

**Assessment of Seven (7) Protected-Size Trees
at and adjacent to
15897 Camino Del Cerro
Los Gatos, California**

Prepared for:
Ryan Safty, Associate Planner
Town of Los Gatos Community Development Department
110 E. Main Street
Los Gatos, CA 95030

Field Visit:
Walter Levison, Contract Town Arborist (CTA)
6/24/2020

Report by CTA
7/20/2020

Table of Contents

1.0 Summary	3
2.0 Assignment & Background	7
3.0 Town of Los Gatos – What Trees are Protected?	8
4.0 Recommendations	9
5.0 Tree Protection and Maintenance Directions per Town Code	15
6.0 Tree Replacement Standards – Los Gatos Town Code	19
7.0 Author’s Qualifications	21
8.0 Assumptions and Limiting Conditions	22
9.0 Certification	23
10.0 Digital Images	23
11.0 Tree Data Table	27
12.0 Attached: Tree Location & Protection Fence Map Mark-up by the CTA	34
13.0 Attached: Appraisal Worksheet by the CTA	35

1.0 Summary

- a. Below is a matrix style overview of protected-size trees (non-exempt species, 4-inches diameter at 4.5 feet above grade). In the table, the CTA (Contract Town Arborist) has outlined expected impacts to each tree, along with suggestions for adjustments to the plan set (if applicable) that will optimize tree survival over the long term.

The CTA calculated the appraised value of each tree, which can be used as a tool for determining the proper security bond amount to have the applicant post with the Town as a hedge against site plan-related tree damages (if applicable). Appraised values can also be used to determine damage fees if trees are determined during or after construction to have been damaged such that mitigation is required.

Mitigation replacement rate and size is noted for each tree in the case that removal or damage to trees occurs.

Note: Only trees within relatively close proximity of proposed work are included in this tree study (e.g. tree trunks located between approximately zero and 30 linear feet of current proposed new grading, utility trenching, excavation, haul routes, landscaping, etc. as shown on proposed plans, and trees with canopy driplines that encroach onto the subject property.

Table 1.0(a) (REFER TO THE CTA'S TREE MAP MARKUP WHEN REVIEWING THIS MATRIX)

Line Number	Tree Tag Number / Common Name	Expected Tree Disposition	Critical Root Zone (CRZ) Radius Suggested for Optimal Structural Stability	Large Protected Tree (LPT)? Tree Conservation Suitability Rating (TCS)?	Appraised Value	Suggested Changes to Applicant's Proposed Plans to Boost Tree Conservation Suitability Rating (TCS) to "Moderate" or "Good"	Replacement Rate Per Canopy Lost	Replacement Size Tree
1	21 Chinese pistache NEIGHBOR-OWNED TREE	Retain	10 feet	Poor (due to close proximity of applicant's proposed trench cuts in relation to the trunk)	\$1,410.	Push the proposed graded swale, joint trench, storm drain trench, and storm drain inlet box to roughly 12 feet offset from trunk edge, to allow RPZ fencing to be erected at 10 feet offset radius from the trunk in a full perimeter around the tree.	3 X \$250 = \$750.	15 gallon or 24" box
2	22 coast redwood	Remove per applicant's plan	n/a	n/a	\$9,300.	Tree is proposed by applicant to be removed, due to direct conflict with the proposed new residence footprint. Note that value of tree is over \$9,000, but mitigation fee is only \$750.	3 X \$250 = \$750.	15 gallon or 24" box

Line Number	Tree Tag Number / Common Name	Expected Tree Disposition	Critical Root Zone (CRZ) Radius Suggested for Optimal Structural Stability	Large Protected Tree (LPT)? Tree Conservation Suitability Rating (TCS)?	Appraised Value	Suggested Changes to Applicant's Proposed Plans to Boost Tree Conservation Suitability Rating (TCS) to "Moderate" or "Good"	Replacement Rate Per Canopy Lost	Replacement Size Tree
3	23 European birch (Not plotted on applicant sheets)	Remove	n/a	n/a	\$130.	Tree is proposed by applicant to be removed, due to direct conflict with the proposed new residence footprint.	3 X \$250 = \$750.	15 gallon or 24" box
4	24 European birch (Not plotted on applicant sheets)	Remove	n/a	n/a	\$250.	Tree is proposed by applicant to be removed, due to direct conflict with the proposed new residence footprint.	3 X \$250 = \$750.	15 gallon or 24" box
5	25 Monterey pine NEIGHBOR TREE	Retain	12.5 feet	Poor	\$7,100.	Erect RPZ chain link fencing per the CTA's attached tree protection map markup. The fence layout will be approximately 15 feet east of the property line, and will enclose the entire southwest corner of the property, with 40 to 50 linear feet of north-south oriented length (see tree map markup by the CTA). Heavily irrigate the entire RPZ fenced enclosure 1x/weekly during construction, to prevent decline of the tree's root system, which is visible even at 20 feet east of the joint property line fence (see digital images).	4 X \$250 = \$1,000.	15 gallon or 24" box

Line Number	Tree Tag Number / Common Name	Expected Tree Disposition	Critical Root Zone (CRZ) Radius Suggested for Optimal Structural Stability	Large Protected Tree (LPT)? Tree Conservation Suitability Rating (TCS)?	Appraised Value	Suggested Changes to Applicant's Proposed Plans to Boost Tree Conservation Suitability Rating (TCS) to "Moderate" or "Good"	Replacement Rate Per Canopy Lost	Replacement Size Tree
6	26 Crape myrtle NEIGHBOR TREE NOT PLOTTED ON APPLICANT PLANS	Retain	(Not applicable, since existing garage foundation footing encroaches almost to the property line fence, and acts as a root extension barrier that restricts most root extension into the 15897 Camino Del Cerro property. However, the root system of this tree may have comingled with the existing garage foundation footing, and therefore care must be taken to avoid inadvertently tearing out the root system of this tree during garage foundation concrete demolition).	Mod	\$1,340.	Special Demolition Instructions: Use handheld breakers (jackhammer, etc.) to carefully demolish the foundation footing of the garage, and pull pieces of the footing out by hand, to avoid inadvertently destroying the root system of this tree, which may be comingled with the footing.	3 X \$250 = \$750.	15 gallon or 24" box

Line Number	Tree Tag Number / Common Name	Expected Tree Disposition	Critical Root Zone (CRZ) Radius Suggested for Optimal Structural Stability	Large Protected Tree (LPT)? Tree Conservation Suitability Rating (TCS)?	Appraised Value	Suggested Changes to Applicant's Proposed Plans to Boost Tree Conservation Suitability Rating (TCS) to "Moderate" or "Good"	Replacement Rate Per Canopy Lost	Replacement Size Tree
7	27 Douglas fir NEIGHBOR TREE NOT PLOTTED ON APPLICANT PLAN	Retain	CRZ = 8 feet offset radius Optimal Root Zone = 13.5 feet offset radius	Mod	\$4,160.	<p>Existing garage foundation footprint extends to property line, so root system of this tree is likely contained to the neighbor's property at 15883 Camino Del Cerro, and trunk is offset adequately to allow for good root zone preservation.</p> <p>However, the canopy of this tree extends at least 7 feet southward over the existing garage, at heights of 12 feet to 17 feet elevation above grade.</p> <p>If there ends up being a conflict between the canopy and the new residence roof airspace, then the CTA expects that, at the most, one (1) single limb measuring 6 inches diameter may need to be pruned back or removed at its attachment point on the mainstem (trunk) on the neighbor's property, which will have a less than significant overall effect on the tree's long term health and structure.</p>	4 X \$250 = \$1,000	15 gallon or 24" box

2020-21 Town of Los Gatos In-lieu fee equivalent = \$250 per each required 24" box mitigation tree planting not installed on the site.

2.0 Assignment & Background

Walter Levison, Contract Town Arborist (CTA) was directed to tag and assess all Protected-Size (4-inch diameter and greater) trees in relatively close proximity to the proposed site plan project area, including off-site trees on neighboring properties which were expected to be negatively impacted by the applicant's planned work.

The CTA assessed the entire set of plans dated 3/6/2020.

Tree data were collected and assembled by the CTA in section 11.0 of this report.

