

**Assessment of Four (4) Protected-Size Trees
at
102 Alta Heights Court
Los Gatos, California**

Prepared for:
Mr. 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)
10/25/2020

Report by CTA
11/3/2020

Table of Contents

1.0 Summary	3
2.0 Assignment & Background	6
3.0 Town of Los Gatos – What Trees are Protected?	6
4.0 Recommendations	8
5.0 Tree Protection and Maintenance Directions per Town Code	16
6.0 Tree Replacement Standards – Los Gatos Town Code	19
7.0 Author’s Qualifications	22
8.0 Assumptions and Limiting Conditions	23
9.0 Certification	24
10.0 Digital Images	24
11.0 Tree Data Table	29
12.0 Tree Location & Protection Fence Map Mark-up by the CTA	36
13.0 Attached: Appraisal Worksheet by the CTA	38

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 on site, and adjacent to the site). 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.

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

1 Tree Tag Number / Overall Condition Rating/ Disposition	2 Impacts Expected if Site were Built as Currently Proposed on Applicant Sheet A1.0.	3 Large Protected Tree (LPT)? Tree Conservation Suitability Rating (TCS)?	4 Appraised Value ¹	5 Critical Root Zone (CRZ) (6 X Dia.) as an Offset Radius	6 Suggested Changes to Applicant's Proposed Plans to Boost Tree Conservation Suitability Rating (TCS) to "Moderate" or "Good", if Tree is to be Preserved and Protected. Suggested Root Protection Zone (RPZ) Chain Link Fence Offset Radius.	7 Replacement Rate Per Canopy Lost	8 Replacement Size Tree
71 POOR REMOVE	Tree will be severely impacted by proposed new foundation footing and airspace conflicts.	No. Poor	\$2,050.	6.5 feet offset.	Assume tree is to be removed.	4 X \$250 = \$1,000.	15 gallon or 24" box
72 POOR REMOVE	Tree will be severely impacted by proposed new foundation footing, airspace conflicts, and assumed gas pipe trenching during gas pipe diameter upgrade.	No. Poor	\$5,000.	8.7 feet offset.	Assume tree is to be removed.	4 X \$250 = \$1,000.	15 gallon or 24" box
73 GOOD RETAIN	Minor.	No Moderate	\$800.	2.1 feet	No applicant plan changes required. Maintain chain link RPZ fencing per the CTA's tree map markup embedded in this report, and 5 feet to 8 feet RADIUS offset from trunk edge, and use hand-watering or timer type irrigation to maintain soil moisture during the project buildout.	2 X \$250 = \$500.	15 gallon or 24" box

¹ Calculated per the newest edition (10th edition, 2nd Printing) of *Guide for Plant Appraisal*, 2019. The Trunk Formula Technique (TFT) was the specific technique noted in the Guide used to determine the dollar valuations noted in Table 1.0(a). Palm appraisals are performed differently, using a calculation of replacement cost, and then multiplying that cost by a condition rating factor and a functional limitations factor.

1 Tree Tag Number / Overall Condition Rating/ Disposition	2 Impacts Expected if Site were Built as Currently Proposed on Applicant Sheet A1.0.	3 Large Protected Tree (LPT)? Tree Conservation Suitability Rating (TCS)?	4 Appraised Value ¹	5 Critical Root Zone (CRZ) (6 X Dia.) as an Offset Radius	6 Suggested Changes to Applicant's Proposed Plans to Boost Tree Conservation Suitability Rating (TCS) to "Moderate" or "Good", if Tree is to be Preserved and Protected. Suggested Root Protection Zone (RPZ) Chain Link Fence Offset Radius.	7 Replacement Rate Per Canopy Lost	8 Replacement Size Tree
74 GOOD RETAIN	<p>Moderate to Severe.</p> <p>Root loss will occur during foundation footing work west of the trunk, where new foundation will be poured closer to the trunk edge than the original existing residence foundation edge.</p> <p>New roof peak is roughly 28.5 feet elevation above grade at centerline of garage, which is +/- 20 horizontal feet east of the trunk.</p> <p>Canopy extends 75 feet diameter (mainly southwestward over the adjoining neighbor property), and appears to be mainly clear of proposed new residence roof peak elevations.</p>	Yes Moderate	\$23,900.	CRZ 18 feet offset radius, which is not going to be able to be achieved except along the west side of the rear yard, where fencing can be erected out to roughly 50 feet from trunk.	<p>The proposed new plan shows new foundation work along much of the existing residence foundation footing edge, with a new bumpout of 5.5 lateral feet west of the existing foundation in the area directly east of trunk. Given the proposed configuration as shown on the October 2020 site plan iteration, the expected impacts to the oak #74 root system will be moderate, assuming that protective chain link fencing will be erected as shown on the CTA's tree protection map markup embedded in this arborist report.</p> <p>In a perfect world, the "ideal" new foundation work would match the existing older edge of foundation exactly, to minimize or eliminate all new work west of the existing older residence foundation footprint.</p>	10 X \$250 = \$2,500.	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 at and adjacent to the Lora Drive property.

