APPENDIX B

ARBORIST REPORT

Deborah Ellis, MS

Consulting Arborist & Horticulturist

Service since 1984

ARBORIST REPORT

Tree Inventory, Tree Descriptions and Recommendations Relative to Proposed Construction

401-409 Alberto Way

Los Gatos, California

Prepared for:

Marni Moseley
Town of Los Gatos Community Planning Department
110 E. Main Street
Los Gatos, CA 95031

Prepared by:
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SEPTEMBER 26, 2015

Report History: This is my first report for this project.

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Table of Contents

Cover photo: southeast corner of the property, Alberto Way in the foreground and looking toward Saratoga-Los Gatos Boulevard in the background. Several of the subject trees are labeled with their tree tag numbers. All photos in this report were taken by D. Ellis on September 18, 2015.

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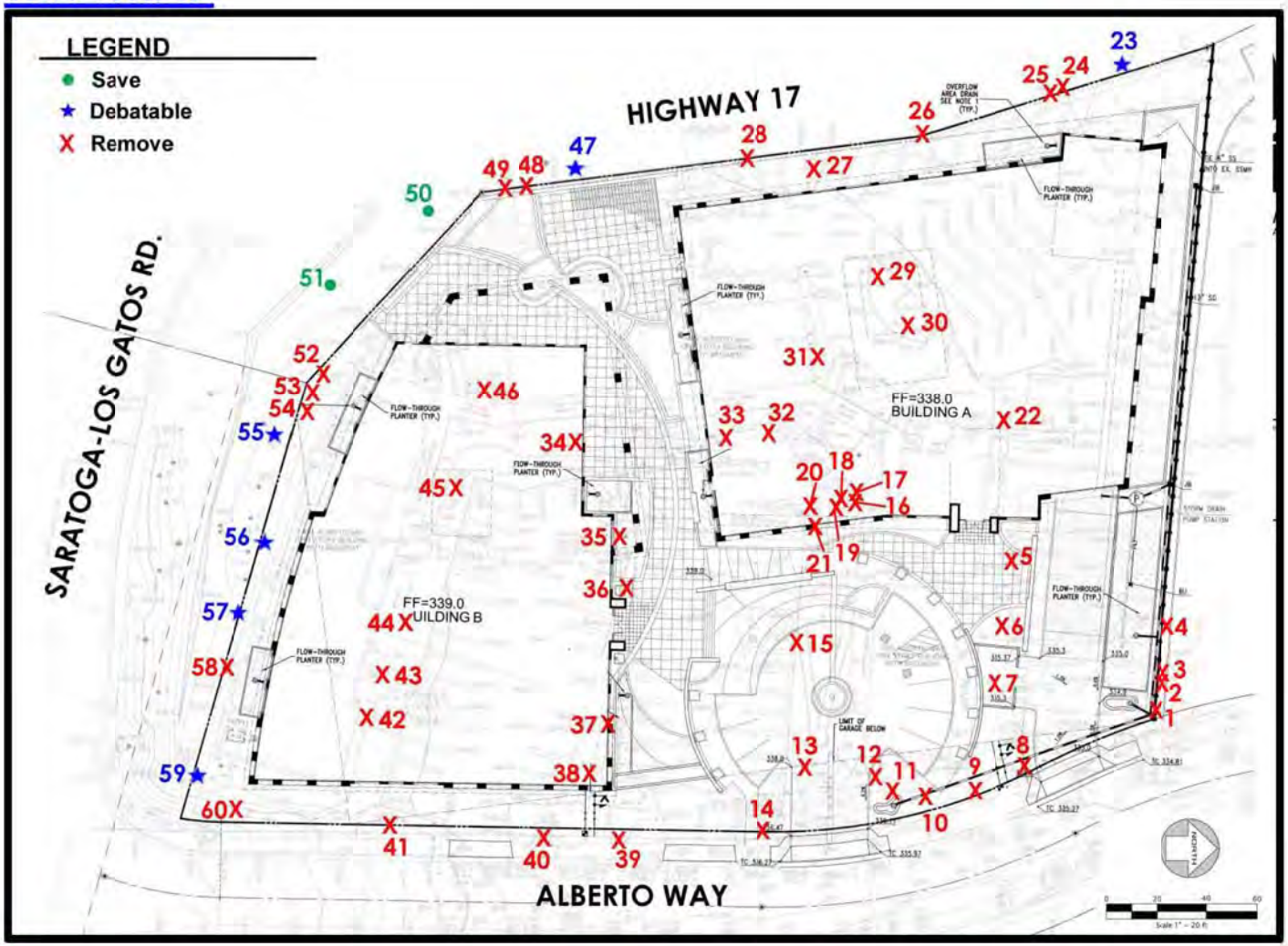
TREE MAP


LEGEND
Save
Debatable
Remove
HIGHWAY 17
SARATOGA-LOS GATOS RD.
ALBERTO WAY
FF=338.0
BUILDING A
FF=339.0
BUILDING B
FLOW-THROUGH PLANTER (TYP.)

SUMMARY

THE PROJECT

An existing commercial office complex will be demolished and replaced with the same, including an underground garage.

THE EXISTING TREES AND HOW THE PROJECT WILL AFFECT THEM

Sixty (60) *protected trees*[1] are listed and described in this report. Most of these trees are located on the project site, but some trees are on property that is adjacent to the site. Due to the extensive renovation of the site, including the underground garage and completely new landscaping, it appears that at least 52 of these trees will need to be removed. I have listed 6 trees (**#23, 47, 55, 56, 57 and 59**) as "Debatable" because I am uncertain of the impact of construction on them. Most of these trees are boundary line trees[2] or are located on adjacent property. It should be possible to save two of these trees, **#50 and #51**, which are off-property but whose canopies overhang the project site.

A summary of all trees is provided in Table 1 on page 3, and a more detailed description of the trees is provided in Table 3 (the *Complete Tree Table*) beginning on page 12. The Complete Tree Table also provides recommended minimum root protection distances for those trees that will or may be saved, as well as other important information about individual trees. The Town of Los Gatos Tree Protection Requirements are included on pages 27 through 32. I have also attached a separate copy of these Requirements, which must be included in the final project bid plan set. It is important to note that trees on neighboring sites whose canopies overhang the site must be protected in the same manner as trees that will remain on the project site.

Most of the best existing trees for the site are actually not located on the site but on adjacent property to the south and west; particularly the large coast live oaks **#47, 50, 51 and 57**. It should be possible to save oaks #50 and 51, but oaks #47 and 57 are listed as "debatable" due to uncertainty about construction impacts to these trees.

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[1] For the purpose of this report a protected tree is: all trees which have a (4) four-inch or greater diameter of any trunk, when removal relates to any review for which zoning approval or subdivision approval is required. Exceptions are: fruit or nut trees that less than eighteen (18) inches in diameter or any of the following species that are less than 24 inches in diameter: black acacia (*Acacia melanoxylon*), tulip tree (*Liriodendron tulipifera*), tree-of- Heaven (*Ailanthus altissima*), Tasmanian blue gum Eucalyptus (*Eucalyptus globulus*), Red River gum Eucalyptus (*Eucalyptus camaldulensis*), other Eucalyptus species (*E. spp.*) (Hillsides only), glossy privet (*Ligustrum lucidum*)and and palms (except *Phoenix canariensis*).

[2] Terms highlighted at their first occurrence in this report are explained in the Glossary on pages 38 nd 39.

TABLE 1 SUMMARY TREE TABLE

*This Table is continued through page 5. + indicates tree not tagged. * Denotes tree species native to the area within the vicinity of the site. All other tree species are not native to the immediate area.*

Tree #	Common Name	Trunk Diam.	Preservation Suitability	Value	Expected Construction Impact	Action	Reason
*1	valley oak	8,2	Fair/Poor	$970	Severe	Remove	Construction
*2	coast live oak	7	Fair	1,040	Severe	Remove	Construction
3	olive	9,3,2	Fair/Poor	1,030	Severe	Remove	Construction
4	olive	3,6,10	Fair	1,680	Severe	Remove	Construction
5	crape myrtle	3*4,5	Fair/Good	3,210	Severe	Remove	Construction
6	crape myrtle	8 (3)	Good	1,310	Severe	Remove	Construction
7	crape myrtle	9 (3)	Good	2,140	Severe	Remove	Construction
8	olive	7,8,9	Fair	2,620	Severe	Remove	Construction
9	olive	13,9 (3)	Fair/Poor	2,580	Severe	Remove	Construction
10	sweet gum	15	Good	2,140	Severe	Remove	Construction
11	European white birch (birch)	11	Unacceptable	0	Severe	Remove	Construction/Overall Condition
12	sweet gum	15	Good	2,370	Severe	Remove	Construction
13	olive	15,18 (3)	Fair	5,400	Severe	Remove	Construction
14	olive	7,9,10	Fair/Poor	2,940	Severe	Remove	Construction
15	birch	4	Good	640	Severe	Remove	Construction
16	birch	7	Fair	1,080	Severe	Remove	Construction
17	birch	5	Fair/Poor	450	Severe	Remove	Construction
18	birch	6	Fair/Poor	900	Severe	Remove	Construction
19	birch	6	Fair/Poor	990	Severe	Remove	Construction
20	birch	5	Fair/Poor	450	Severe	Remove	Construction
21	birch	5	Fair/Poor	410	Severe	Remove	Construction
22	olive	15	Fair/Poor	1,710	Severe	Remove	Construction
23	redwood	20,20	Fair	9,000	Uncertain	Debatable	Construction