Tree tags were affixed by the CTA to the mainstems of the on-site trees. These tags were racetrack shaped aluminum tags numbering "21" through "27".

The CTA's recommendations in section 4.0 of this report are based on published information in various standard arboriculture texts, such as the series of *Best Management Practices* (BMP) companion publication (booklets) published by International Society of Arboriculture that are periodically updated over time. The series of BMP booklets accompany the ANSI-A300 USA standards for tree care used by U.S.-based tree care companies.

Additional supporting information includes digital images archived by the CTA as section 10.0, a tree map markup JPEG embedded as section 12.0, and an appraisal data worksheet attached as section 13.0.

The CTA's tree map was marked-up using the applicant's grading and drainage plan sheet C-2 as a base. This base sheet was dated 2/25/2020 by SMP Civil of Los Altos, California, though the submittal set of plans is dated 3/6/2020. The tree trunk plot dot locations shown on the CTA's tree map markup for trees #25, 26, and #27 on neighboring properties are considered rough approximate only, as they were not formally plotted by the applicant's survey team. Similarly, trees #23 and #24 were on-site trees that were not plotted by the applicant's surveyor, and were therefore penciled in by the CTA as rough approximate locations on the CTA's tree protection map attached to this report document.

The CTA utilized a forester's D-tape to determine tree mainstem (trunk) diameters at 4.5 feet above grade. The D-tape is a circumferential tape that converts actual trunk circumference to an averaged diameter in inches and tenths of inches.

Tree heights were determined using a digital Nikon Forestry Pro 550 hypsometer.

Tree canopy spread diameters were estimated visually or paced off. The tree canopy driplines shown as black clouding on the tree map markup are approximate only.

3.0 Town of Los Gatos – What Trees are Protected?

Per the most recent (2015) iteration of the Town of Los Gatos tree ordinance (Town Code Chapter 29 – Zoning Regulations, Article 1), the following regulations apply to all trees within the Town’s jurisdiction (wordage adjusted):

1. All trees with at least a single mainstem measuring four (4) inches diameter or greater at 4.5 feet above grade are considered “**Protected Trees**” when removal relates to any development review.
2. 12 inch diameter (18 inch multistem total) trees on developed residential property not currently subject to development review.
3. 8 inch diameter (8 inch multistem total) blue oak (*Quercus douglasii*), black oak (*Quercus kellogii*), California buckeye (*Aesculus californica*), and Pacific madrone (*Arbutus menziesii*) on developed residential lots not currently subject to development review.
4. 8 inch diameter (8 inch multistem total) trees on developed residential property not currently subject to development review, on lots in the designated **Hillside Area** per the official Town map.
5. All trees with a single mainstem or sum of multiple mainstems totaling 48 inches diameter or greater at 4.5 feet above grade are considered “**Large Protected Trees**” (LPT).
6. All oak species (*Quercus spp.*), California buckeye (*Aesculus californica*), and Pacific madrone (*Arbutus menziesii*) with one or more mainstems totaling 24 inches diameter or more at 4.5 feet above grade are considered “**Large Protected Trees**” (LPT).
7. Section 29.10.0965. Prohibitions: A **permit** is required to prune, trim, cut off, or perform any work, on a single occasion or cumulatively, over a three-year period, affecting 25% or more of any **Protected Tree** (including below ground root system).
8. Section 29.10.0965. Prohibitions: A **permit** is required to prune, trim, or cut any branch or root greater than four (4) inches in diameter of a **Large Protected Tree**.
9. Section 29.10.0965. Prohibitions: A permit is required to conduct severe pruning on any protected tree. Severe pruning is defined in section 29.10.0955 as “topping or removal of foliage or significant scaffold limbs or large diameter branches so as to cause permanent damage and/or disfigurement of a tree, and/or which does not meet specific pruning goals and objectives as set forth in the current version of the International Society of Arboriculture Best Management Practices-Tree Pruning and ANSI A300-Part 1 Tree, Shrub, and Other Woody Plant Management-Standard Practices, (Pruning).”

10. Exceptions:

Severe Pruning Exception in Town Code section 29.10.1010(3) “.....except for pollarding of fruitless mulberry (*Morus alba*) or other species approved by the Town Arborist....”.

Protected Tree Exceptions:

- a. Edible fruit or nut bearing trees less than 18 inches diameter (multistem total or single stem), including fruiting olive trees.
- b. *Acacia melanoxylon* (blackwood acacia) less than 24 inches (multistem total or single stem)
- c. *Liriodendron tulipifera* (tulip tree) less than 24 inches (multistem total or single stem)
- d. *Ailanthus altissima* (tree of heaven) less than 24 inches (multistem total or single stem)
- e. *Eucalyptus globulus* (Tasmanian blue gum) less than 24 inches (multistem total or single stem)
- f. *Eucalyptus camaldulensis* (River red gum) less than 24 inches (multistem total or single stem)
- g. *Other eucalyptus species* (E. spp.) not noted above, less than 24 inches (multistem total or single stem)

(REMOVAL O.K. ONLY AT HILLSIDE AREA LOCATIONS PER OFFICIAL TOWN MAP):

www.losgatosca.gov/documentcenter/view/176

- h. All palm species (except *Phoenix canariensis*) less than 24 inches (multistem total or single stem)
- i. *Ligustrum lucidum* (glossy privet) less than 24 inches (multistem total or single stem)

Note that per the exception in part 'a' above, fruiting olive trees with stems totaling less than 18 inches are considered non-protected.

4.0 Recommendations

1. Project Arborist ("PA"):

Initial Signoff

It is recommended that a third party ASCA registered consulting arborist or ISA Certified Arborist with good experience with tree protection during construction be retained by the applicant, to provide pre-project verification that tree protection and maintenance measures outlined in this section of the arborist report are adhered to. Periodic (e.g. monthly) inspections and summary reporting, if required as a project condition of approval, are suggested in order to verify contractor compliance with tree protection throughout the site plan project. This person will be referred to as the project arborist ("PA"). The PA should monitor soil moisture within the root protection zones of trees being retained, using a Lincoln soil moisture probe/meter or equivalent. If required, inspection reports shall be sent to Mr. Ryan Safty, Associate Planner (rsafty@losgatosca.gov). Sample wordage for a condition of approval regarding monitoring of tree protection and tree condition:

"The required protective fencing shall remain in place until final landscaping and inspection of the project. Project arborist approval must be obtained and documented in a monthly site activity report sent to the Town. A mandatory Monthly Tree Activity Report shall be sent at least once monthly to the Town planner associated with this project (rsafty@losgatosca.gov) beginning with the initial tree protection verification approval letter".

2. Project Team Pre-Project Adjustments, Clarifications, and Limits Suggested or Required:

2a. PRE-DEMOLITION FENCING / TREES #21 AND #25:

Set up chain link fencing per the red dashed line routes shown on the CTA's tree map markup at the end of this report, around trees #21 and #25.

The area to be fenced off for tree #25 root zone protection will measure approximately 50 feet north-south by 15 feet east-west, effectively encompassing the entire southwest corner of the project area, per the CTA's tree protection map.

2b. DEMOLITION / SPECIAL INSTRUCTIONS FOR TREES #26 & #27:

Restrict demolition of the west end of garage foundation footing material to "hand tool hammers only". Pull out the concrete footing at the west end of garage by hand only, taking care to avoid ripping roots of neighbor tree #26 that may be comingled with this foundation footing.

Take care during demolition of the existing garage structure, to avoid damage to one 6 inch diameter limb extending into the demolition airspace from neighbor tree #27.

2c. POST DEMOLITION FENCING / TREE #27:

Immediately (same day as demolition of garage is complete), erect chain link root protection zone fence along the route shown on the CTA's tree protection map at the end of this report, to protect the above-ground canopy of neighbor tree #27.

2d. IRRIGATION FOR TREE #25:

Commence heavy 1x/weekly irrigation of neighbor pine #25 as soon as the chain link root protection zone fence is erected around this tree's root zone (i.e. the entire southwest corner of the project site). The area to be irrigated will be the entire fenced off area 50 feet X 15 feet, at the southwest corner of the site (i.e. a +/- 750 square feet rectangle).