The CTA assessed the set of site plans dated September, 2020, and a single sheet A1.0 updated 10/13/2020 which was used as the CTA's tree map markup embedded in this report.

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. The CTA's tags are professional grade racetrack shaped aluminum tags numbering "71" through "74".

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 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 kelloggii*), 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 melanoxydon* (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 tree specimens.

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. Tree Protection Fencing and Trunk Buffer Wraps:

Fence off **trees #73 and #74** using chain link fencing per the distances indicated as red dashed lines shown to scale on the CTA’s tree map markup below in this arborist report. The fencing for tree #74 will range from 8 feet radius offset from trunk in the area directly east of trunk, to 50 feet offset radius in the area north of trunk (along the west side of the rear yard).

Install trunk buffer wrap around **tree #74** per the specifications listed below in this recommendations section of the arborist report.

2b. Ground Protection:

Install ground protection along the west side yard area west of the proposed garage footprint, to prevent soil rutting and soil compaction during proposed demolition of existing residence, and proposed new residential build work. Specifications are indicated below in this section of the arborist report.

2c. Pruning:

Perform minor (10% to 15% of total biomass) limb length reduction pruning (aka “limb endweight reduction pruning”) at the outermost ends of the southwest section of the canopy of **tree #74**. All pruning will need to conform to the most current iterations of ANSI A300 pruning standards and the Best Management Practices Pruning booklet that accompanies the ANSI A300 standards. Details are indicated below in this section of the arborist report.

3. Trunk Buffer Wrap Type III Protection:

Prior to demolition commencement, install trunk buffer around **tree #74** being retained on-site.

Wrap **one (1) entire roll of orange plastic snow fencing around the trunk of tree #74**, between grade and up to 6 or 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 at 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.

4. (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.

Fence routes: Per the red dashed lines indicated on the CTA's tree map markup, drawn to scale, below in this arborist report.

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.



5. 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".

6. Ground Protection:

Project team contractors shall install ground protection “soil buffer” prior to start of demolition of the existing residence, in order to avoid soil compaction and soil rutting caused by machinery use, foot traffic, and other high ground pressure type activities.

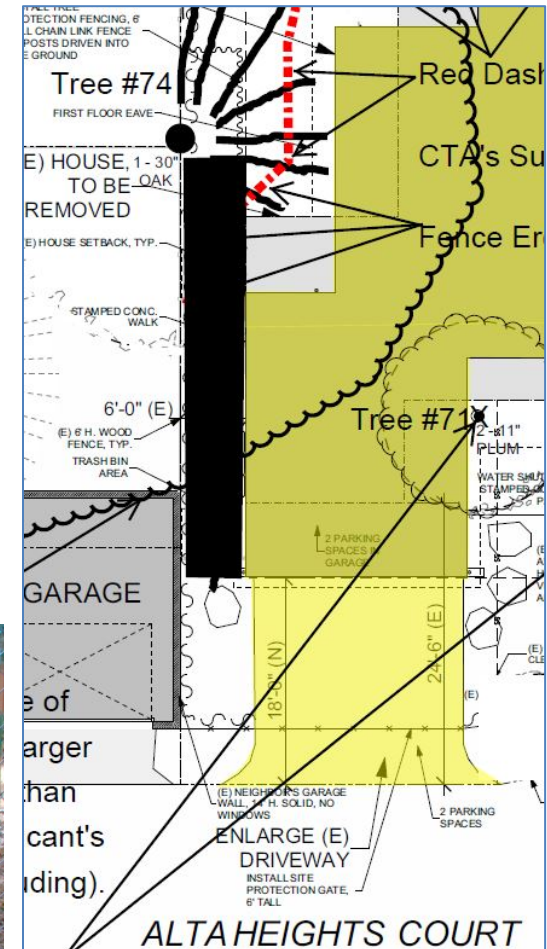
Location:

The ground protection shall be set up over the entire west side yard of the site, between tree #74 trunk, and southward to the proposed driveway (see black rectangle area on the markup at right).