Tree #	Common Name	Trunk Diam.	Preservation Suitability	Value	Expected Construction Impact	Action	Reason
24	olive	7,8	Fair	1,290	Severe	Remove	Construction
25	olive	6,2	Fair	1,170	Moderate/Severe	Remove	Construction
*26	coast live oak	24 (3)	Fair/Good	6,800	Severe	Remove	Construction
27	olive	5,6,6	Fair/Poor	1,030	Severe	Remove	Construction
*28	coast live oak	13	Fair/Good	2,540	Severe	Remove	Construction
29	Southern magnolia	9	Fair	990	Severe	Remove	Construction
30	Southern magnolia	7	Fair/Poor	900	Severe	Remove	Construction
31	New Zealand Christmas tree	7,8	Fair	2,810	Severe	Remove	Construction
32	olive	6,7,7,10	Fair/Good	4,880	Severe	Remove	Construction
33	olive	11(3)	Fair/Good	1,510	Severe	Remove	Construction
34	olive	12 (4)	Good	1,960	Severe	Remove	Construction
35	Southern magnolia	11 (4)	Fair/Poor	1,230	Severe	Remove	Construction
36	crape myrtle	7(4)	Good	1,440	Severe	Remove	Construction
37	crape myrtle	7(4)	Good	1,350	Severe	Remove	Construction
38	Raywood ash	14	Poor	920	Severe	Remove	Construction
39	sweet gum	13	Fair/Good	1,580	Severe	Remove	Construction
40	sweet gum	11	Fair	1,030	Severe	Remove	Construction
41	olive	6,6,7,9	Fair	3,680	Severe	Remove	Construction
42	olive	14	Fair/Good	2,240	Severe	Remove	Construction
43	olive	8,8,10	Fair	3,550	Severe	Remove	Construction
44	Brazilian pepper tree	7,8,9,10	Good	6,800	Severe	Remove	Construction
45	olive	14,9@3 (2)	Fair/Poor	2,610	Severe	Remove	Construction
46	olive	14 (3)	Fair	2,030	Severe	Remove	Construction
*47+	coast live oak	22	Good	7,400	Uncertain	Debatable	Construction
*48	coast live oak	6	Fair/Poor	810	Severe	Remove	Construction
*49	coast live oak	8,11	Fair/Good	3,160	Severe	Remove	Construction
*50+	coast live oak	26 (4)	Good	1,1700	Moderate	Save	

Tree #	Common Name	Trunk Diam.	Preservation Suitability	Value	Expected Construction Impact	Action	Reason
*51+	coast live oak	24	Fair	9,400	Low/Moderate	Save	
52	Monterey pine	28	Fair/Poor	2,220	Severe	Remove	Construction/Overall Condition
53	Monterey pine	17	Poor	540	Severe	Remove	Construction/Overall Condition
54	Monterey pine	23	Poor	1,290	Severe	Remove	Construction/Overall Condition
*55+	coast live oak	9	Fair/Poor	580	Uncertain	Debatable	Construction, Overall Condition
*56	coast live oak	8	Fair	450	Uncertain	Debatable	Construction, Structure
*57	coast live oak	14	Good	2,830	Moderate/Severe	Debatable	Construction
58	redwood	16,17	Poor	3,660	Severe	Remove	Overall Condition, Construction
59	redwood	23,24,39	Fair	25,300	Moderate/Severe	Debatable	Construction
60	California pepper tree	20	Fair/Good	3,490	Severe	Remove	Landscape Improvement

RECOMMENDATIONS

1) **Existing trees to be saved or removed should be numbered on all site-based plans to match the tree tag numbers that are used in this arborist report.** Note that there are two sets of tags on some trees – the tags that were used to number the trees for this report and another set of tags that were placed on the trees prior to our tree survey on September 18, 2015.

2) **Do not remove or prune to remove** more than 25% of the live branches of any protected tree until a valid tree removal permit has been obtained from the Town of Los Gatos.

3) **Trees listed as "Debatable" are: #23, 47, 55, 56, 57 and 59**. Read about these 6 trees in the *Notes* Section of the *Complete Tree Table* in order to determine what to do with them (will they be saved or removed)? A "Debatable" designation means that there is a problem with retaining that tree, such as a tree that is shown to be saved but is a poor species for the site, or in poor condition. Another common cause is that the tree is shown to be saved but construction may be too close to it. The reason for the "Debatable" designation can be found in the "Reason" and "Notes" column of the *Complete Tree Table*. Additional action or decisions are necessary on the part of the tree owner, project architects or others involved in the project design and construction are necessary in order to resolve whether a debatable tree will be saved or removed.

4) **For those trees that will be retained on or adjacent to the project site, follow the Town of Los Gatos *Tree Protection Requirements*,** included in this report on pages 27 through 32. At this time only the following two trees will likely be saved: **#50 and 51**. A separate copy of the *Directions* is enclosed and must be incorporated into the project final plans. Additional tree protection information is also available from Deborah Ellis if necessary. These Directions shall replace any tree protection notes, specifications or other directions (including detail drawings) that are included in the plans.

5) **I have also included, as a separate attachment, *Recommended Supplemental Tree Protection Specifications*** to supplement the tree protection requirements of the Town of Los Gatos.

6) **Neighboring trees**: whose canopies overhang the project site must receive tree protection in the same manner as existing trees to remain on the project site; for example tree protection fencing and signage. The general contractor shall fence off the dripline of these trees as much as possible in order to avoid damaging branches and compacting the soil beneath the canopy. If pruning is necessary in order to avoid branch breakage, the general contractor shall hire a qualified tree service to perform the minimum necessary construction clearance pruning.

7) **I should review all site-based plans for this project.** I have reviewed the plan sheets listed on page 9. Additional improvements on plans that were not reviewed or have been revised may cause additional trees to be impacted and/or removed. Plans reviewed by the arborist should be full-size, to-scale and with accurately located tree trunks and canopy driplines relative to proposed improvements. Scale should be 1:20 or 1:10.

8) **As a part of the design process, try to keep improvements (and any additional over-excavation or work area beyond the improvement) as far from tree trunks and canopies as possible.** *6xDBH*[3] or the dripline of the tree, whichever is grecter, should be used as the minimum distance for any soil disturbance to the edge of the trunk. 3xDBH should be considered the absolute minimum distance from any disturbance to the tree trunk on one side of the trunk only, for root protection. Farther is better, of course. For disturbances on multiple sides of the trunk, then 6xDBH or greater should be used, and farther is also better here. Tree canopies must also be taken into consideration when designing around trees. Don't forget the minimum necessary working margin around improvements as you locate those improvements. Disturbance usually comes much closer to trees than the lines shown on the plans!

9) **Construction or landscaping work done underneath the dripline of existing trees should preferably be done by hand**, taking care to preserve existing roots in undamaged condition as much as possible and cutting roots cleanly by hand when first encountered, when those roots must be removed. A qualified consulting arborist (the project arborist) should be hired to monitor tree protection and

[3] See pages 26 and 27 for an explanation of tree protection root distances.

supervise all work underneath the dripline of trees. This also applies to trees on neighboring properties whose canopies overhang the work site.