2e. STORM DRAIN (SD) PIPES AND BOXES: The applicant shall push the proposed graded swale, proposed storm drain inlet box, proposed storm drain pipe trench, and the proposed joint trench, all to at least 12 feet from trunk edge of tree #21, so that RPZ fencing can be erected at 10 feet offset radius from the trunk of this tree and maintained at that distance throughout the entire construction project.

2f. LANDSCAPE / IRRIGATION PLANS:

There were no landscape or irrigation plan sheets submitted in the applicant's proposed set of plans. Therefore, damages to existing on-site trees and/or neighbor trees could not be assessed as part of this tree impact study by the CTA.

It is suggested that Town Staff Planners communicate with this applicant to verify whether the applicant is going to submit one or both of these sheets at a later date, as part of their entitlement request.

3. Demolition:

Restrict demolition of the garage footing section adjacent to tree #26 to use of hand-held breaker hammers only.

Pull out materials by hand, to avoid ripping roots out of the ground that are associated with neighbor tree #26.

4. New Irrigation Piping (if applicable):

4a. Review:

Provide an irrigation plan sheet to Town Staff for review. all new irrigation hard PVC pipe trenching shall be offset at least 15 feet from the trunk edge of any tree being retained both on and off site.

For areas within 15 feet of a tree being retained, use only over-grade “trenchless” systems such as flexible ½” diameter tubing that is UV-resistant and rated for installations on-grade, in order to avoid trenching which would otherwise destroy root systems of trees being retained.

5. (Optional) Trunk Buffer Wrap Type III Protection:

Prior to demolition commencement, install trunk buffers around all trees being retained on-site:

Wrap **one (1) entire roll of orange plastic snow fencing around the trunk of each single on-site tree**, between grade and 6 to 8 feet above grade to create a padding of at least 1 to 2 inches thickness around each tree trunk. Stand 2x4 wood boards upright, side by side, around the entire circumference of the orange plastic wraps. Affix using duct tape (do not use wires or ropes). See spec image above right showing the wooden boards correctly mounted against one entire roll of orange snow fencing, such that the wood does not actually touch the trunk at all.

6. (Required) Chain Link Fencing Type I and/or Type II Root Protection Zone (RPZ):

Prior to demolition commencement, erect chain link fencing panels set on moveable concrete block footings (see sample image below right). Wire the fence panels to iron layout stakes pounded 24 inches into the ground at the ends of each fence panel to keep the fence route stabilized and in its correct position. Do not wire the fence panels to the trunks of the trees. These panels are available commonly for rent or purchase.

Alternative Fencing / Tube Posts and Rolled Chain Link: Using a professional grade post bender, pound 7-foot long 2-inch diameter iron tube posts 24-inches into the ground, at 6 to 10-foot spacing maximum on-center, and hang steel chain link fencing material minimum 5-feet height on the tube posts. These materials are available for purchase at many retail and wholesale construction supply houses such as Home Depot, Lowe’s, Grainger’s, White Cap, Harbor Freight, etc.



Pre-demolition fence routes:

See the CTA's red-dashed lines indicating chain link fence routing, on the attached tree map markup (TREES #21 and #25).

Post-demolition fence addition: Add fencing per the black-dashed line on the CTA's tree map markup (TREES #26 and #27).

This fencing must be erected prior to any heavy machinery traffic or construction material arrival on site.

The protective fencing must not be temporarily moved during construction. No materials, tools, excavated soil, liquids, substances, etc. are to be placed or dumped, even temporarily, inside the root protection zone or "RPZ".

No storage, staging, work, or other activities will be allowed inside the RPZ except with PA monitoring.



7. **Signage:** The RPZ fencing shall have one sign affixed with UV-stabilized zip ties to the chain link at eye level for every 15 linear feet of fencing, minimum 8"X11" size each, plastic laminated or printed with waterproof ink on waterproof paper, with wordage that includes the Town Code section that refers to tree fence protection requirements (wordage can be adjusted):

**TREE PROTECTION ZONE FENCE
ZONA DE PROTECCION PARA ARBOLES**

**-NO ENTRE SIN PERMISO-
-LLAME EL ARBOLISTA-**

**REMOVAL OF THIS FENCE IS
SUBJECT TO PENALTY ACCORDING TO
LOS GATOS TOWN CODE 29.10.1025**

**PROJECT ARBORIST:
TELEFONO CELL:**

EMAIL:

Note: Walter Levison, Contract Town Arborist is an independent consultant retained under contract with Town of Los Gatos Planning Division Staff, and is not the "PROJECT ARBORIST".

8. Tree Removal Permitting / Removal of Protected-Size Trees / Mitigation:

Trees #22, 23, and #24 will be removed per plan.

The canopy replacement fee associated with the removal of these three regulated-size trees is \$2,250, per the table in the summary section of this report. Alternatively, up to nine (9) 24" box size trees¹ could be installed at the site, each with two (2) high flow ½" diameter flood bubblers emitting between 1 and 2 gallons per minute each, which would eliminate the fee. In many cases, a combination of fee payment and site mitigation tree installation is appropriate, where full sun tree installation locations are limited, in order to achieve the canopy replacement mitigation required per the tree ordinance.

9. New Plantings / Tree Installation Specs:

Ideally, **two (2) high flow type adjustable bubblers each emitting 1/2 to 2 gallons per minute (2GPM), depending on percolation rate of planting pit**, are set over the rootball of each single tree planting, and each tree is installed with two (2) wooden planting stakes (not the shipping stake), with a set of figure-8 Cinch Ties™ affixed per the standard spec image below right.

Note how the tree stakes are cut to just above the elevation of the Cinch-Ties to avoid abrasion between the stakes and the limbs and trunk during wind movement.

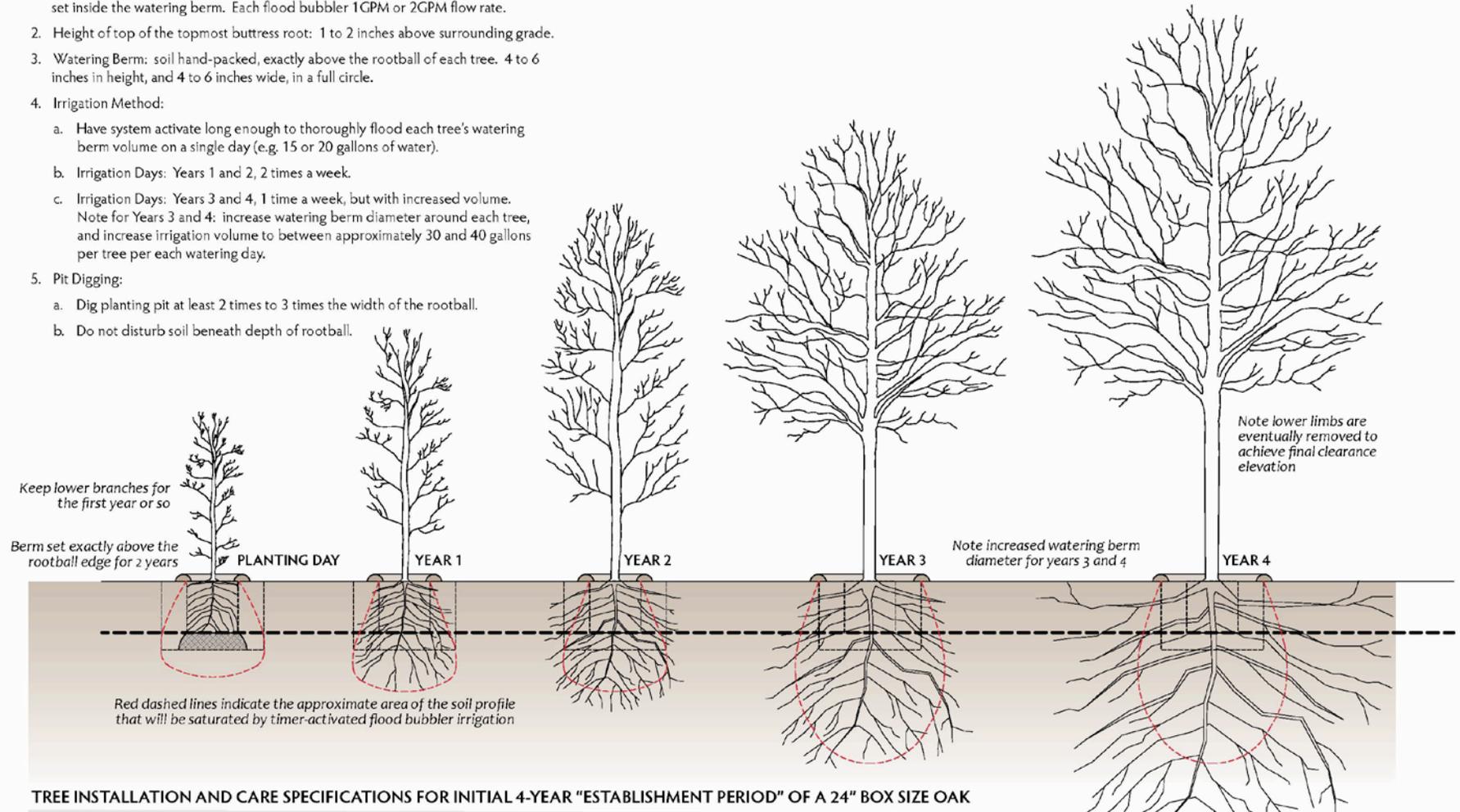
A watering berm consisting of site soil is formed around the edge of the rootball to force irrigation water to pool up directly over the rootball, as seen in the image at right and spec sheet on page 14 of this arborist report.