Construction of:

The ground protection soil buffer shall consist of:

- Geotextile fabric laid down over the ground.
- 6 inches thickness wood chip mulch laid over the geotextile.
- 1 inch thick exterior grade plywood boards (full sheets), set side by side over the wood chips.
- Steel screw plates to affix the plywood sheets together, side by side.
- (See photo at right for example of correctly-installed soil buffer on a site where trees were protected using chain link fence panels, trunk buffers, and the complete soil buffer system as described on this page.



7. Tree Removals:

It is suggested that Town Staff allow the applicant to remove **trees #71 and #72** due to their locations in close proximity to proposed new work, which will cause both root loss below ground and canopy loss above ground, resulting in premature decline or death of the trees.

Mitigation Options

The canopy replacement mitigation standard for loss of these two regulated size trees, per the CTA's summary table in section 1.0 of this report, is \$2,000, or on-site installation of eight (8) 15 gallon size or 24" box size tree plantings with high flow type flood bubbler irrigation (two bubblers emitting 2 gallons per minute each, per each tree).

Given the limited available land at this project site that has full sun access appropriate for installation of new landscape trees, the maximum number of new plantings will likely need to be limited to between two (2) and four (4) new tree plantings.

The mitigation requirement can be either \$2,000, or a combination of both on-site tree plantings and a fee payment.

On-site plantings need to be minimum 15 gallon size (24" box size is optional), of a species or multiple species approved by Town Staff.

8. Pruning / Oak #74:

Retain a tree care company to perform limb endweight reduction pruning (aka "branch length reduction pruning"), consisting of removal of selected branches **only from the outermost section of the southwest portion of the tree #74 canopy, not to exceed 10% or 15% of total live biomass.**

Do NOT thin or otherwise remove any material from the lower or inner areas of the canopy.

The goal is to shorten the southwest section of canopy by removing only certain end sections of branches from that southwestmost section of the canopy, which reduces endweight of the limb systems extended in that direction, resulting in a reduction of load forces acting on the limb attachment points, and reducing risk of limb splitout.

All work will have to be performed directly by or under direct full-time site supervision by an ISA Certified Arborist, and will need to conform to all of the most current iterations of ANSI A300 standards for tree care operations "Pruning", and the most current Best Management Practices Pruning booklet that accompanies the ANSI A300 pruning standards.

The most current ANSI A300 pruning standard is (Part 1) Pruning 2017. The most current *Best Management Practices Pruning* booklet by International Society of Arboriculture is the 3rd edition (2019). Some excerpts from the BMP booklet:

- **Page 26: (Reduction Cuts):** "When possible, avoid large (greater than 4 inches diameter) reductions cuts.....". The CTA recommends only removing branches that are up to 2 or 3 inches diameter at the most, during the limb length reduction pruning in the southwest end of the canopy.
- **Page 31: (Making Pruning Cuts):** "Large or heavy branches should be precut using three cuts to avoid splitting the wood or tearing the bark".

9. New Plantings / Tree Installation Specs (if applicable):

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) or three (3) 2-inch diameter wooden planting stakes (not the shipping stake), with a set of figure-8 Cinch Ties™ affixed per the standard spec image at 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 below in this arborist report.