10) **Landscaping:**

a) New landscaping and irrigation can be as much or more damaging to existing trees than any other type of construction. The same tree root protection distances recommended for general construction should also be observed for new landscaping. Within the root protection zone it is usually best to limit landscape changes to a 3 to 4-inch depth of coarse organic mulch such as wood or bark chips or tree trimming chippings spread over the soil surface. The environment around existing trees should be changed very carefully or not at all – please consult with me regarding changes in the landscape around existing trees and/or have me review the landscape and irrigation plans for this project.

b) This site and adjacent property contains oaks that are native to the immediate area (coast live oak, *Quercus agrifolia*). This tree species fares best with no irrigation during the normal dry months of the year. The best treatment of the ground beneath the canopies of native oaks is nothing but their own natural leaf and twig litter mulch. Exceptions to irrigation restriction include during the winter in extended drought periods, as temporary compensation for root loss due to construction, and for newly planted trees during their 2 to 3 year establishment period after installation. Native oak species are often killed due to inappropriate landscaping that is installed around them; mostly commonly landscaping that requires frequent irrigation such as lawns or other high water-use plants. Large drought tolerant trees such as native oaks can become dangerous when exposed to frequent irrigation, especially close to their trunks. California native oaks that are treated in this manner may contract root rot diseases and fall over at the roots; often causing great damage and personal injury I there are targets in their vicinity such as homes, cars and people. It is important to landscape correctly around our native oaks; e.g. summer dry. I have attached a publication entitled *Living among the Oaks*, to assist in best managing the oaks on the property, as well as the directions to follow in items `b' and `c' below.

c) Around the native oaks: there shall be no planting or irrigation (including drip irrigation) within a minimum radius of 10 feet from the trunks of the oaks or the inner half of the dripline of the tree, whichever is greater. Farther is better. Within this 10-foot (or greater) radius around the trunk a 3 to 4-inch depth of coarse organic mulch such as wood or bark chips or tree trimming chippings shall be spread over the soil surface. Shredded redwood bark is not allowed. Keep the mulch off the root collar of the trees. Beyond this 10-foot (or greater) protective, mulched area only drought-tolerant, summer-dry plant species, preferably plant species that are native to the immediate area and grow commonly in association with the native oaks, may be planted. Only summer-dry tolerant plants are allowed within the outer half of the dripline of the tree or 20 feet from the trunk, whichever is greater. Such plants may be planted from no larger than 1-gallon cans in holes that are hand-dug manually with a shovel (no

power equipment such as augers allowed). These plants must be spaced sparsely (e.g. planted no closer than 4 feet apart) and watered with drip irrigation. The planting zone around these plants shall be mulched in the same manner previously described. The drip irrigation for these plants should preferably be abandoned after a 2 to 3 year establishment period.

11) **Trees to remain after adjacent trees are removed** should be re-evaluated by me or the project arborist after the surrounding trees have been taken out.

12) **General Tree Maintenance:**
   a) The root collars and lower trunks of some of the trees were obscured from view by vegetation, excess soil or other covering. Such portions of the tree should be uncovered and the tree re-evaluated by the arborist.
   b) Do no unnecessary pruning, fertilization or other tree work. Pre-construction pruning should be limited to the absolute minimum required for construction clearance. A qualified tree service should be hired to provide such pruning.

INTRODUCTION

PURPOSE & USE OF REPORT

This survey and report was required by the Town of Los Gatos as a part of the building permit process for this project. The purpose of the report is to identify and describe the existing protected trees on site - - their size, condition and suitability for preservation. The audience for this report is the property owner, developer, project architects and contractors, and Town of Los Gatos authorities concerned with tree preservation and tree removal. The goal of this report is to preserve the existing protected trees on site that are in acceptable condition, are good species for the area and will fit in well with the proposed new use of the site.

PLANS REVIEWED

Table 2

PLAN	DATE	SHEET	REVIEWED	SHOULD REVIEW	NOTES
Existing Site Topographic Map *including existing tree trunk locations*	7/23/15	C1.0	X		
Proposed Site Layout	7/23/15	A1.01	X		
Demolition				X	
Construction Staging					
Grading/Drainage	7/23/15	C2.0	X		
~~**Erosion Control**~~ **Storm water Management**	7/23/15	C3.0, 3.1	X		
Underground Utility					
Site & Building Sections	7/23/15	A3.01, a, b 3.11a,b	X		
Building Exterior Elevations	7/23/15	A3.01, a, b 3.11a,b	X		
Roof	7/23/15	A2.31a, b	X		
Shadow Study					
Construction Details *that would affect trees (for example building foundations, pavement installation including sub-grade preparation, underground utility installation)*				X	
Landscape Planting	7/23/15	L1.1	X		Conceptual. Should also review Detailed.
Irrigation Plan	7/23/15	L1.2	X		Preliminary. Should also review Detailed.
Landscape & Irrigation Details				X	

METHODOLOGY

I performed a brief evaluation of the subject trees from the ground on September 18, 2015. Tree characteristics such as form, weight distribution, foliage color and density, wounds and indicators of decay were noted. Surrounding site conditions were also observed. Evaluation procedures were taken from:

- American National Standard A-300 (Part 5) – 2012 for *Tree Care Operations – Tree, Shrub & Other Woody Plant Management – Standard Practices (Management of Trees, & Shrubs During Site Planning, Site Development and Construction*).
- International Society of Arboriculture, *Best Management Practices:*
  - *Managing Trees during Construction*. 2008
  - *Tree Inventories*. 2013

The above references serve as industry professional standards for tree evaluation and written findings and recommendations for trees on construction sites prior, during and after site development.

Each of the trees was tagged in the field (exceptions noted) with metal number tags that correspond with the tree numbers referenced in this report and on the Tree Map. Note that there are two sets of tags on many of the trees – the tags that were used to number the trees for this report and another set of tags that were placed on the trees prior to our tree survey on September 18, 2015.

I measured the trunk diameter of each tree with a diameter tape at 4.5 feet above the ground (DBH), which is also the required trunk diameter measurement height of the Town of Los Gatos. DBH is used calculate tree protection distances and other tree-related factors. Trunk diameter was rounded to the nearest inch. I estimated the tree's height and canopy spread. Tree *Condition* (structure and vigor) was evaluated and I also recorded additional notes for trees when significant. Tree species and condition considered in combination with the current or (if applicable) proposed use of the site yields the *Tree Preservation Suitability* rating. The more significant trees (or groups of trees) were photographed with a digital camera. Some of these photos are included in this report, but all photos are available from me by email if requested.

OBSERVATIONS

SITE CONDITIONS

The existing site includes three commercial buildings, a large parking lot area and perimeter and interior landscaping. Site topography is mainly level. Landscaping is typical for the area and is irrigated by sprinklers. Landscape irrigation has probably been reduced due to the drought, as many of the moderate and high water requirement species appear drought stressed. Landscape maintenance is of a moderate level. Sun exposure for the trees varies from full to partly shaded, depending upon proximity to existing buildings and to other trees.

Many of the overhanging trees on adjacent properties are coast live oaks (a native tree species) which are probably of *natural growth*, meaning that they were not planted. In the "outback" areas to the south and west of the site these trees are not receiving irrigation, but for the most part they are doing well. There are also a few non-native tree species in the outback area as well, such as coast redwood and olive. These trees were probably not planted and are "volunteers" that grew with the help of birds distributing their seeds.

APPENDIX

TABLE 3 COMPLETE TREE TABLE

This Table is continued through page 21. Data fields in the Table are explained on pages 21 to 26.

** Denotes tree species native to the area within the vicinity of the site. All other tree species are not native to the immediate area.*

+ Denotes tree not tagged.

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability	Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	6xDBH	OTPZ
*1	*Quercus lobata*, valley oak	8,2	40*20	40	40	Fair/Poor	$970	Severe	Remove	Construction		5	5	7
*2	*Quercus agrifolia*, coast live oak	7	40*25	75	40	Fair	1,040	Severe	Remove	Construction		5	5	5
3	*Olea europaea*, European olive (olive)	9,3,2	20*12	70	40	Fair/Poor	1,030	Severe	Remove	Construction	Condition: car wounds to trunk on neighbor's side. Tree is pruned to look like a narrow hedge.	5	6	6
4	olive	3,6,10	18*15	70	40	Fair	1,680	Severe	Remove	Construction	Condition: tree is pruned to look like a narrow hedge.	4	8	8
5	*Lagerstroemia* hybrid, crape myrtle	3*4,5	20*13	85	50	Fair/Good	3,210	Severe	Remove	Construction		5	6	6
6	crape myrtle	8 (3)	20*16	90	60	Good	1,310	Severe	Remove	Construction		5	5	5
7	crape myrtle	9 (3)	22*16	85	60	Good	2,140	Severe	Remove	Construction		5	5	5
8	olive	7,8,9	15*18	80	40	Fair	2,620	Severe	Remove	Construction	Condition: topped	4	9	9
9	olive	13,9 (3)	15*16	70	40	Fair/Poor	2,580	Severe	Remove	Construction	Condition: topped	4	9	13

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability	Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	6xDBH	OTPZ
10	*Liquidambar styraciflua*, American sweet gum (sweet gum)	15	45*20	85	60	Good	2,140	Severe	Remove	Construction		4	8	11
11	*Betula pendula*, European white birch (birch)	11	60*30	0	0	Unacceptable	0	Severe	Remove	Construction/ Overall Condition	Condition: tree is dead. Fungal wood decay conks are emerging from the trunk, including the lower trunk – so remove tree asap for safety.	5	6	11
12	sweet gum	15	40*22	90	70	Good	2,370	Severe	Remove	Construction		4	8	11
13	olive	15,18 (3)	16*18	90	50	Fair	5,400	Severe	Remove	Construction	Condition: topped but some reparative pruning afterward.	6	11	17
14	olive	7,9,10	16*16	80	40	Fair/Poor	2,940	Severe	Remove	Construction	Condition: same as previous, also much sunscald on exposed branches.	4	9	9
15	birch	4	35*15	80	75	Good	640	Severe	Remove	Construction	Condition: remove stake and tie.	5	5	5
16	birch	7	40*12	70	50	Fair	1,080	Severe	Remove	Construction		5	5	7
17	birch	5	38*15	60	50	Fair/Poor	450	Severe	Remove	Construction		5	5	5
18	birch	6	30*12	50	50	Fair/Poor	900	Severe	Remove	Construction		5	5	6
19	birch	6	30*12	50	60	Fair/Poor	990	Severe	Remove	Construction		5	5	6
20	birch	5	30*15	50	60	Fair/Poor	450	Severe	Remove	Construction	Condition: lower trunk hidden in shrub.	5	5	5