Right: Spec planting at a site on which the CTA consults, June, 2020. Note that the shipping stake was removed from the mainstem, and a narrow diameter bamboo pole was tied to the mainstem using biodegradable masking tape. This is considered a Best Management Practice for trees that exhibit mainstems leaning off-vertical. Do not allow the large diameter wooden shipping stake to remain tied to the mainstem, as this will cause permanent irreversible problems with tree stability over time.



¹ See Table 3-1 “tree canopy replacement standard”, Town of Los Gatos Tree Ordinance, included below as section 6.0 of this arborist report.

1. Irrigation Feed: 1/2" diameter flex tubing with two flood bubblers per each tree, set inside the watering berm. Each flood bubbler 1GPM or 2GPM flow rate.
2. Height of top of the topmost buttress root: 1 to 2 inches above surrounding grade.
3. Watering Berm: soil hand-packed, exactly above the rootball of each tree. 4 to 6 inches in height, and 4 to 6 inches wide, in a full circle.
4. Irrigation Method:
 - a. Have system activate long enough to thoroughly flood each tree's watering berm volume on a single day (e.g. 15 or 20 gallons of water).
 - b. Irrigation Days: Years 1 and 2, 2 times a week.
 - c. Irrigation Days: Years 3 and 4, 1 time a week, but with increased volume. Note for Years 3 and 4: increase watering berm diameter around each tree, and increase irrigation volume to between approximately 30 and 40 gallons per tree per each watering day.
5. Pit Digging:
 - a. Dig planting pit at least 2 times to 3 times the width of the rootball.
 - b. Do not disturb soil beneath depth of rootball.



(c) Copyright 2020 Walter Levison, Dave Muffly, & Roma Design Group San Francisco

RIGHT: Proper installation of a new 24" box size tree with two (2) high flow type ½ GPM to 2.0 GPM (gallon-per-minute) flood bubblers seen inside a steeply sloped watering berm built using site soil. The berm is built up directly over the rootball edge, which forces irrigation water directly downward into the rootball via gravity.

10. Temporary Irrigation During Construction (If Any):

Volume per week: **Approximately 100 gallons, 1x/week, on a single day.**

Application locations: **Throughout the Monterey pine #25 root zone area to be fenced off (approx. 15 feet X 40 feet).**

Application methods: **Garden hose, etc.**

See image below right showing a 100-foot long soaker hose setup with wood chip mulch around a large coast redwood specimen being retained during construction on a Walter Levison project. Palo Alto, California.

Other over-grade temporary irrigation techniques can be used, including a tow-behind water tank/spray apparatus, water truck, garden hose, high flow type bubblers, etc.



5.0 Tree Protection and Maintenance Directions per Town Code

The following is excerpted directly from the 2015 iteration of the Town of Los Gatos tree ordinance sections which provide specific tree protection directions and limitations on root pruning and above-ground pruning:

Sec. 29.10.1000. New property development.

(a) A tree survey shall be conducted prior to submittal of any development application proposing the removal of or impact to one or more protected trees. The development application shall include a Tree Survey Plan and Tree Preservation Report based on this survey. The tree survey inventory numbers shall correspond to a numbered metal tag placed on each tree on site during the tree survey. The tree survey plan shall be prepared by a certified or consulting arborist, and shall include the following information:

- (1) Location of all existing trees on the property as described in section 29.10.0995;
- (2) Identify all trees that could potentially be affected by the project (directly or indirectly- immediately or in long term), such as upslope grading or compaction outside of the dripline;

- (3) Notation of all trees classified as protected trees;
 - (4) In addition, for trees four (4) inches in diameter or larger, the plan shall specify the precise location of the trunk and crown spread, and the species, size (diameter, height, crown spread) and condition of the tree.
- (b) The tree survey plan shall be reviewed by the Town's consulting arborist who shall, after making a field visit to the property, indicate in writing or as shown on approved plans, which trees are recommended for preservation (based on a retention rating of high/moderate/low) using, as a minimum, the Standards of Review set forth in section 29.10.0990. This plan shall be made part of the staff report to the Town reviewing body upon its consideration of the application for new property development;
- (c) When development impacts are within the dripline of or will affect any protected tree, the applicant shall provide a tree preservation report prepared by a certified or consulting arborist. The report, based on the findings of the tree survey plan and other relevant information, shall be used to determine the health and structure of existing trees, the effects of the proposed development and vegetation removal upon the trees, recommendations for specific precautions necessary for their preservation during all phases of development (demolition, grading, during construction, landscaping); and shall also indicate which trees are proposed for removal. The tree preservation report shall stipulate a required tree protection zone (TPZ) for trees to be retained, including street trees, protected trees and trees whose canopies are hanging over the project site from adjacent properties. The TPZ shall be fenced as specified in section 29.10.1005:
- (1) The final approved tree preservation report shall be included in the building permit set of development plans and printed on a sheet titled: Tree Preservation Instructions (Sheet T-1). Sheet T-1 shall be referenced on all relevant sheets (civil, demolition, utility, landscape, irrigation) where tree impacts from improvements may be shown to occur;
 - (2) The Town reviewing body through its site and design plan review shall endeavor to protect all trees recommended for preservation by the Town's consulting arborist. The Town reviewing body may determine if any of the trees recommended for preservation should be removed, if based upon the evidence submitted the reviewing body determines that due to special site grading or other unusual characteristics associated with the property, the preservation of the tree(s) would significantly preclude feasible development of the property as described in section 29.10.0990;
 - (3) Approval of final site or landscape plans by the appropriate Town reviewing body shall comply with the following requirements and conditions of approval:
 - a. The applicant shall, within ninety (90) days of final approval or prior to issuance of a grading or building permit, whichever occurs first, secure an appraisal of the condition and value of all trees included in the tree report affected by the development that are required to remain within the development using the Tree Value Standard methodology as set forth in this Chapter. The appraisal of each tree shall recognize the location of the tree in the proposed development. The appraisal shall be performed in accordance with the current edition of the Guide for Plant Appraisal published by the Council of Tree and Landscape Appraisers (CTLA) and the Species and Group Classification Guide published by the Western Chapter of the International Society of Arboriculture. The appraisal shall be performed at the applicant's expense, and the appraisal shall be subject to the Director's approval.
 - b. The site or landscape plans shall indicate which trees are to be removed. However, the plans do not constitute approval to remove a tree until a separate permit is granted. The property owner or applicant shall obtain a protected tree removal permit, as outlined in section 29.10.0980, for each tree to be removed to satisfy the purpose of this division.
 - (d) Prior to acceptance of proposed development or subdivision improvements, the developer shall submit to the Director a final tree preservation report prepared by a certified or consulting arborist. This report shall consider all trees that were to remain within the development. The report shall note

the trees' health in relation to the initially reported condition of the trees and shall note any changes in the trees' numbers or physical conditions. The applicant will then be responsible for the loss of any tree not previously approved for removal. For protected trees, which were removed, the developer shall pay a penalty in the amount of the appraised value of such tree in addition to replacement requirements contained in section 29.10.0985 of this Code. The applicant shall remain responsible for the health and survival of all trees within the development for a period of five (5) years following acceptance of the public improvements of the development or certificate of occupancy.