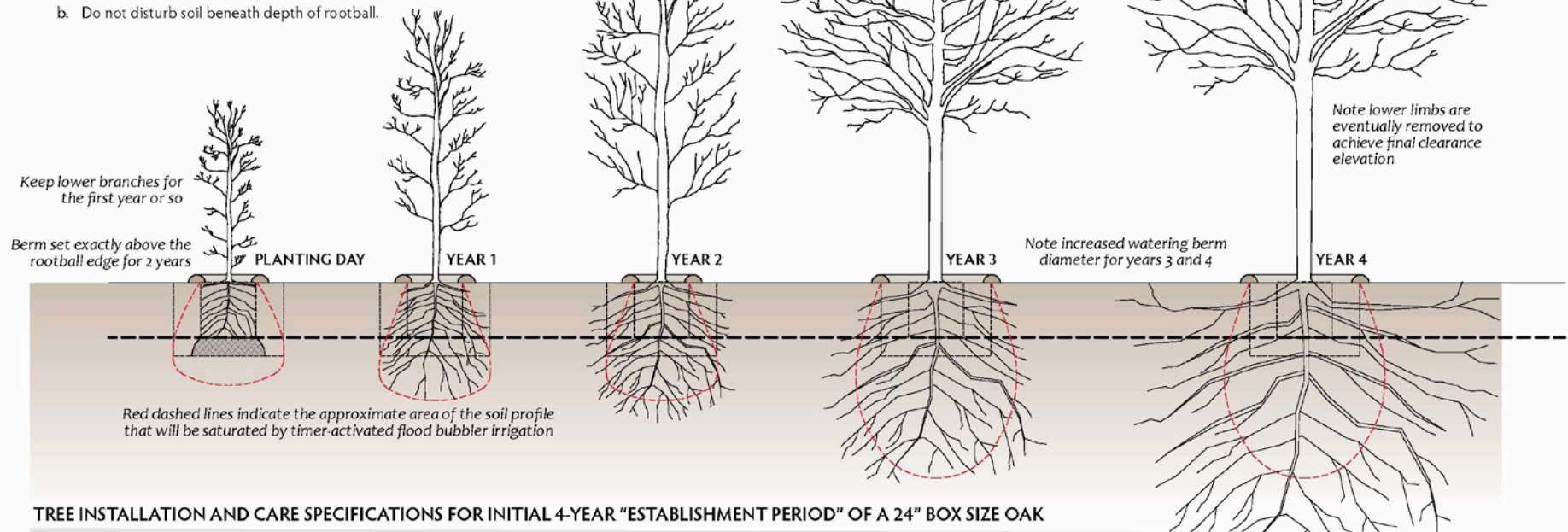
Above Right: Spec planting at a site on which the CTA consults, June, 2020. Note that the shipping stake was removed from the mainstem, and a narrow diameter bamboo pole was tied to the mainstem using biodegradable masking tape. This is considered a Best Management Practice at this particular site, because the mainstem was 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.**

Below 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 watering berm is built up directly over the rootball edge, which forces irrigation water directly downward into the rootball via gravity. Total volume of water flow typically needs to be at least +/-1 gallon per minute, in order to physically flood the watering berm and force water downward into the rootball via gravity flow.

Next Page: Walter Levison and Dave Muffly Planting Spec Sheet, indicating correct irrigation and watering berm building procedures for first 4 years (sandy soils may require significantly greater irrigation volume than indicated).



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.



TREE INSTALLATION AND CARE SPECIFICATIONS FOR INITIAL 4-YEAR "ESTABLISHMENT PERIOD" OF A 24" BOX SIZE OAK

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

10. Temporary Irrigation During Construction:

It is suggested that the applicant's project arborist monitor soil moisture using a soil moisture probe and/or a soil recovery device, to ensure that root zones are being kept irrigated to field capacity soil moisture per the following irrigation regime:

- a. **Crape myrtle #73 at right side of rear yard: 50 to 100 gallons per week, applied 1x/week.**
 - b. **Coast live oak #74 at left side yard west of garage: (To be determined by project arborist. Tree may or may not require irrigation to boost soil moisture. Coast live oaks can in some cases decline in condition if irrigation water is applied within 25 feet of the trunk. Therefore, any irrigation of the tree would need to occur in the area north of trunk in the west portion of the rear yard only).**
- Apply indicated water volume all on a single day during a single application, such as by garden hose running at high volume, or a soaker hose running on a timer system attached to an active hose bib at standard residential water pressure (e.g. 60psi to 70psi).
 - If runoff of water will be a problem, then build a 6 inch tall watering berm along the chain link fence perimeters to contain the irrigation water and force it downward via gravity.
 - Alternatively, a straw wattle can be pinned down over the ground using wooden dowels, as a quick watering berm that may be far more easily maintained than a soil watering berm that is subject to damage by construction personnel foot traffic, etc. See sample image below as an example of how this is done.



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 trees	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 (21 Years)
- 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



Walter Levison, Consulting Arborist

DIGITAL BADGES:

ISA CERTIFIED ARBORIST CREDENTIAL:

https://certificates.isa-arbor.com/d180515f-ab75-440b-9c66-106005e3cf10?record_view=true#gs.hpaw8u