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability	Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	6xDBH	OTPZ
21	birch	5	40*16	50	50	Fair/Poor	410	Severe	Remove	Construction		5	5	5
22	olive	15	16*15	60	40	Fair/Poor	1,710	Severe	Remove	Construction		4	8	8
23	*Sequoia sempervirens*, coast redwood (redwood)	20,20	50*30	60	60	Fair	9,000	Uncertain	Debatable	Construction	Construction: trunk is close to property line, and edge of underground garage is 15 feet from property line. This could be acceptable for the tree as long as the actual excavation remains at this distance. Not sure about construction methodology, however. There will also be existing parking lot removal, a new wall and new landscaping up to the property line. Depending upon the footing, the wall may take out the tree. Recommend avoiding any soil disturbance within a minimum of 8 feet from trunk, except for careful removal of existing pavement. Condition: behind fence off property; limited visibility of tree for evaluation.	8	15	23

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability	Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	6xDBH	OTPZ
24	olive	7,8	22*18	70	60	Fair	1,290	Severe	Remove	Construction	Construction: existing parking lot removal, wall and new landscaping to property line – within a few feet of trunk. Condition: same as previous.	5	6	6
25	olive	6,2	22*15	70	60	Fair	1,170	Moderate/ Severe	Remove	Construction	Construction: same as previous. Tree not included on plan. Condition: same as previous. Probably a volunteer. Next to 12" dead redwood.	5	5	5
*26	coast live oak	24 (3)	35*40	60	60	Fair/Good	6,800	Severe	Remove	Construction	Condition: asphalt paving on project site, right up to root collar.	6	12	18
27	olive	5,6,6	16*15	70	40	Fair/Poor	1,030	Severe	Remove	Construction		5	6	6
*28	coast live oak	13	40*30	85	60	Fair/Good	2,540	Severe	Remove	Construction	Condition: behind fence and off property, with trunk growing through fence.	3	7	7
29	*Magnolia grandiflora*, Southern magnolia	9	18*20	60	60	Fair	990	Severe	Remove	Construction	Condition: looks drought stressed.	5	5	9
30	Southern magnolia	7	16*20	50	50	Fair/Poor	900	Severe	Remove	Construction	Condition: same as above, but worse.	5	5	7

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability	Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	6xDBH	OTPZ
31	*Metrosideros excelsa*, New Zealand Christmas tree	7,8	20*15	60	50	Fair	2,810	Severe	Remove	Construction		5	6	9
32	olive	6,7,7,10	20*20	70	70	Fair/Good	4,880	Severe	Remove	Construction		5	10	10
33	olive	11(3)	22*20	80	70	Fair/Good	1,510	Severe	Remove	Construction		5	5	5
34	olive	12 (4)	22*20	80	75	Good	1,960	Severe	Remove	Construction		5	6	6
35	Southern magnolia	11 (4)	20*20	50	60	Fair/Poor	1,230	Severe	Remove	Construction		5	5	11
36	crape myrtle	7(4)	20*22	90	70	Good	1,440	Severe	Remove	Construction		5	5	5
37	crape myrtle	7(4)	18*18	80	70	Good	1,350	Severe	Remove	Construction		5	5	5
38	*Fraxinus angustifolia* `Raywood', Raywood ash	14	35*25	50	40	Poor	920	Severe	Remove	Construction	Condition: about a quarter of the tree's branches are dead.	4	7	11
39	sweet gum	13	35*27	85	70	Fair/Good	1,580	Severe	Remove	Construction	Condition: lower trunk obscured from view by groundcover. Root collar about 6 inches from sidewalk and slight slab lifting	3	7	10
40	sweet gum	11	30*22	80	60	Fair	1,030	Severe	Remove	Construction	Condition: same as previous.	5	6	8
41	olive	6,6,7,9	18*20	85	50	Fair	3,680	Severe	Remove	Construction	Condition: topped and also pruned in an odd manner for light pole clearance.	5	10	10

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability	Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	6xDBH	OTPZ
42	olive	14	18*18	90	60	Fair/Good	2,240	Severe	Remove	Construction		4	7	7
43	olive	8,8,10	25*20	85	60	Fair	3,550	Severe	Remove	Construction		4	9	9
44	*Schinus terebinthefolius*, Brazilian pepper tree	7,8,9,10	22*25	85	60	Good	6,800	Severe	Remove	Construction		6	11	17
45	olive	14,9@3 (2)	16*15	70	40	Fair/Poor	2,610	Severe	Remove	Construction		5	9	9
46	olive	14 (3)	18*18	70	60	Fair	2,030	Severe	Remove	Construction		3	7	7
*47+	coast live oak	22	50*35	70	60	Good	7,400	Uncertain	Debatable	Construction	Construction: edge of trunk is 2 feet from property line edge of underground garage is 15 feet from property line. This could be acceptable for the tree as long as the actual excavation remains at this distance. Not sure about construction methodology, however. There will also be existing parking lot removal, a new wall and new landscaping up to the property line. Depending upon the footing, the wall may take out the tree. Recommend avoiding any soil	6	11	17

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability	Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	6xDBH	OTPZ
											disturbance within a minimum of 6 feet from trunk, except for careful removal of existing pavement. Condition: behind fence off property; limited visibility of tree for evaluation.			
*48	coast live oak	6	40*16	50	40	Fair/Poor	810	Severe	Remove	Construction	Construction: likely too close to wall. Condition: shaded and suppressed. Growing through fence.	5	5	5
*49	coast live oak	8,11	30*35	70	60	Fair/Good	3,160	Severe	Remove	Construction	Construction: likely too close to wall. Condition: growing through fence. Lower trunk partially obscured from view. Asphalt up to root collar.	4	8	8
*50+	coast live oak	26 (4)	40*58	80	70	Good	11,700	Moderate	Save		Construction: edge of trunk is 8 feet from property line, which new landscaping is going right up to. Note proposed focal point shade tree near this tree – there are already many large	7	13	19

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability	Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	6xDBH	OTPZ
											shading trees in the outback area between the property and Saratoga Los Gatos Rd. / Highway 17. Condition: behind fence off property; limited visibility of tree for evaluation. Foliage and branches of tree are about 18 feet above the ground, 15 feet from fence.			
*51+	coast live oak	24	40*50	70	70	Fair	9,400	Low/ Moderate	Save		Construction: trunk is 15 feet from property line. Condition: behind fence off property; limited visibility of tree for evaluation.	6	12	18
52	*Pinus radiata*, Monterey pine	28	80*50	60	50	Fair/Poor	2,220	Severe	Remove	Construction/ Overall Condition		7	14	28
53	Monterey pine	17	70*25	40	40	Poor	540	Severe	Remove	Construction/Overall Condition		4	9	13
54	Monterey pine	23	70*30	50	50	Poor	1,290	Severe	Remove	Construction/Overall Condition		6	12	23
*55+	coast live oak	9	20*12	50	40	Fair/Poor	580	Uncertain	Debatable	Construction, Overall Condition	Construction: 4 feet from property line, 8 feet from edge of underground garage.	5	5	5

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability	Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	6xDBH	OTPZ
											Condition: shaded and suppressed. Behind fence off property; limited visibility of tree for evaluation.			
*56	coast live oak	8	25*20	80	40	Fair	450	Uncertain	Debatable	Construction, Structure	Construction: 1 foot from property line, 20 feet from edge of underground garage. Condition: lower trunk grows through fence and leans outward toward Saratoga/Los Gatos Road.	5	5	5
*57	coast live oak	14	40*20	80	60	Good	2,830	Moderate/ Severe	Debatable	Construction	Construction: 12-14 feet from building and planter. 30 feet from underground garage. Canopy of tree will probably be impacted the most. Erect story posts to assess. Condition: lower trunk presses against fence and partially obscured from view.	4	7	7
58	redwood	16,17	50*22	40	50	Poor	3,660	Severe	Remove	Overall Condition, Construction	Construction: 6 feet from planter, 13 feet from building. Erect story posts to assess effect on	6	13	19

Tree #	Species & Common Name	Trunk Diam.	Size	CONDITION		Preservation Suitability	Value	Expected Construction Impact	Action	Reason	Notes	TREE ROOT PROTECTION DISTANCES		
				Vigor	Structure							3xDBH	6xDBH	OTPZ
											canopy. Condition: looks drought stressed.			
59	redwood	23,24,39	70*35	60	60	Fair	25,300	Moderate/ Severe	Debatable	Construction	Construction: 17 feet from building, 51 feet from underground parking garage. Erect story posts to see effect of building on canopy. Soil disturbance should not come closer than 16 feet from trunk, except for careful removal of existing building.	16	32	63
60	*Schinus molle*, California pepper tree	20	35*25	80	60	Fair/Good	3,490	Severe	Remove	Landscape Improvement		5	10	25

EXPLANATION OF TREE TABLE DATA COLUMNS:

1) **Tree Number** (the field tag number of the existing tree). Each existing tree in the field is tagged with a 1.25 inch round aluminum number tag that corresponds to its tree number referenced in the arborist report, Tree Map, Tree Protection Specifications and any other project plans where existing trees must be shown and referenced.