(e) Prior to issuance of any demolition, grading or building permit, the applicant or contractor shall submit to the Building Department a written statement and photographs verifying that the required tree protection fence is installed around street trees and protected trees in accordance with the tree preservation report.

(f) If required by the Director and conditioned as part of a discretionary approval, a security guarantee shall be provided to the Town. Prior to the issuance of any permit allowing construction to begin, the applicant shall post cash, bond or other security satisfactory to the Director, in the penal sum of five thousand dollars (\$5,000.00) for each tree required to be preserved, or twenty-five thousand dollars (\$25,000.00), whichever is less. The cash, bond or other security shall be retained for a period of one (1) year following acceptance of the public improvements for the development and shall be forfeited in an amount equal to five thousand dollars (\$5,000.00) per tree as a civil penalty in the event that a tree or trees required to be preserved are removed, destroyed or severely damaged.

(g) An applicant with a proposed development which requires underground utilities shall avoid the installation of said utilities within the dripline of existing trees whenever possible. In the event that this is unavoidable, all trenching shall be done using directional boring, air-spade excavation or by hand, taking extreme caution to avoid damage to the root structure. Work within the dripline of existing trees shall be supervised at all times by a certified or consulting arborist.

(h) It shall be a violation of this division for any property owner or agent of the owner to fail to comply with any development approval condition concerning preservation, protection, and maintenance of any protected tree.

(Ord. No. 2114, §§ I, II, 8-4-03)

Sec. 29.10.1005. Protection of trees during construction.

(a) Protective tree fencing shall specify the following:

- (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 10-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 2-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 8.5 x 11-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".

(b) 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.

(Ord. No. 2114, §§ I, II, 8-4-03)

Sec. 29.10.1010. Pruning and maintenance.

All pruning shall be in accordance with the current version of the International Society of Arboriculture Best Management Practices—Tree Pruning and ANSI A300-Part 1 Tree, Shrub and Other Woody Plant Management—Standard Practices, (Pruning) and any special conditions as determined by the Director. For developments, which require a tree preservation report, a certified or consulting arborist shall be in reasonable charge of all activities involving protected trees, including pruning, cabling and any other work if specified.

- (1) Any public utility installing or maintaining any overhead wires or underground pipes or conduits in the vicinity of a protected tree shall obtain permission from the Director before performing any work, including pruning, which may cause injury to a protected tree. (e.g. cable TV/fiber optic trenching, gas, water, sewer trench, etc.).
- (2) Pruning for clearance of utility lines and energized conductors shall be performed in compliance with the current version of the American National Standards Institute (ANSI) A300 (Part 1)- Pruning, Section 5.9 Utility Pruning. Using spikes or gaffs when pruning, except where no other alternative is available, is prohibited.
- (3) No person shall prune, trim, cut off, or perform any work, on a single occasion or cumulatively, over a three-year period, affecting twenty-five percent or more of the crown of any protected tree without first obtaining a permit pursuant to this division except for pollarding of fruitless mulberry trees (*Morus alba*) or other species approved by the Town Arborist. Applications for a pruning permit shall include photographs indicating where pruning is proposed.

- (4) No person shall remove any Heritage tree or large protected tree branch or root through pruning or other method greater than four (4) inches in diameter (12.5" in circumference) without first obtaining a permit pursuant to this division.

(Ord. No. 2114, §§ I, II, 8-4-03)

6.0 Tree Replacement Standards – Los Gatos Town Code

(Excerpted from Town Code 29.10.0985 and 29.10.0987)

- (1) Two (2) or more replacement trees, of a species and size designated by the Director, shall be planted on the subject private property. Table 3-1 The Tree Canopy—Replacement Standard shall be used as a basis for this requirement. The person requesting the permit shall pay the cost of purchasing and planting the replacement trees.
- (2) If a tree or trees cannot be reasonably planted on the subject property, an in-lieu payment in an amount set forth by the Town Council by resolution shall be paid to the Town Tree Replacement Fund to:
 - a. Add or replace trees on public property in the vicinity of the subject property; or
 - b. Add or replace trees or landscaping on other Town property; or
 - c. Support the Town’s urban forestry management program. (Ord. No. 2114, §§ I, II, 8-4-03)

Table 3-1 - Tree Canopy - Replacement Standard

Canopy Size of Removed Tree ¹	(Staff is using 24" box size as the Replacement Standard for SFR Projects as of 2016) ^{2,4}	Single Family Residential Replacement ^{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	Not Available
Greater than 55 feet	Ten 24 inch box trees; or Five 36 inch box trees	Not Available

Notes

- 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 Development Standards and Guidelines Appendix A and Section 29.10.0987 Special Provisions--Hillsides.

Sec. 29.10.0987. Special Provisions—Hillsides

The Town of Los Gatos recognizes its hillsides as an important natural resource and sensitive habitat which is also a key component of the Town's identity, character and charm. In order to maintain and encourage restoration of the hillside environment to its natural state, the Town has established the following special provisions for tree removal and replacement in the hillsides:

- (1) All protected trees located 30 or more feet from the primary residence that are removed shall be replaced with native trees listed in *Appendix A Recommended Native Trees for Hillside Areas of the Town of Los Gatos Hillside Development Standards and Guidelines* (HDS&G).
- (2) All protected trees located within 30 feet of the primary residence that are removed shall be replaced as follows:
 - (a) If the removed tree is a native tree listed in Appendix A of the HDS&G, it shall only be replaced with a native tree listed in Appendix A of the HDS&G.
 - (b) If the removed tree is not listed in Appendix A, it may be replaced with a tree listed in Appendix A, or replaced with another species of tree as approved by the Director.
 - (c) Replacement trees listed in Appendix A may be planted anywhere on the property.
 - (d) Replacement trees not listed in Appendix A may only be planted within 30 feet of the primary residence.
- (3) Replacement requirements shall comply with the requirements in Table 3-1 Tree Canopy Replacement Standard of this Code.
- (4) Property owners should be encouraged to retain dead or declining trees where they do not pose a safety or fire hazard, in order to foster wildlife habitat and the natural renewal of the hillside environment.

7.0 Author's Qualifications

- Continued education through The American Society of Consulting Arborists, The International Society of Arboriculture (Western Chapter), and various governmental and non-governmental entities.
- Contract Town Arborist, Town of Los Gatos, California
Community Development Department / Planning Division
2015-present
- Tree Risk Assessment Qualified (ISA TRAQ Course Graduate, Palo Alto, California)
- Millbrae Community Preservation Commission (Tree Board)
2001-2006
- ASCA Registered Consulting Arborist #401
- ASCA Arboriculture Consulting Academy graduate, class of 2000
- Associate Consulting Arborist
Barrie D. Coate and Associates
4/99-8/99
- Contract City Arborist, City of Belmont, California
Planning and Community Development Department
5/99-5/20
- ISA Certified Arborist #WE-3172A
- Peace Corps Soil and Water Conservation Extension Agent
Chiangmai Province, Thailand 1991-1993
- B.A. Environmental Studies/Soil and Water Resources
UC Santa Cruz, Santa Cruz, California 1990

UCSC Chancellor's Award, 1990

(My full curriculum vitae is available upon request)

8.0 Assumptions and Limiting Conditions

Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownership to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised and evaluated as through free and clean, under responsible ownership and competent management.

It is assumed that any property is not in violation of any applicable codes, ordinance, statutes, or other government regulations.

Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant/appraiser can neither guarantee nor be responsible for the accuracy of information provided by others.

The consultant/appraiser shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.