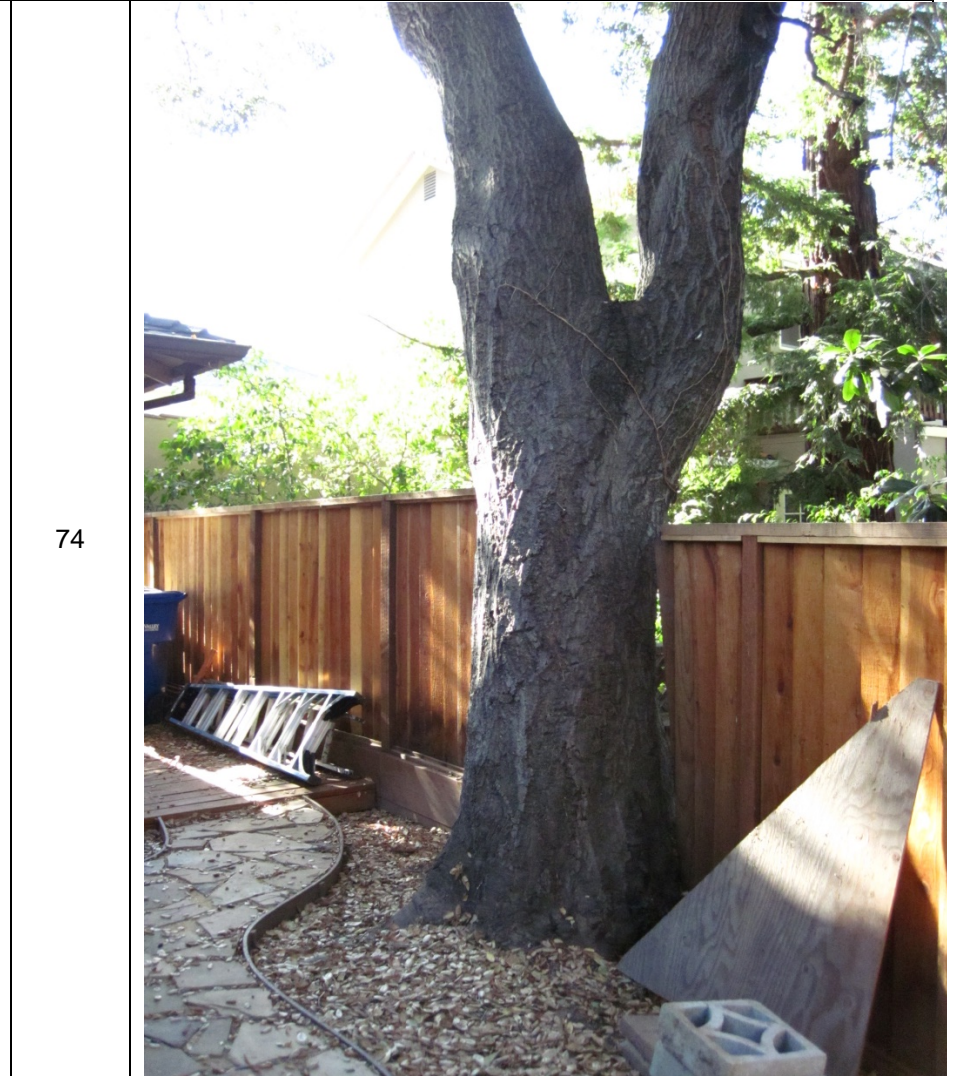
ISA TREE RISK ASSESSMENT QUALIFIED (TRAQ):

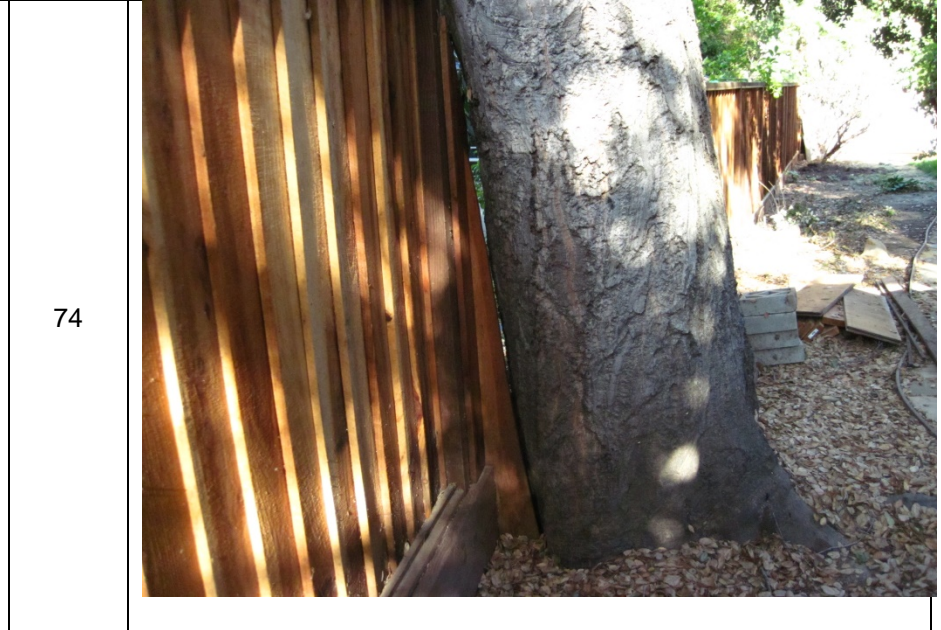
https://certificates.isa-arbor.com/d180515f-ab75-440b-9c66-106005e3cf10?record_view=true#gs.hpb30w


10.0 Digital Images

Below: Digital Images by the CTA archived 11/3/2020:

Tag #	Image	Tag #	Image
71		72	





74		--	(Intentionally Blank)
----	---	----	-----------------------

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.