2) **Tree Name and Type:**
Species: The *Genus* and *species* of each tree. This is the unique scientific name of the plant, for example *Quercus agrifolia* where *Quercus* is the Genus and *agrifolia* is the species. The scientific names of plants can be changed from time to time, but those used in this report are from the most current

edition of the *Sunset Western Garden Book* (2012) Sunset Publishing Corporation. The scientific name is presented at its first occurrence in the Tree Table, along with the regional common name. After that only the common name is used.

3) **Trunk DBH**. Tree trunk diameter in inches "at breast height" (measured at 4.5 feet above ground level). This is the forestry and arboricultural standard measurement height that is also used in many tree-related calculations. It is also the trunk diameter measurement height required by the Town of Los Gatos. For multi-trunk trees, trunk diameter is measured for the largest trunk and estimated for all smaller trunks. Trunk diameter is measured when possible, and estimated when it is not possible or safe to physically measure. A number in parentheses (e.g. 3) after the trunk diameter(s) indicates that it was not possible to measure the trunk at 4.5 feet (due to tree architecture) and so the diameter was measured at this alternate height (in feet), which reflects a more realistic trunk diameter for the tree.

4) **Size**: tree size is listed as height x width in feet, estimated and approximate and intended for comparison purposes.

5) **Condition Ratings**: Trees are rated for their *condition* on a scale of *zero to 100* with zero being a dead tree and 100 being a perfect tree (which is rare – like a supermodel in human terms). A 60 is "average" (not great but not terrible either). There are two components to tree condition – ***vigor*** and ***structure***, and each component is rated separately. Averaging the two components is not useful because a very low rating for either one could be a valid reason to remove a tree from a site -- even if the other component has a high rating. Numerically speaking for each separate component:

100 is equivalent to *Excellent* (an 'A' academic grade), **80** is *Good* (B), **60** is *Fair* (C), **40** is *Poor* (D), **20** is *Unacceptable* (F) and **0** is *Dead*.

- Relative to the scope of work for this report, tree *Condition* has been rated but not explained in detail and recommendations for the management of tree condition have not been included. The tree owner may contact Deborah Ellis for additional information on tree condition and specific recommendations for the general care of individual trees relative to their condition.

- The *Condition* of the tree is considered relative to the tree species and present or future intended use of the site to provide an opinion on the tree's Preservation Suitability Rating (i.e. "Is this tree worth keeping on this site, in this location, as explained in Table 4 on the next page. This is based upon the scenario that the tree is given enough above and below-ground space to survive and live a long life on the site. Ratings such as "Fair/Good" and "Fair/Poor" are intermediate in nature. The Preservation Suitability rating is not always the same as the Condition Rating because (for example) some trees with poor condition or structure can be significantly improved with just a small amount of work – and it would be worthwhile to keep the tree if this were done.

Table 4 Preservation Suitability Rating Explanation

Excellent	Such trees are rare but they have unusually good health and structure and provide multiple functional and aesthetic benefits to the environment and the users of the site. These are great trees with a minimum rating of "Good" for both vigor and structure. Equivalent to academic grade `A'.
Good	These trees may have some minor to moderate structural or condition flaws that can be improved with treatment. They are not perfect but they are in relatively good condition and provide at least one significant functional or aesthetic benefit to the environment and the users of the site. These are better than average trees equivalent to academic grade `B'.
Fair	These trees have moderate or greater health and/or structural defects that it may or may not be possible to improve with treatment. These are "average" trees – not great but not so terrible that they absolutely should be removed. The majority of trees on most sites tend to fall into this category. These trees will require more intensive management and monitoring, and may also have shorter life spans than trees in the "Good" category. Retention of trees with moderate suitability for preservation depends upon the degree of proposed site changes. Equivalent to academic grade `C'.
Poor	These trees have significant structural defects or poor health that cannot be reasonably improved with treatment. These trees can be expected to decline regardless of management. The tree species themselves may have characteristics that are undesirable in landscape settings or may be unsuitable for high use areas. I do not recommend retention of trees with low suitability for preservation in areas where people or property will be present. Equivalent to academic grade `D'.
None	These trees are dead and/or are not suitable for retention in their location due to risk or other issues. In certain settings however, (such as wilderness areas, dead trees are beneficial as food and shelter for certain animals and plants including decomposers. Equivalent to academic grade `F'.

6) **Value**: Tree monetary appraisal is based upon: (1) Cost of Installation plus (2) its increase in value over a container-size tree if a larger size tree being appraised. This value is then adjusted according to: (a) *Species* (according to regional published species ratings), (b) *Condition* of the tree, and (c) *Location* of the tree (an average of the sub-categories of *Site*, *Contribution* and *Placement)*. The methodology and calculations for the Trunk Formula Method are taken from two industry standard texts – The Guide for Plant Appraisal, 9th edition, 2000, edited by the Council of Tree & Landscape Appraisers and published by the International Society of Arboriculture, and the Species Classification and Group Assignment, 2004, published by the Western Chapter of the International Society of Arboriculture. The cross-sectional trunk diameter price presented in this text has been adjusted slightly downward to match the current actual average wholesale cost of a 24-inch box nursery tree in this area. Note that the values produced for this report

are meant for reference only and may not reflect the true value of the tree that could be calculated by a thorough and more detailed analysis of each individual tree.

a) **Caveats regarding tree values**: The values in this report have not been subjected to a "reasonableness test" which compares the value of trees and landscaping to the total value of the property. The values in the report were calculated quickly and are intended to be approximate and for reference only. Research on tree and landscape values has shown that landscaping can contribute up to 20% of the total property value. In some cases however, tree appraisals have produced tree values that exceed the value of the entire property. Performing a reasonableness test screens for this error. For certain trees in this report I have decreased or increased tree values when I felt that the calculated values were too high or too low.

b) **The Trunk Formula Method** is used for trees that are too large for practical replacement with a similar size nursery container-grown tree. This method applies to trees with trunk diameters that are larger than 8-inches, measured at 12 inches above the ground. For the purpose of this report, all trees with trunk diameters of 8 inches or greater measured at DBH (4.5 feet above the ground) are appraised by this method.

c) **The Replacement Cost Method** is used for smaller trees with trunk diameters up to 4-inches in diameter measured at 12 inches above the ground. This is generally equivalent to a 48-inch box-size tree. The replacement cost for such a tree shall be the average wholesale cost of the tree multiplied by two to include transportation to the site, planting and other costs. This price is then adjusted (usually downward) based upon the Condition ratings percentages for the appraised tree. For the purpose of this report, all trees with trunk diameters of 7 inches or less measured at DBH (4.5 feet above the ground) are appraised by this method. The following cost basis is used (based upon the average of wholesale tree prices from Boething Treeland Nursery, Portola Valley and Valley Crest Tree Nursery, Sunol, 2/2/2015):

Trunk DBH	Replacement tree size	Replacement Tree Wholesale Cost x 2 (for installation, etc.)
<1" to 1"	15 gallon	$47.50 x 2 = $95
2-3"	24" box	$162.50 x 2 = $325
4-5"	36" box	$412.50 x 2 = $825
6-7"	48" box	$900 x 2 = $1800

d) **Tree values for tree protection bonds**: Prior to commencing work, the tree-regulating authority may require that the contractor furnish a bond equal to some portion of the total appraised value of the trees on the site based upon the values presented in the Arborist Report. Bond money will be returned to the contractor upon the completion of the project with deductions or additional fines imposed based upon tree protection compliance and the final condition of the trees. Tree values are often used to establish a benchmark amount to fine the contractor if non-compliance with the Tree Protection Specifications or other negligence causes a subject tree to be removed or unnecessarily damaged. The full value amount should be charged to the contractor if a tree is damaged to the degree that it must be removed. A portion of the value of the tree

plus any necessary remediation costs, as determined by the tree owner, should be charged to the contractor if the tree is damaged but does not have to be removed.