Unless required by law otherwise, the possession of this report or a copy thereof does not imply right of publication or use for any other purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant/appraiser.

Unless required by law otherwise, neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales, or other media, without the prior expressed conclusions, identity of the consultant/appraiser, or any reference to any professional society or institute or to any initiated designation conferred upon the consultant/appraiser as stated in his qualifications.

This report and any values expressed herein represent the opinion of the consultant/appraiser, and the consultant's/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.

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

Unless expressed otherwise:

- a. information contained in this report covers only those items that were examined and reflects the conditions of those items 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 problems or deficiencies of the plants or property in question may not arise in the future.

Loss or alteration of any part of this report invalidates the entire report.

Arborist Disclosure Statement:

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

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

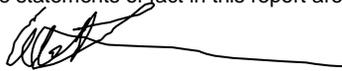
Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate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

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

9.0 Certification

I hereby certify that all the statements of fact in this report are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

Signature of Consultant



10.0 Digital Images

Below: Digital Images by the CTA archived 6/24/2020

Tag #	Image	Tag #	Image
21		22	

23-24



Above center: #23
Above left: #24

25



The root system of this tree likely extends +/-30 to 40 feet east of the property line fence in this image. The roots are visible on grade to 20 feet east of the fence.

25



Closeup of the canopy. This tree appears to be infected by pine pitch canker fungus, which is a pathogen that has no cure. Trees can survive for years with the infection, but typically succumb to premature death at some point, ranging from 1 year to as many as 15 or more years after first symptom of infection. Irrigation can allow for prolonged life with continued vigorous growth. The CTA recommends heavy weekly irrigation for the root system of this tree, which extends far eastward into the proposed project area. See tree map for details.

26



This neighbor tree was not plotted by the applicant. The trunk is roughly 1 foot west of property line. The existing garage foundation to be demolished is shown in this image, at roughly 1 foot east of the property line, and may have been a barrier to tree root growth (not confirmed). The demolition of this footing will need to be performed carefully by hand so as not to destroy the root system of tree #26 which may be comingled with the garage foundation footing.

27



Neighbor's Douglas fir (ID from afar, not 100% verified). Tree overhangs the existing garage to be demolished by at least 7 feet, with a limb measuring 6 inches estimated diameter. The elevation of that limb overhanging the garage ranges from roughly 12 feet to 17 feet above grade, as measured from afar by the CTA using a hypsometer.

27



Zoom view of the overhanging limb extending over the project area garage. The limb appears to be clear or mainly clear of the proposed new residence roof footprint.

11.0 Tree Data Table

NOTE 1: Fruit and nut trees measuring less than 18” diameter (total of all mainstems), including fruiting olive trees, both on the site and on adjacent neighbor properties are excluded from the CTA’s tree studies as “exemption trees” per the Town tree ordinance.

NOTE 2: Tree conservation suitability ratings (CSR) are now based on the 2016 version of *Best Management Practices: Managing Trees During Construction, 2nd Edition*, published by the International Society of Arboriculture. These ratings are linked to tree health, desirability, distance between tree trunk edges and construction impacts such as root cuts and graded fill soil as shown on the applicant’s current-proposed set of plan sheets, species’ tolerance to construction impacts, etc. See the worksheet at the end of this data table for the full breakdown of TCS rating determinations and definitions.

Tree Tag Number	Genus & Species	Common Name	Trunk1 Diameter	Trunk2 Diameter	Trunk3 Diameter	Sum of All Trunk Diameters	Height & Canopy Spread (Ft.)	Health & Structural Rating (100% Each)	Overall Condition Rating (0 to 100%)	(R) Remove Tree	(S) Save Tree	Tree Conservation Suitability Ratings (TCS)	Lopsided Canopy (note direction)	Trunk Lean (note direction)	Girdling Roots	Root Flares Buried in Fill Soil	Pests and Disease Presence, and Other Notes	SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.)	MAINTENANCE AND PROTECTION
21	<i>Platanus chinensis</i> NEIGHBOR-OWNED TREE	Chinese pistache	7.4	--	--	7.4	18/21	85/55	67% Good		X	Poor					Root system may be located beneath the existing concrete driveway. Applicant’s proposed storm drain box, drain line, joint trench, and swale will all need to be pushed out to roughly 12 feet offset from trunk in order to clear the RPZ fence route.	10 feet offset radius from trunk.	RPZ, W, and relocate all proposed construction activities to at least 12 feet offset radius from trunk (joint trench, storm drain box, drain line, and graded swale). Once these items are relocated to 12 feet offset, the ‘TCS’ rating will be Mod or Good.

Tree Tag Number	Genus & Species	Common Name	Trunk1 Diameter	Trunk2 Diameter	Trunk3 Diameter	Sum of All Trunk Diameters	Height & Canopy Spread (Ft.)	Health & Structural Rating (100% Each)	Overall Condition Rating (0 to 100%)	(R)Remove Tree	(S)ave Tree	Tree Conservation Suitability Ratings (TCS)	Lopsided Canopy (note direction)	Trunk Lean (note direction)	Girdling Roots	Root Flares Buried in Fill Soil	Pests and Disease Presence, and Other Notes	SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.)	MAINTENANCE AND PROTECTION
22	<i>Sequoia sempervirens</i>	Coast redwood	19.3	-	-	19.3	50/20	85/85	85% Good	X		Poor					Good live crown ratio. Good live twig density. Tree has poor TCS rating due to its location in conflict with the proposed new residence footprint.	Tree to be removed per plans.	Tree to be removed per plans.
23	<i>Betula pendula</i>	European birch	4.0	--	--	4.0	20/16	60/40	45% Fair	X		Poor	North	North			Apical stem droops to horizontal. Tree shaded out and crowded out by redwood #22. Note indicated on applicant plan sheets. Tree in conflict with proposed new residence footprint.	Tree to be removed	Tree to be removed

Tree Tag Number	Genus & Species	Common Name	Trunk1 Diameter	Trunk2 Diameter	Trunk3 Diameter	Sum of All Trunk Diameters	Height & Canopy Spread (Ft.)	Health & Structural Rating (100% Each)	Overall Condition Rating (0 to 100%)	(R)Remove Tree	(S)ave Tree	Tree Conservation Suitability Ratings (TCS)	Lopsided Canopy (note direction)	Trunk Lean (note direction)	Girdling Roots	Root Flares Buried in Fill Soil	Pests and Disease Presence, and Other Notes	SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.)	MAINTENANCE AND PROTECTION
24	<i>Betula pendula</i>	European birch	4.9	-	-	4.9	30/15	35/40	36% Poor	X		Poor					Live twig density very poor. Tree not noted on plans, but will be removed due to conflict with proposed new residence footprint.	Tree to be removed	Tree to be removed
25	<i>Pinus radiata</i> NEIGHBOR-OWNED TREE	Monterey pine	Est. 25	-	-	Est. 25	50/40	35/35	35% Poor		X	Poor	South	South			Pine pitch canker fungus infection noted on at least 4 branches. 3 to 7 years of remaining life, or more, depending on volume of irrigation it is provided with. Note root system extends at least 20 feet eastward, possibly far greater, into the project area.	15 feet east of the rear property line fence, and a north-south run of 40 to 50 feet, per the CTA's tree map markup.	W, RPZ fencing.

Tree Tag Number	Genus & Species	Common Name	Trunk1 Diameter	Trunk2 Diameter	Trunk3 Diameter	Sum of All Trunk Diameters	Height & Canopy Spread (Ft.)	Health & Structural Rating (100% Each)	Overall Condition Rating (0 to 100%)	(R)Remove Tree	(S)ave Tree	Tree Conservation Suitability Ratings (TCS)	Lopsided Canopy (note direction)	Trunk Lean (note direction)	Girdling Roots	Root Flares Buried in Fill Soil	Pests and Disease Presence, and Other Notes	SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.)	MAINTENANCE AND PROTECTION
26	<i>Lagerstroemia hybrid</i> NEIGHBOR-OWNED TREE	Crape myrtle	Est. 7	-	-	Est. 7	22/24	50/50	50% Fair		X	Mod					Tree vigor is declining due to soil moisture deficit. I expect root system to be comingled with the garage foundation footing. Use hand-tools to break out and remove foundation to avoid damaging the tree's roots that extend into the project area.	Existing fence acts as a pseudo RPZ fence.	Special demolition methods required to avoid damage to root system during demo of garage footing.
27	<i>Pseudotsuga menziesii</i> NEIGHBOR-OWNED TREE	Douglas fir	Est. 16	--	--	Est. 16	--/35	70/65	65% Good		X	Good					Canopy appears to extend at least 7 feet southward past the property line, over the existing garage to be demolished. Canopy appears to be clear of new residence root airspace.	Existing fence will be the effective RPZ. Trunk is well offset from property line. One 6" diameter limb may be affected by demo.	RPZ erect after demolition complete. Take care during demo of the (e) garage structure, to avoid damage to the 6" diameter limb extending southward over the garage.