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	(TCS) Tree Conservation Suitability Rating	Lopsided Canopy (note direction)	Trunk Lean (note direction)	Pests and Disease Presence, and Other Notes	SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.)	MAINTENANCE AND PROTECTION
71	<i>Pyrus kawakamii</i>	Evergreen pear	12.9	--	--	12.9	30/30	40/35	38% Poor	X		Poor	South	South	Tree located 1 foot or less from the proposed new residence foundation footing edge, and is assumed to be proposed for removal due to direct impact from this work. Some evidence of fireblight bacteria infection noted. Tree has been severely pruned over the years, which has permanently damaged the branch architecture assemblages. Also note that the canopy conflicts with the proposed new residence and garage footprints.	(Tree assumed to be removed)	Not applicable.

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	(TCS) Tree Conservation Suitability Rating	Lopsided Canopy (note direction)	Trunk Lean (note direction)	Pests and Disease Presence, and Other Notes	SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.)	MAINTENANCE AND PROTECTION
72	<i>Pyrus kawakamii</i>	Evergreen pear	17.4	-	-	17.4	30/30	50/40	45% Fair	X		Poor	South		<p>Tree located 3 feet or less from the proposed new residence foundation footing edge, and is assumed to be proposed for removal due to direct impact from this work.</p> <p>Also note the existence of a gas line that is almost directly in line with this tree trunk location. Typically, most or all existing gas lines are required to be upgraded (removed and replaced) during residential rebuilds. Therefore, it is assumed that this gas line will be dug out and replaced as part of the proposed residence rebuild, which will require removal of the tree if it is performed in-line with the trunk as currently shown.</p> <p>The canopy conflicts with the proposed new residence footprint.</p> <p>Some evidence of fireblight bacteria infection noted.</p> <p>Tree has been severely pruned over the years, which has permanently damaged the</p>	(Tree assumed to be removed)	Not applicable.
<p>Site Address: 102 Alta Heights Court, Los Gatos, CA</p> <p>Registered Member, American Society of Consulting Arborists and Member of the International Society of Arboriculture © Walter Levison 2020 All Rights Reserved</p>									30 of 38							Version: 11/3/2020	

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	(TCS) Tree Conservation Suitability Rating	Lopsided Canopy (note direction)	Trunk Lean (note direction)	Pests and Disease Presence, and Other Notes	SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.)	MAINTENANCE AND PROTECTION
73	<i>Lagerstroemia indica</i> (Cult.)	Crape myrtle cultivar	4.2	--	--	4.2	15/7	80/60	70% Good		X	Mod			<p>Irrigated turf lawn is 2 feet from trunk edge. Tree is feeding off the incidental soil moisture provided to this turf lawn.</p> <p>Tree is assumed to be protected and retained during construction, given its position offset from the proposed new residence and patio areas.</p> <p>The CTA suggested an ideal RPZ (root protection zone) fence line route as red dashed lines on the tree map markup embedded in this report.</p>	5 to 8 feet radius offset from trunk edge.	RPZ fence, and maintain heavy irrigation at least 2x/week.

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	(TCS) Tree Conservation Suitability Rating	Lopsided Canopy (note direction)	Trunk Lean (note direction)	Pests and Disease Presence, and Other Notes	SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.)	MAINTENANCE AND PROTECTION
74	<i>Quercus agrifolia</i> Large Protected Tree ("LPT")	Coast live oak	Est. 36	-	-	Est. 36	45/75	70/60	63% Good		X	Mod	South west	South west	Moderate live twig density and extension, with some patchy dieback visible in canopy. Buttress root flares normal. Wide saddle shaped fork normal at 10 feet. Splitout stem noted at 35 feet elevation above grade: an 8 inch diameter stem at the southwest end of the canopy. Tree may require some limb length reduction pruning (aka "endweight reduction pruning") to remove the endmost portions of some extended stems in the southwest portion of the canopy.	See the CTA's tree map markup embedded in this report for the suggested route shown as red dashed lines.	Trunk Buffer (TB), Protective Fencing (RPZ), Ground Protection (GP), and perform some minor limb endweight reduction pruning under direct guidance of an ISA Certified Arborist to reduce lengths of over-extended limbs in southwest portion of canopy (not to exceed 10% - 15% reduction of total tree live biomass).