7) **Action (Disposition):**
   a) ***Save*:** it should be no problem save this tree utilizing standard tree protection measures.
   b) ***Remove:*** this recommendation is based upon tree condition, preservation suitability, expected impact of construction, poor species for the site or any combination of these factors.
   c) ***Debatable:*** there is a problem with potentially retaining this tree. Find out why in the *Reason* and Notes columns of the Complete Tree Table. Examples are:
      - The tree is shown to be saved (and may be a desirable tree to save) but proposed construction is too close or is uncertain and may cause too much damage to retain the tree. Design changes may be recommended to reduce damage to the tree so that it can be saved.
      - Further evaluation of the tree is necessary (e.g. the tree requires further, more detailed evaluation that is beyond the scope of this tree survey and report. Examples are advanced internal decay detection and quantification with resistance drilling or tomography, a "pull test" to assess tree stability from the roots, or tissue samples sent to a plant pathology laboratory for disease diagnosis.
      - Condition: the tree is in "so-so" or lesser condition and an argument could be made to either save or remove the tree as it stands now. In some cases the owner will make the decision to save or remove the tree based upon the information provided in this report as well as the owner's own preferences.
      - Species: the tree may be a poor species for the area or the intended use of the developed site.
      - Uncertain construction impact
      - Other (as explained for the individual tree)

8) **Reason** (for tree removal or to explain why a tree is listed as "Debatable" or "Uncertain"). Multiple reasons may be provided, with the most significant reason listed first. Reasons can include but are not limited to:
   - ***Construction*** (excessive construction impact is unavoidable and it is not worthwhile to try and save the tree)
   - ***Condition*** (e.g. poor tree condition – either *vigor*, *structure* or both)
   - ***Landscaping*** (the tree is being removed because it does not fit in with or conflicts with proposed new landscaping)
   - ***Owner's Decision*** (for some reason the owner has decided to remove this tree)
   - ***Species*** (the tree is a poor species for the use of the site)
   - ***Risk*** (the tree presents moderate to excessive risk to people or property that cannot be sufficiently mitigated)

9) **Notes:** This may include any other information that would be helpful to the client and their architects and contractors within the scope of work for this report, such as a more detailed explanation of tree condition or expected construction impact.

10) **Tree Protection Distances:**
   a) Root Protection: see below and page 27 for a detailed explanation.
   b) Canopy Protection: Additional space beyond root zone protection distances may be necessary for canopy protection.
   c) I have increased a few of the calculated tree protection distances for certain individual trees based upon my professional judgment and relative to site constraints. For example the minimum root protection distance I will list for any tree is 5 feet.

TREE ROOT PROTECTION DISTANCES

No one can estimate and predict with absolute certainty how far a soil disturbance such as an excavation must be from the edge of the trunk of an individual tree to effect tree stability or health at a low, moderate or severe degree -- there are simply too many variable involved that we cannot see or anticipate. **3xDBH** however, is a reasonable "rule of thumb" minimum distance (in feet) any soil disturbance should be from the edge of the trunk on one side of the trunk. This is supported by several separate research studies including (Smiley, Fraedrich, & Hendrickson 2002, Bartlett Tree Research Laboratories). DBH is trunk "diameter at breast height" (4.5 feet above the ground). This distance is often used during the design and planning phases of a construction project in order to estimate root damage to a tree due to the proposed construction. It tends to correlate reasonably well with the *zone of rapid taper*, which is the area in which the large buttress roots (main support roots close to the trunk) rapidly decrease in diameter with increasing distance from the trunk. For example, using the 3X DBH guideline an excavation should be no closer than 4.5 feet from the trunk of an 18-inch DBH tree. For trees with multiple trunks, an adjusted DBH is often calculated using 100% of the largest trunk plus 50% of the remaining smaller trunks. Such distances are guidelines only, and should be increased for trees with heavy canopies, significant leans, decay, structural problems, etc. I will generally not recommend a root protection distance of less than 5 feet for any tree, even very small trees. It is also important to understand that in actual field conditions we often find that much less root damage occurs than was anticipated by the guidelines. 3xDBH may be more of an aid in preserving tree stability and not necessarily long-term tree health.

6 to 18 X DBH is the minimum distance which is recommended in the *ANSI (American National Standard) A300 (Part 5)-2012 Management of Trees & Shrubs During Site Planning, Site Development, & Construction*, and also in the companion publication from the International Society of Arboriculture, *Best Management Practices, Managing Trees During Construction*, 2008. When the 6 to 18 x DBH distance cannot be met, "appropriate mitigation or determination that the work will not impact tree health and stability shall be performed", according to the ANSI Standard. ANSI A300 (Part 8) - 2013 Root Management, states: "When roots are damaged within 6 times the trunk diameter (DBH) mitigation shall be recommended." For practical purposes I use the 6 x DBH distance as the minimal distance acceptable (in most circumstances) in order to maintain good tree health and structural stability. The 6 x DBH distance or greater should definitely be used when there are soil disturbances on more than one side of the trunk.

OTPZ (Optimum Tree Protection Zone): OTPZ is the distance in feet from the trunk of the tree, all around the tree, that construction or other disturbance should not encroach within. If this zone is respected, then chances of the tree surviving construction disturbance are very good. This method takes into account tree age and the particular species tolerance to root disturbance. Although there are no scientifically based methods to determine the minimum distance for construction (for example, root severance) from trees to assure their survival and stability, there are some guidelines that are often used in the arboricultural industry. The most current guideline comes from the text, *Trees & Development*, Matheny et al., International Society of Arboriculture, 1998. Due to the crowded, constrained nature of many building sites it is often not be possible to maintain the OPTZ distance recommended for many of the trees -- therefore I have also listed alternate distances of 3 and 6X DBH.

LOS GATOS TREE PROTECTION REQUIREMENTS

LOS GATOS TOWN CODE
Chapter 29 – ZONING REGULATIONS
Article I. – IN GENERAL
Division 2. TREE PROTECTION
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)

Sec. 29.10.1015. No limitation of authority.

Nothing in this division limits or modifies the existing authority of the Town under Division 29 of Title 29 (Zoning Regulations), Title 26 (Public Trees) or the Hillside Development Standards and Guidelines to require trees and other plants to be identified, retained, protected, and/or planted as conditions of the approval of development. In the event of conflict between provisions of this division and conditions of any permit or other approval granted pursuant to Chapter 29 or Chapter 26 of the Town Code or the Hillside Development Standards and Guidelines. The more protective requirements shall prevail.

(Ord. No. 2114, §§ I, II, 8-4-03)

Sec. 29.10.1020. Responsibility for enforcement.

All officers and employees of the Town shall report violations of this division to the Director of Community Development. Whenever an Enforcement Officer as defined in Section 1.30.015 of the Town Code determines that a violation of this code has occurred, the Enforcement Officer shall have the authority to issue an administrative citation pursuant to the provisions of Section 1.30.020 of the Town Code

Whenever an Enforcement Officer charged with the enforcement of this Code determines that a violation of that provision has occurred, the Enforcement Officer shall have the authority to issue an administrative citation to any person responsible for the violation.

(Ord. No. 2114, §§ I, II, 8-4-03)

Sec. 29.10.1025. Enforcement—Remedies for violation.

In addition to all other remedies set forth in this code or otherwise provided by law, the following remedies shall be available to the Town for violation of this division:

(1) **Tree removals in absence of or in anticipation of development**. If a violation occurs in the absence of or prior to proposed development, then discretionary applications and/or building permit applications will not be accepted or processed by the Town until the violation has been

remedied to the reasonable satisfaction of the Director. Mitigation measures as determined by the Director may be imposed as a condition of any subsequent application approval or permit for development on the subject property. A mitigation plan shall include specific measures for the protection of any remaining trees on the property, and shall provide for the replacement of each hillside tree that was removed illegally with a new tree(s) in the same location(s) as those illegally removed tree(s). The replacement ratio shall be at a greater ratio than that required in accordance with the standards set forth in Sec. 29.10.0985 of this division. If the court or the Director directs a replacement tree or trees to be planted as part of the remedy for the violation, the trees shall be permanently maintained in a good and healthy condition. The property owner shall execute a five-year written maintenance agreement with the Town. For those trees on public property, replacement is to be determined by the Director of Community Development or by the Director of Parks and Public Works.

(2) **Pending development applications. Incomplete applications will not be processed further until the violation has been remedied**. If an application has been deemed complete, it may be denied by the Director or forwarded to the Planning Commission with a recommendation for denial at the Director's discretion. Mitigation measures as determined by the director may be imposed as a condition of approval. A mitigation plan shall include specific measures for the protection of any remaining trees on the property, and shall provide for the replacement of each hillside tree that was removed illegally with a new tree(s) in the same location(s) as those illegally removed tree(s). The replacement ratio shall be at a greater ratio than that required in accordance with the standards set forth in Sec. 29.10.0985 of this division. If the court or the Director directs a replacement tree or trees to be planted as part of the remedy for the violation, the trees shall be permanently maintained in a good and healthy condition. The property owner shall execute a five-year written maintenance agreement with the Town. For those trees on public property, replacement is to be determined by the Director of Community Development or by the Director of Parks and Public Works.

