	\$3,360.00	9



Tree Species	I.D. #	Trunk Diameter (in.)	~ Canopy Diameter (ft.)	Condition	Expected Impact	Protection Status	Rounded Depreciated Value	Calculated TPZ (8X DBH ft.)
coast redwood (<i>Sequoia sempervirens</i>)	756	14	15	Fair	Low-moderate	Protected	\$2,430.00	9
coast redwood (<i>Sequoia sempervirens</i>)	757	9	15	Poor	Low-moderate	Protected	\$600.00	6
crape myrtle (<i>Lagerstoemia indica</i>)	758	Multi 2	15	Fair	Low-moderate	Protected	\$2,330.00	5
coast live oak (<i>Quercus agrifolia</i>)	759	4, 4, 4, 6	20	Good	Low-moderate	Protected	\$2,260.00	6
ash (<i>Fraxinus angustifolia</i> 'Raywood')	761	4, 3	10	Good	Low-moderate	Protected	\$660.00	3



Appendix C: Photographs

C1:#731 through #736



C2: #737 through #747



C3: Cavity in #743



C4: #751 through #755

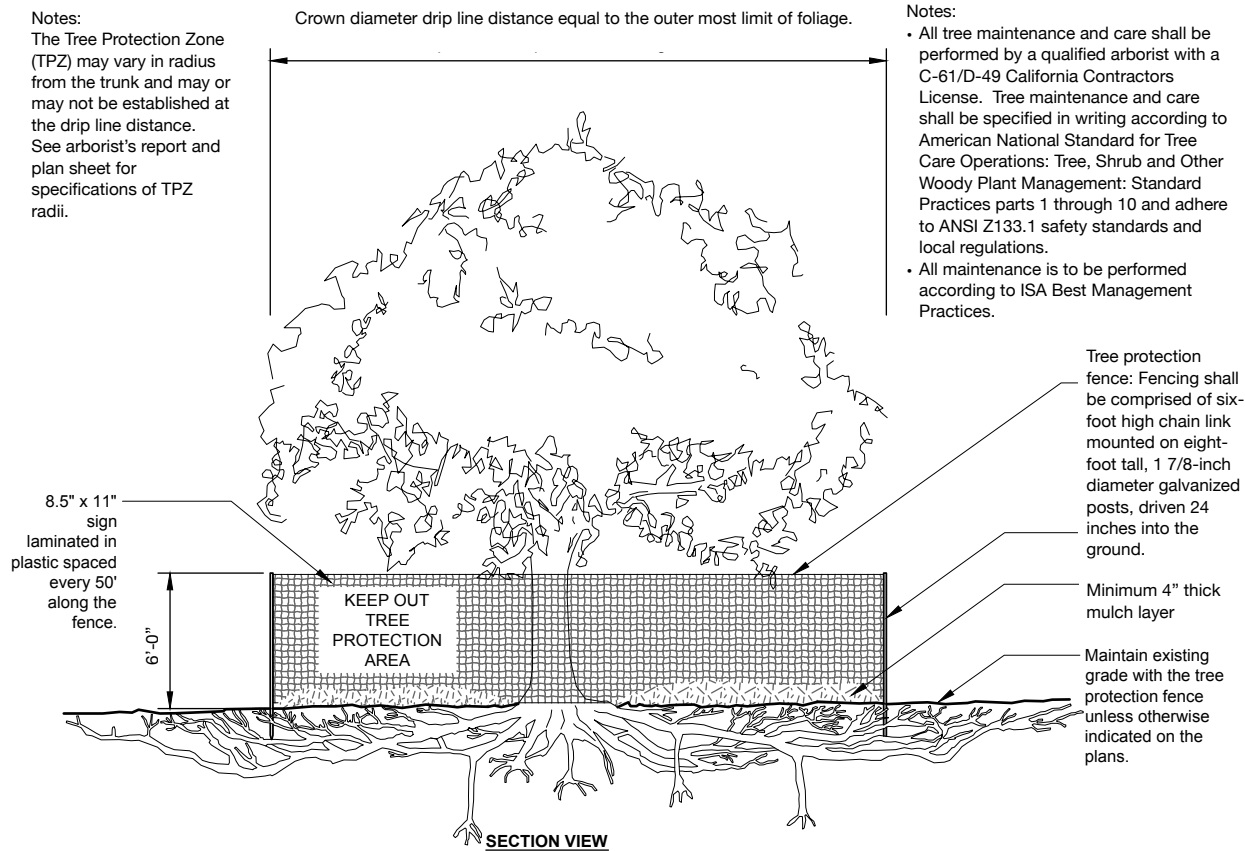


C5: Pepper #760



Appendix D: Tree Protection Guidelines

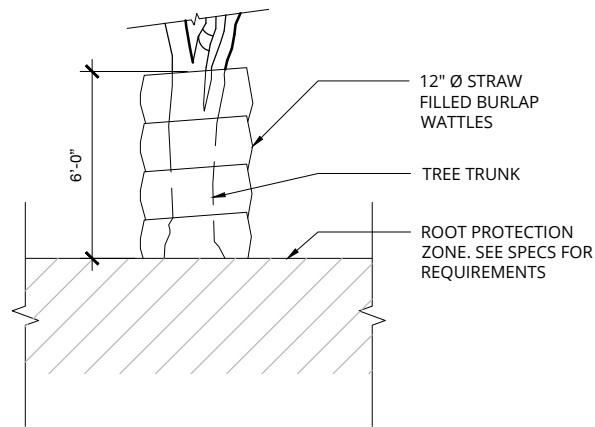
D1: Plan Sheet Detail S-X (Type I)



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OPEN SOURCE FREE TO USE
Modified by Monarch Consulting
Arborists LLC, 2019



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

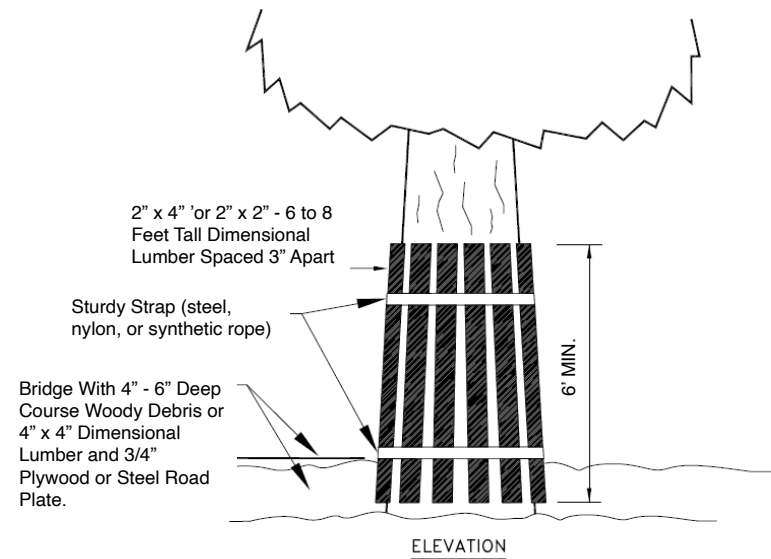
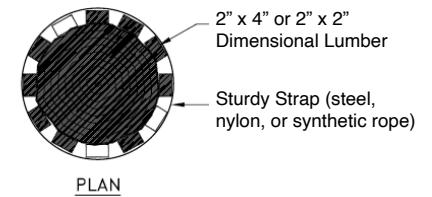


SECTION VIEW

S-Y

TRUNK PROTECTION WITH WATTLE

Note: See Local Ordinance Requirements and Arborist's Report for Additional Protection Specifications and Guidelines.



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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