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 the applicant's proposed site work can be offset to relatively far linear offset distances from a tree's trunk edge, a tree's Tree Conservation Suitability (TCS) rating may be elevated by one rating tier, given that there would be a corresponding reduction in expected future root zone impacts. Thus, specific adjustments to the applicant's proposed plans (if and when itemized by the CTA in Summary Table 1.0(a) above in this report) could boost the TCS ratings from "Poor" to 'Moderate' or 'Good'.

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.

GP: Ground protection soil buffer, consisting of a geotextile laid over grade, with 6 inches of wood chip mulch placed over the geotextile, overlain with 1 inch or greater plywood strapped together with steel screw plates. This ground protection soil buffer should be placed over the entire width of the construction corridor between tree trunks and new 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 for tree care (Pruning) (2017 iteration), and the accompanying ISA *Best Management Practices Pruning* booklet (3rd Printing, 2019).

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

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

The CTA marked up the applicant's new residence plan sheet A1.0 dated 10/13/2020, as the background for the tree map markup.

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

- a. Tree tag numbers are noted in black numeric oversized type. Important Note: The numbers on the CTA's map refer to new racetrack shaped professional grade aluminum tags affixed to the trees or on the fencing in front of each tree, by the CTA. They are affixed to the mainstem of each tree at between 4 and 6 feet above grade.
- b. Tree plot dots are in some cases added as new, or blackened, for clarity. Most of the CTA's survey trees were not plotted by the applicant's civil surveyor.
- c. Canopy dripline of oak #74 was drawn out by the CTA to approximate scale, using black clouding.

The canopies of trees #71 and #72 as indicated on the applicant's sheet A1.0 is not accurate. The canopy spread of each of those trees is actually 30 feet diameter. The applicant's sheet A1 indicates canopy spreads of only 18 feet diameter for each of these trees.

Note that the extent of oak #74 canopy spread diameter is roughly 65 to 75 feet, which is approximately 200% of the diameter indicated on the applicant's architectural rendering of the canopy where it was shown incorrectly as a 36 foot diameter black cloud.

- d. **Red dashing** indicates suggested chain link root protection zone (RPZ) fencing routes, drawn to approximate true scale to indicate optimal placement in terms of root protection and preservation for **trees #73 and #74**.
- e. **Yellow highlight** indicates the applicant's proposed new construction.
- f. **Magenta highlight** indicates the applicant's existing gas line (assumed to be existing), which is likely required by Los Gatos public works to be removed and replaced with a larger diameter pipe (not verified).
- g. **Black lines** indicate the CTA's rough representation of likely extent of **coast live oak #74** lateral woody root extension on the 102 Alta Heights Court property that will be preserved to some degree, assuming that chain link fencing is erected and maintained along the red dashed lines indicated on the CTA's map markup below.

Note that the canopy dripline of oak #74 is far greater in dimensions than shown on the applicant's original proposed sheet A1.0.