(3) **Projects under construction**.

a. If a violation occurs during construction, the Town may issue a stop work order suspending and prohibiting further activity on the property pursuant to the grading, demolition, and/or building permit(s) (including construction, inspection, and issuance of certificates of occupancy) until a mitigation plan has been filed with and approved by the Director, agreed to in writing by the property owner(s) or the applicant(s) or both, and either implemented or guaranteed by the posting of adequate security in the discretion of the Director. A mitigation plan shall include specific measures for the protection of any remaining trees on the property, and shall provide for the replacement of each hillside tree that was removed illegally with a new tree(s) in the same location(s) as those illegally removed tree(s). The replacement ratio shall be at a greater ratio than that required in accordance with the standards set forth in Sec. 29.10.0985 of this division. If the court or the Director directs a replacement tree or trees to be planted as part of the remedy for the violation, the trees shall be permanently maintained in a good and healthy condition. The property owner shall execute a five-year written maintenance agreement with the Town. For those trees on public property, replacement is to be determined by the Director of Community Development or by the Director of Parks and Public Works.

b. The violation of any provisions in this division during the conduct by any person of a tree removal, landscaping, construction or other business in the Town shall constitute grounds for revocation of any business license issued to such person.

(4) **Civil penalties**.

Notwithstanding section 29.20.950 relating to criminal penalty, any person found to have violated section 29.10.0965 shall be liable to pay the Town a civil penalty as prescribed in subsections a. through d.

a. As part of a civil action brought by the Town, a court may assess against any person who commits, allows, or maintains a violation of any provision of this division a civil penalty in an amount not to exceed five thousand dollars per violation.

b. Where the violation has resulted in removal of a protected tree, the civil penalty shall be in an amount not to exceed five thousand dollars per tree unlawfully removed, or the replacement value of each such tree, whichever amount is higher. Such amount shall be payable to the Town and deposited into the Tree Replacement Fund. Replacement value for the purposes of this section shall be determined utilizing the most recent edition of the Guide for Plant Appraisal, as prepared by the Council of Tree and Landscape Appraisers and the Species and Group Classification Guide published by the Western Chapter of the International Society of Arboriculture.

c. If the court or the Director directs a replacement tree or trees to be planted as part of the remedy for the violation, the trees shall be permanently maintained in a good and healthy condition. The property owner shall execute a five year written maintenance agreement with the Town.

d. The cost of enforcing this division, which shall include all costs, staff time, and attorneys' fees.

(5) **Injunctive relief**. A civil action may be commenced to abate, enjoin, or otherwise compel the cessation of such violation.

(6) **Costs**. In any civil action brought pursuant to this division in which the Town prevails, the court shall award to the Town all costs of investigation and preparation for trial, the costs of trial, reasonable expenses including overhead and administrative costs incurred in prosecuting the action, and reasonable attorney fees.

(Ord. No. 2114, §§ I, II, 8-4-03)

Sec. 29.10.1030. Fees.

The fee, as adopted by Town Resolution, prescribed therefore in the municipal fee schedule shall accompany the removal or pruning permit application submitted to the Town for review and evaluation pursuant to this division.

(Ord. No. 2114, §§ I, II, 8-4-03)

Sec. 29.10.1035. Severability.

If any provision of this division or the application thereof to any person or circumstance is held to be invalid by a court of competent jurisdiction, such invalidity shall not affect any other provision of this division which can be given effect without the invalid provision or application, and to this end the provisions of this division are declared to be severable.

(Ord. No. 2114, §§ I, II, 8-4-03)

Sec. 29.10.1040. Notices.

All notices required under this division shall conform to noticing provisions of the applicable Town Code.

Sec. 29.10.1045. Appeals.

Any interested person may appeal a decision of the director pursuant to this division in accordance with the procedures set forth in section 29.20.260 of the Town Code. All appeals shall comply with the public noticing provisions of section 29.20.450 of the Town Code.
(Ord. No. 2114, §§ I, II, 8-4-03)

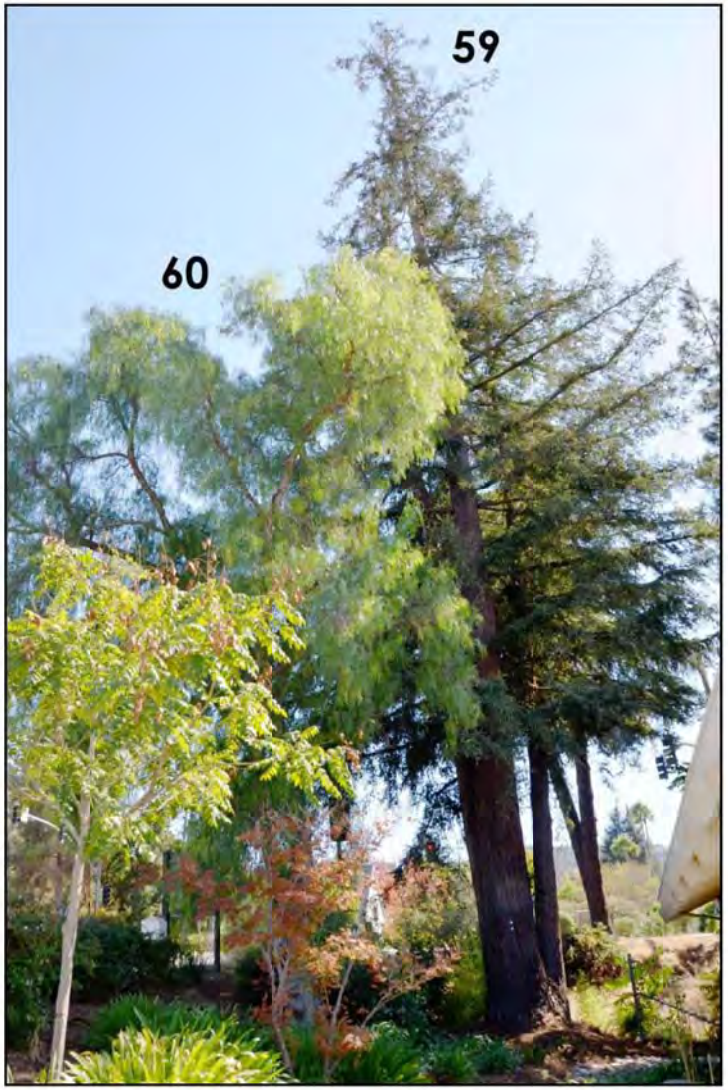
TREE PHOTOS

Northeast corner of the site looking east. **Coast live oaks and olives #1-4** are labeled - these are either borderline trees or are located on adjacent property to the north.

Interior of the site, 409 building with **European white birch trees #1-21**.

Upper photo: **olive #27** in the parking lot, and **coast live oaks #28, 47 and 49** (on adjacent property but overhanging the site. This is near the southwest corner of the property.

Lower photo: front (east) perimeter of the property on Alberto Way. **Sweet gums #12, 39 and 40 and olives #13 and 14** are labeled.



Left photo: **Monterey pines #52-54** on the south side of building 401. These pines are not in good condition and they will be removed as a part of development.
Right photo: the southeast corner of the property with Alberto Way to the left and Saratoga-Los Gatos Road in the background. Triple-trunk **redwood #59** is visible along with **California pepper #60**. It may be possible to save the redwood, but the pepper will be removed.

ASSUMPTIONS & LIMITATIONS

1. **Tree locations** were provided by Kier & Wright civil engineers and are shown on the Tree Map on page 1 of this report. The tree map is a reduced partial copy of the Preliminary Grading, Drainage & Utility plan that I was given. Tree locations are assumed to be accurate but should be verified in the field.
2. **A Level 2 Basic Evaluation** of the subject trees described in this report was performed on August 5, 2015 for the purpose of this report. This is a brief visual evaluation of the tree from the ground, without climbing into the tree or performing detailed tests such as extensive digging, boring or removing samples. The tree is viewed by walking all around it, unless this is not possible. This type of evaluation is an initial screening of the tree after which the evaluator may recommend that additional, more detailed examination(s) be performed if deemed necessary. An assessment of tree risk was not performed during the evaluation.
3. **Trees on neighboring properties** were not evaluated in detail and/or from all sides.
4. **Some trees had their root collars and or lower trunks covered** with soil, vegetation or debris and were obstructed from view when I conducted my tree evaluation. If these trees may remain, the obstructions should be removed and I should re-examine these previously covered areas.
5. **I did the best I could at estimating construction impacts to trees based upon the plans, but this is difficult to accomplish with certainty at a scale of 1:20.** We do not have knowledge about the construction methods that will be used on this project and how the site will be staged for construction – these factors can increase or decrease the effect of construction on trees. How heavy equipment will move on the site is another factor we are unaware of – even though trees may not be located close to improvements, they may be located within equipment travel or staging areas. It is possible therefore, that more trees will need to be removed than are presently listed for removal in this report. On the other hand I may have overestimated construction impact in some cases – so that some trees that are listed for removal may not end up having to be removed after all.
6. **Any information and descriptions provided to me for the purpose of my investigation in this case and the preparation of this report are assumed to be correct**. Any titles and ownerships to any property are assumed to be good and marketable. I assume no responsibility for legal matters in character nor do I render any opinion as to the quality of any title.
7. **The information contained in this report covers only those items that were examined** and reflects the condition of those items at the time of inspection.
8. **Loss or removal of any part of this report** invalidates the entire report.
9. **Possession of this report, or any copy thereof, does not imply right of publication** for use for any purpose by any person other than to whom this report is addressed without my written consent beforehand.
10. **This report and the ratings or values represented herein represent my opinion**. My fee is in no way contingent upon the reporting of a specified value or upon any finding or recommendation reported.