Overall Tree Condition Ratings / Breakdown of Numeric Ranges

(New, Per *Guide for Plant Appraisal, 10th Edition*):

00 - 05% = Dead

06 - 20% = Very Poor

21 - 40% = Poor

41 - 60% = Fair

61 - 80% = Good

81 - 100% = Exceptional

Tree Conservation Suitability (TCS) Ratings²

A tree's suitability for conservation is determined based on its health, structure, age, species and disturbance tolerances, proximity to proposed cutting and filling, proximity to proposed construction or demolition, and potential longevity, using a scale of good, fair, or poor (Fite, K, and Smiley, E. T., 2016). The following list defines the rating scale. Note that if proposed site work can be offset to farther linear distances from a tree's trunk edge, a tree's TCS rating may be elevated by one rating tier, given that there would be a corresponding reduction in expected future root zone impacts.

TPS Ratings	Range of values	
Good	80-100	Trees with good health, good structural stability and good expected longevity after construction.
Moderate	60-79	Trees with fair health and/or structural defects that may be mitigated through treatment. These trees require more intense management and monitoring, before, during, and after construction, and may have shorter life expectancy after development.
Poor	<59	Trees are expected to decline during or after construction regardless of management. The species or individual may possess characteristics that are incompatible or undesirable in landscape settings or unsuited for the intended use of the site.

TCS Ratings Worksheet Factors (Total Possible: 100 Points)

Health (1-15)
Root Cut/Fill Distance from Trunk (1-15)
Structure Defects (1-15)
Construction Tolerance of the tree species (1-15)
Age relative to typical species lifespan (1-10)
Location of construction activity (1-10)
Soil quality/characteristics (1-10)
Species desirability (1-10)

² Derived from Fite and Smiley, 2016. *Best Management Practices: Managing Trees During Construction, 2nd Edition*. International Society of Arboriculture.

Tree Maintenance and Protection Codes Used in Data Table:

RPZ: Root protection zone fence, chain link, with 2" diameter iron posts driven 24" into the ground, 6 to 8 feet on center max. spacing. Alternative material: chain link fence panels set over concrete block-type footings, with the fence panels wired to steel pins pounded 24 inches into the ground at both ends of each panel.

RB: Root buffer consisting of wood chip mulch lain over existing soil as a 12 inch thick layer, overlain with 1 inch or greater plywood strapped together with metal plates. This root buffer or soil buffer should be placed over the entire width of the construction corridor between tree trunks and construction.

RP: Root pruning. Prune woody roots measuring greater than or equal to 1 inch diameter by carefully back-digging into the soil around each root using small hand tools until an area is reached where the root is undamaged. Cleanly cut through the root at right angle to the root growth direction, using professional grade pruning equipment and/or a Sawzall with wood pruning blade. Backfill around the cut root immediately (same day), and thoroughly irrigate the area to saturate the uppermost 24 inches of the soil profile.

BDRP: Back-dig root pruning: Hand-dig around the broken root, digging horizontally into the open soil root zone until a clean, unbroken, unshattered section of the root is visible. Proceed as per 'root pruning'.

RCX: Root crown excavation. Retain an experienced ISA-Certified arborist to perform careful hand-digging using small trowels or other dull digging tools to uncover currently-buried buttress root flares. Digging shall occur between trunk edge and at least two (2) feet horizontal from trunk edge. The final soil elevation will be at a level such that the tree's buttress roots visibly flare out from the vertical trunk.

TB: Trunk buffer consists of 20-40 wraps of orange plastic snow fencing to create a 2 inch thick buffer over the lowest 8 feet of tree trunk (usually takes at least an entire roll of orange fencing per each tree). Lay 2X4 wood boards vertically, side by side, around the entire circumference of the trunk. Secure buffer using duct tape (not wires).

F: Fertilization with slow-release Greenbelt 22-14-14 tree formula, as a soil injection application using a fertilizer injection gun. This brand and formulation is commonly used by reputable tree care companies in the Bay Area. Apply at label rate and injection hole spacing.

M: 4-inch thick layer of chipper truck type natural wood chips (example source: Lyngso Garden Supply, self pick-up). Do not use bark chips or shredded redwood bark.

W: Irrigate using various methods to be determined through discussion with General Contractor. Irrigation frequency and duration to be determined through discussion and/or per directions in this report. Native oak species typically require 1x/month irrigation, while other tree species tend to prefer 2x/month or 4x/month moderate to heavy irrigation during construction.

P: Pruning per specifications noted elsewhere. All pruning must be performed only under direct site supervision of an ISA Certified Arborist, or performed directly by an ISA Certified Arborist, and shall conform to all current ANSI A300 standards.

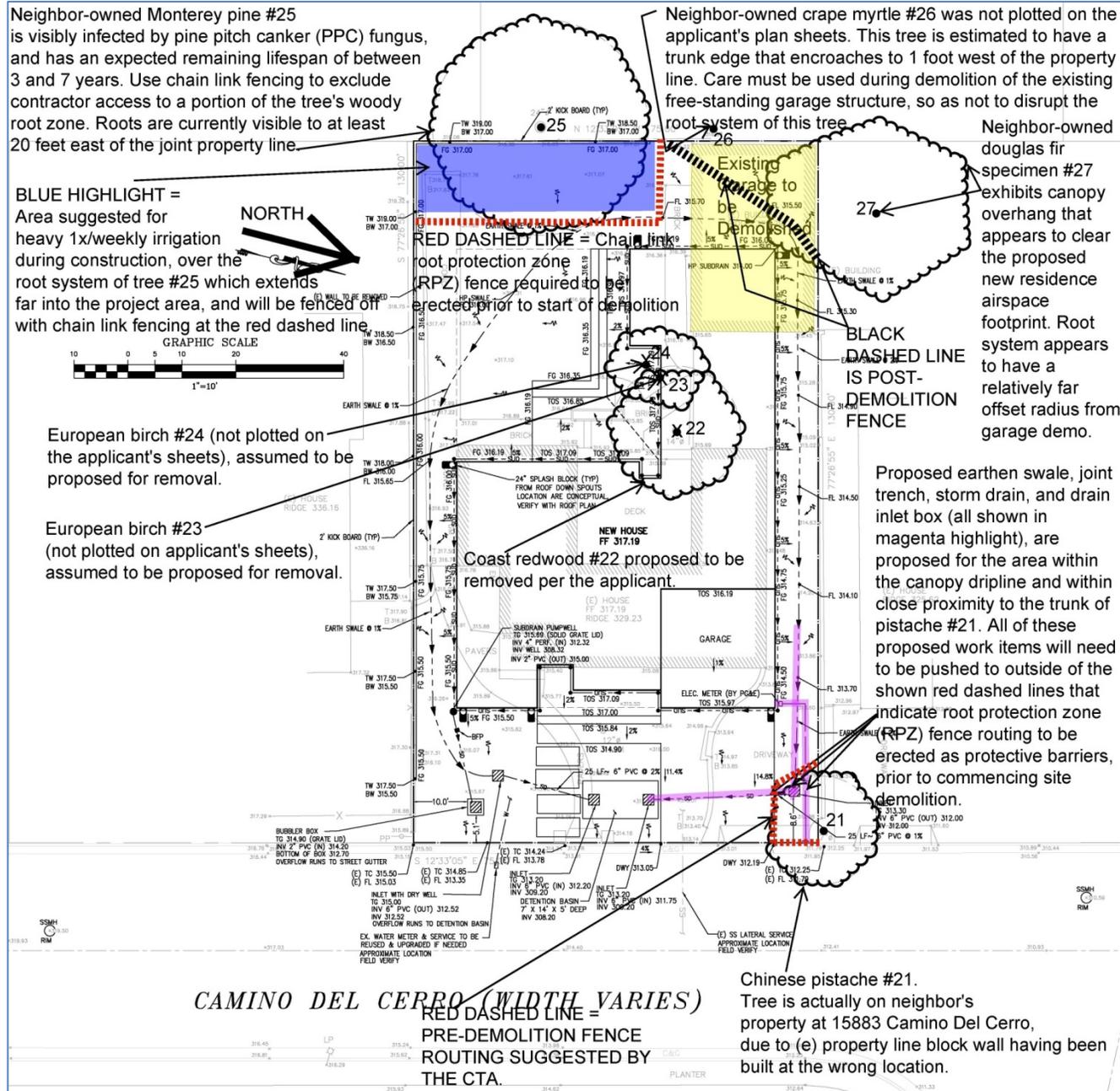
MON: A Project Arborist must be present to monitor specific work as noted for each tree.