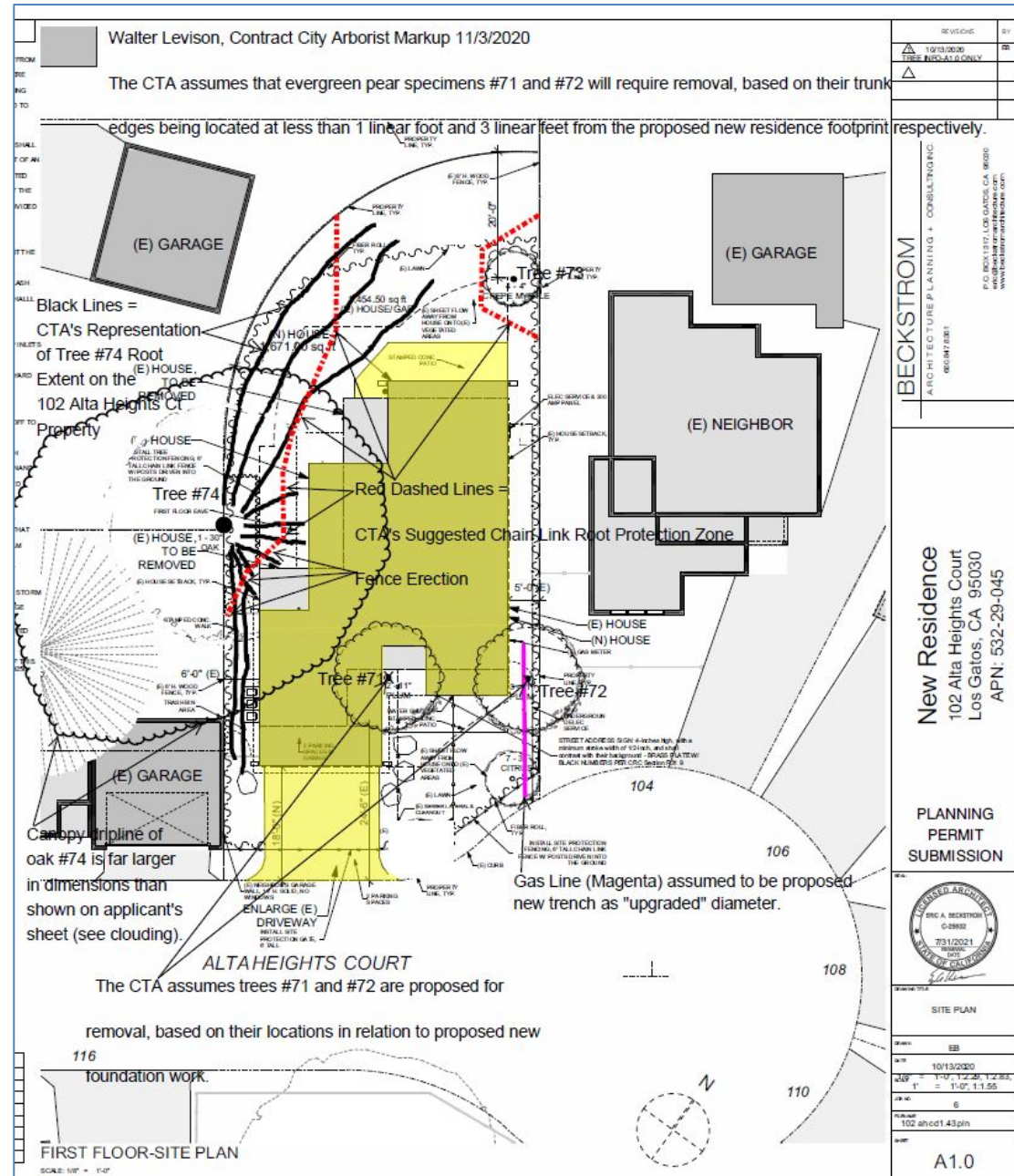
The black clouding indicating on the CTA's markup at right is roughly to scale, and is a more accurate albeit crude representation of the extent of this very large tree specimen.

The tree protection fencing will need to be erected at roughly 7 to 8 feet east of trunk of oak #74, but will extend 50 feet northward per the markup at right, in order to protect as much square footage of the tree's lateral woody root system extending along the 102 Alta Heights Ct. property.

The fencing routes shown will allow for staging/storage/work in the center of the rear yard, but will protect the tree's root system along the west side of the rear yard.

The side yard along the proposed garage area is too narrow to allow for any protective fence erection, and that root zone area will need to be sacrificed and cannot be preserved. The roots below grade may however still survive the construction period, if ground protection such as plywood boards are laid down on the ground to prevent rutting and compaction.

Note: As indicated above in this report, the applicant's original sheet A1.0 shows the canopy driplines of trees #71, 72, and #74 at dimensions far smaller than actual. The CTA enlarged the tree #74 canopy in the marked up image at right to rough-scale dimensions.



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 against 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"

11/3/2020

102 Alta Heights Ct., 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	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		
71	Pk	30	0.4	0.35	0.4	37%	12.9	40%	90%	1	2.09	\$250.00	\$119.62	130.63	\$ 15,626	\$ 2,053	\$2,050
72	Pk	30	0.5	0.4	0.55	44%	17.4	45%	90%	1	2.09	\$250.00	\$119.62	237.67	\$ 28,429	\$ 5,037	\$5,000
73	Li	19	0.8	0.6	0.85	67%	4.2	80%	90%	1	2.09	\$250.00	\$119.62	13.85	\$ 1,656	\$ 796	\$800
74	Qa	30	0.7	0.6	0.75	64%	Est. 36 (cannot access around circumference of lower trunk). Use Adjusted Trunk Area (ATA) since >30" diameter.	65%	90%	3	3.8	\$250.00	\$65.79	974.00	\$ 64,079	\$ 23,897	\$23,900

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

"Functional Replacement Method / Trunk Formula Technique"

11/3/2020

102 Alta Heights Ct., 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. 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.</p> <p>3. LARGE TREES: 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>4. 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>5. 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	\$31,750	