11. **This report has been prepared in conformity with generally acceptable appraisal/diagnostic/reporting methods and procedures** and is consistent with practices recommended by the International Society of Arboriculture and the American Society of Consulting Arborists.
12. **My evaluation of the trees that are the subject of this report 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.
13. **I take no responsibility for any defects in any tree's structure**. No tree described in this report has been climbed and examined from above the ground, and as such, structural defects that could only have been discovered have not been reported, unless otherwise stated. Structural defects may also be hidden within a tree, in any portion of a tree. Likewise, root collar excavations and evaluations have not been performed unless otherwise stated.
14. **The measures noted within this report are designed to assist in the protection and preservation of the trees mentioned herein**, should some or all of those trees remain, and to help in their short and long term health and longevity. This is not however; a guarantee that any of these trees may not suddenly or eventually decline, fail, or die, for whatever reason. Because a significant portion of a tree's roots are usually far beyond its dripline, even trees that are well protected during construction often decline, fail or die. Because there may be hidden defects within the root system, trunk or branches of trees, it is possible that trees with no obvious defects can be subject to failure without warning. The current state of arboricultural science does not guarantee the accurate detection and prediction of tree defects and the risks associated with trees. There will always be some level of risk associated with trees, particularly large trees. It is impossible to guarantee the safety of any tree. Trees are unpredictable.

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I certify that the information contained in this report is correct to the best of my knowledge, and that this report was prepared in good faith. Thank you for the opportunity to provide service again. Please call me if you have questions or if I can be of further assistance.

Sincerely,

Deborah Ellis

Deborah Ellis, MS.
Consulting Arborist & Horticulturist
Certified Professional Horticulturist #30022
ASCA Registered Consulting Arborist #305
I.S.A. Board Certified Master Arborist WE-457B
I.S.A. Tree Risk Assessment Qualified

ENCLOSURES:

- *Town of Los Gatos General Tree Protection Directions* (to be included in the final project plan set)
- *Recommended Supplemental Tree Protection Specifications.* D. Ellis, September 2, 2015.
- *Los Gatos Tree Protection Sign* template (to be placed on tree protection fencing)
- *Living among the Oaks – a Management Guide for Landowners.* Johnson. University of California Cooperative Extension, Natural Resources Program. February 2011 Revision.

REFERENCES:

- *American National Standard A300 (Part 5)-2012 for Tree Care Operations – Tree, Shrub & Other Woody Plant Management – Standard Practices:*
  - (Part 5) – 2012 -- *Management of Trees & Shrubs During Site Planning, Site Development, & Construction*.
  - (Part 8) – 2013. *Root Management*.
  - (Part 9) – 2011. *Tree Risk Assessment. Tree Structure Assessment*.
- *Best Management Practices*, International Society of Arboriculture:
  - *Managing Trees during Construction*. *2008*
  - *Tree Inventories*. 2013.
- *The Guide for Plant Appraisal*, 9th edition, 2000, edited by the Council of Tree & Landscape Appraisers and published by the International Society of Arboriculture.
- *Species Classification & Group Assignment*. Western Chapter of the International Society of Arboriculture. 2004.

GLOSSARY

1. **Boundary Line Tree**: a tree who's trunk (where the trunk is attached to the ground) straddles the property line between two or more properties. Such a tree is owned jointly by those properties on a percentage basis, depending upon the percentage of the trunk that is located on each property. Permission of co-owners is generally required for removal of the tree, and often pruning or other tree work or actions that affect the tree.
2. **Conk**: the fruiting body (reproductive structure) of a wood decay fungus, from which spores are released. It usually assumes a "shelf-like" orientation when growing from the side of a trunk or branch. On top of roots, conks often assume a flat or "tabletop" shape. Conks are often a sign that extensive decay has already occurred within the wood.
3. **Dripline**: the area under the total branch spread of the tree, all around the tree. Although tree roots may extend out 2 to 3 times the radius of the dripline, a great concentration of active roots is often in the soil directly beneath this area. The dripline is often used as an arbitrary "tree protection zone".
4. **Project Arborist. The arborist who is appointed to be in charge of arborist services for the project.** That arborist shall also be a *qualified consulting arborist* (either an International Society of Arboriculture (ISA) Board-Certified Master Arborist or an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist) that has sufficient knowledge and experience to perform the specific work required. For most construction projects that work will include inspection and documentation of tree protection fencing and other tree protection procedures, and being available to assist with tree-related issues that come up during the project.
5. **Qualified Consulting Arborist:** must be either an International Society of Arboriculture (ISA) Board-Certified Master Arborist or an American Society of Consulting Arborists (ASCA) Registered Consulting Arborist that has sufficient knowledge and experience to perform the specific work required.
6. **Qualified Tree Service**: A tree service with a supervising arborist who has the minimum certification level of ISA (International Society of Arboriculture) Certified Arborist for at least 5 years, in a supervisory position on the job site during execution of the tree work. The tree service shall have a State of California Contractor's license for Tree Service (C61-D49) and provide proof of Workman's Compensation and General Liability Insurance. The person(s) performing the tree work must understand and adhere to the most current of the following arboricultural industry tree care standards:
   - Best Management Practices, Tree Pruning. International Society of Arboriculture, PO Box 3129, Champaign, IL 61826-3129. 217-355-9411
   - ANSI A300 Pruning Standards. Ibid. (Covers tree care methodology).
   - ANSI Z133.1 Safety Requirements for Arboricultural Operations. Ibid. (Covers safety).
7. **Root collar & root collar excavation and examination**: The *root collar* (junction between trunk and roots) is critical to whole-tree health and stability. A root collar excavation carefully uncovers this area (with hand digging tools, water or pressurized air). The area is then examined to assess its health and structural stability. Buttress roots may be traced outward from the trunk several feet. Decay assessment of the large roots close to the trunk (buttress roots) involves additional testing such as drilling to extract interior wood with a regular drill, or the use of a resistance-recording drill to check for changes in wood density within the root; as would be caused by decay or cavities. It is important to note that root decay often begins on the underside of roots, which is not detectable in a root collar excavation unless the entire circumference of the root is

excavated and visible. Drill tests may detect such hidden decay. Note that it is not possible to uncover and evaluate the entire portion of the root system that is responsible for whole-tree stability. Decayed roots that are inaccessible (e.g. underneath the trunk) can be degraded to the extent that the whole tree may fail even though uncovered and examined roots in accessible locations appear to be sound.

8. **Root rot disease** is caused by wet, poorly aerated soil conditions. Degradation of roots (root rot) and sometimes the lower trunk (crown rot) ensues on weakened, susceptible plant species not adapted to such a soil environment. Opportunistic plant root pathogens (such as watermold fungi) are often the secondary cause of the problem. Root rot is a particular problem among drought tolerant plants that are not adapted to frequent irrigation during our normally rain-free months, such as many of our California native plants. The problem is often worsened in fine-textured heavy clay soils that retain water more than do the coarser, fast-draining soils such as occur in the natural environment of many of our native plants.
9. **Summer Dry**: Our native oak species are adapted to our "summer dry" climate. When the soil in their root system is kept moist during our normally dry months, these oaks are predisposed to attack by fungal root rot pathogens that are usually present in our soils. Therefore it is important to keep irrigation as far from the tree trunk (preferably beyond the mature dripline) as possible. The best landscape treatment underneath native oaks is non-compacted soil covered with a 3 to 4-inch depth of oak wood, leaf and twig litter (the tree's natural litter). Keep this mulch 6 to 12 inches away from the root collar (junction of trunk and roots). An exception to the no summer water rule would be newly planted oaks (for the first 2 to 3 years after planting, until they are "established") and also during droughts that occur during the normal rainy season.
10. **Sunscald** is the death of bark, and sometimes the underlying wood, due to the heat of the sun. This often occurs when over-pruning removes a large amount of foliage, newly exposing previously sheltered tissue.
11. **Topping** is the practice of indiscriminately cutting back large diameter branches of a mature tree to some predetermined lower height; to reduce the overall height of the tree. Cuts are made to buds, stubs or lateral branches not large enough to assume the terminal role. Reputable arborists no longer recommend topping because it is a particularly destructive pruning practice. It is stressful to mature trees and may result in reduced vigor, decline and even death of trees. In addition, branches that regrow from topping cuts are weakly attached to the tree and are in danger of splitting out. Large topping cuts may have significant decay associated with them, which weakens the branch as well as the attachment of any secondary branches attached nearby. Topping may be useful however, for immediately reducing the risk of a high risk tree that will soon be removed.