12.0 Attached: Tree Location & Protection Fence Map Mark-up by the CTA

The CTA marked up the applicant's sheet C-2 grading and drainage plan.

The CTA added the following items to this sheet for reference purposes:

- a. Tree tag numbers are noted in black numeric oversized type.
- b. Tree plot dots are in some cases blackened for clarity. The locations of **neighbor trees** were rough-plotted by the CTA, as they were not surveyed by the applicant's survey team. Trees #23 and #24 were also not plotted by the applicant's surveyor.
- c. Canopy driplines were drawn out by the CTA to approximate scale, using black clouding.
- d. Red dashed lines indicate chain link fencing tree root protection zones or root protection zones (TPZ or RPZ).
- e. Blue highlight indicates area to be irrigated 1x/week over the root zone of neighbor pine #25.
- f. Yellow highlight indicates the existing garage to be demolished.
- g. Magenta lines indicate applicant's current proposed routing of storm drain, swale, drain box, and joint trench, which violate the CTA's proposed RPZ chain link tree protection zone fence route. These items are suggested to be pushed to 12 feet offset radius from tree #21, to avoid conflict with the tree's root system and conflict with the tree protection fence which will be at 10 feet offset from tree.



13.0 Attached: Appraisal Worksheet by the CTA

This appraisal worksheet was prepared using the 10th edition of the Guide for Plant Appraisal, 2nd Printing (2019). The dollar values of each survey tree derived from these calculations are useful in helping determine the monetary fines for construction team violations of the Town of Los Gatos tree ordinance, and for other Town Staff purposes. For instance, if a tree is found by an ISA Certified Arborist (e.g. the Project Arborist, or the Contract Town Arborist) to be “50% damaged” in terms of below and/or above-ground losses to structure and/or health (vigor), the fine assessed on the construction team might be calculated as 50% of the tree’s appraised dollar value.



Valuation Appraisal Worksheet Based on *Guide for Plant Appraisal, 10th Edition*, 2nd Printing (2019)

"Functional Replacement Method / Trunk Formula Technique"

7/20/2020

15897 Camino Del Cerro, Los Gatos, CA

Tree Tag #	Name (Initials)	WCISA Speces Group Classification Booklet Page	Health (Weighted 0.15)	Structure (Weighted 0.70)	Form (Weighted 0.15)	Overall Condition Rating (OCR) "Weighted Method"	Diameter Inches at 4.5 ft. Above Grade	Depreciation Factors		WCISA Species Group Number	Trunk Square Inches for Replacement-Size Specimen of This Species	Average SF Bay Area Cost of 24 Inch Box Tree (2019)	Line 9	Line 10	Line 11	Rounded-off Appraised Values	
								Functional Limitations	External Limitations				(UTC) Unit Tree Cost per Sq Inch (M Divided by L)	Basic Functional Replacement Cost (BFRC) = (OxN)	Depreciated Functional Replacement Cost (DFRC) = PxGxIxJ		
21	Pc	25	0.85	0.57	0.85	65%	7.4	50%	90%	2	2.24	\$250.00	\$111.61	42.99	\$ 4,798	\$ 1,412	\$1,410
22	Ss	34	0.85	0.85	0.8	84%	19.3	80%	90%	4	4.75	\$250.00	\$52.63	292.40	\$ 15,390	\$ 9,335	\$9,300
23	Bp	6	0.6	0.4	0.35	42%	4	40%	90%	3	3.8	\$250.00	\$65.79	12.56	\$ 826	\$ 126	\$130
24	Bp	6	0.25	0.35	0.65	38%	4.9	60%	90%	3	3.8	\$250.00	\$65.79	18.85	\$ 1,240	\$ 254	\$250
25	Pr	25	0.35	0.35	0.75	41%	25	75%	90%	4	4.75	\$250.00	\$52.63	490.63	\$ 25,822	\$ 7,146	\$7,100
26	Lhy	19	0.5	0.5	0.75	54%	7	60%	90%	1	2.09	\$250.00	\$119.62	38.47	\$ 4,601	\$ 1,335	\$1,340
27	Pm	29	0.7	0.65	0.75	67%	16	65%	90%	4	4.75	\$250.00	\$52.63	200.96	\$ 10,577	\$ 4,161	\$4,160

Valuation Appraisal Worksheet Based on *Guide for Plant Appraisal, 10th Edition*, 2nd Printing (2019)
"Functional Replacement Method / Trunk Formula Technique"

7/20/2020

15897 Camino Del Cerro, Los Gatos, CA

Tree Tag #	Name (Initials)	WCISA Species Group Classification Booklet Page	Health (Weighted 0.15)	Structure (Weighted 0.70)	Form (Weighted 0.15)	Overall Condition Rating (OCR) "Weighted Method"	Diameter Inches at 4.5 ft. Above Grade	Depreciation Factors		WCISA Species Group Number	Trunk Square Inches for Replacement-Size Specimen of This Species	Average SF Bay Area Cost of 24 Inch Box Tree (2019)	Line 9 (UTC) Unit Tree Cost per Sq Inch (M Divided by L)	Trunk Area (TA) ((dia. x dia.) x 0.785)	Line 10 Basic Functional Replacement Cost (BFRC) = (OxN)	Line 11 Depreciated Functional Replacement Cost (DFRC) = PxGxIxJ	Rounded-off Appraised Values
<p>Notes:</p> <p>1. (NEWLY REVISED) OVERALL CONDITION RATING RANGE per the new 10th edition, 2nd Printing, of <i>Guide for Plant Appraisal</i> (2019): Excellent: 81-100% Good: 61-80% Fair: 41-60% Poor: 21-40% Very Poor: 6-20% Dead: 0-5%</p> <p>2. MULTI STEM TREES: For trees with multiple mainstems, the total of all mainstem cross sectional areas was used as the "trunk area" calculation. For trees with mainstems larger than 30 inches diameter each, an "adjusted trunk area" or "ATA" value is used, from a table of values in the older 9th edition of the <i>Guide for Plant Appraisal</i>. The ATA value is smaller than the actual trunk diameter, and brings the tree's appraised dollar value down to a more "reasonable" level.</p> <p>3. NEIGHBOR TREES: For neighbor-owned trees that were not accessible by the CTA, the trunk diameter was estimated from a distance to the best of the CTA's ability.</p> <p>4. CONDITION RATINGS / APPRAISAL TABLE VS. DATA TABLE: Because of the new appraisal methods outlined in the 2019 edition of the <i>Guide for Plant Appraisal</i>, 10th edition 2nd printing, the condition ratings calculated in the "Overall Condition Rating / Weighted Method" column, and the data noted in the health and structure columns of this spreadsheet (with calculations embedded), may in some cases be slightly different from data in the CTA's arborist report tree data table. The CTA attempted to keep overall condition rating values as consistent as possible between the two data tables (i.e. the appraisal data table and the tree data table in the arborist report).</p>																Total Appraised Value of All Study Trees	\$23,690