

MACNAIR
&
ASSOCIATES
CONSULTING ARBORISTS AND HORTICULTURISTS



August 22, 2024

Judy Stout
Integrity DCS
2 South Pointe Dr. Ste 140
Lake Forest, CA 92630

RE: Magnussen's Toyota Auto Dealership Mountain View- Arborist Report and Tree Protection Specifications

Dear Ms. Stout,

This report was prepared at the request of Integrity Design and Construction Services, project managers for the proposed Magnussen Toyota Auto Dealership located at the southeast corner of Old Middlefield Way and Independence Avenue in Mountain View, CA. This report provides an update to the initial October 12, 2023, arborist report and reflects the most recent Planning 5 Project Submittal.

The purpose of this evaluation is to:

- Update the health and structural condition of trees growing within and near the project limits.
- Provide an assessment of the probable construction impact of the evaluated trees and provide tree protection specifications for the trees designated as preserved.
- Calculate the mitigation requirements described in the City of Mountain View Tree Technical Manual and Ordinance No. 01.03 Section 1 Chapter 32, Article II Protection of the Urban Forest.

Site and Tree Summary Discussion:

The project site consists of three parcels. Parcel 1 is located in the east section of the site with two existing commercial buildings (one vacant) and associated parking lots. Parcels 2 and 3 are on the west side and are paved parking lots, currently unused and fenced.

A total of 116 trees were inventoried and evaluated. The species occurring on the site consist of five (5) Bradford pear (*Pyrus calleryana* 'Bradford'), 99 coast redwoods (*Sequoia sempervirens*), two (2) crape myrtles (*Lagerstroemia indica x fauriei*), five (5) liquidambar (*Liquidambar styraciflua*), one (1) white lead tree (*Leucaena sp.*), one (1) Peruvian pepper (*Schinus molle*), and three (3) tree-of-heaven (*Ailanthus altissima*) (three original trees plus root sprouts) All the trees

originate as landscape plantings, although the tree-of-heavens are likely volunteers as the species is highly invasive.

The condition of the trees is variable, with three of the redwoods dead, four in poor health, and the balance in fair to moderate condition. The other species are generally in fair to moderate condition, with two liquidambar exceptions in poor condition. The two clusters of tree-of-heaven located on the property line and adjacent to two residential properties are dense, multi-stem clonal thickets with canopies extending over the property line by 30 feet and likely spreading into the neighboring property.

A unique aspect of the landscape plantings is the planting of 79 coast redwoods as a hedge bordering the Parcel 1 interior parking lot. The trees have been topped at 12 feet and were planted on five-foot centers. With the high water and frequent pruning requirements, the hedge is inefficient and a questionable screening strategy.

The Bradford pears, four liquidambers, and the two crape myrtles are designated street trees. Two of the Bradford pears, the Peruvian pepper, the two tree-of-heavens, and the coast redwoods, including the hedge and dead trees, qualify as heritage-status trees. The white lead tree on an adjacent residential property could be of heritage status size. Eight street trees have trunk circumferences less than the heritage status threshold.

The report includes images of the trees. Attached are the Tree Evaluation Data Matrix (Appendix A), Tree Protection Requirements Matrix (Appendix B), Tree Protection Specifications (Appendix C), and an Existing Tree Exhibit.

Construction Impact:

Construction impacts include grading cuts near property line trees, the construction of property line masonry walls, new sidewalk locations, bio-retention zones, and new building construction. The specific impacts for each tree are listed in Appendix A- Tree Inventory and Evaluation Data Matrix. A single white lead tree on an adjacent residential property (tree #33) may be impacted due to the masonry wall construction and grading at the property line.

Tree Removal Mitigation:

The Tree Evaluation Data Matrix (Appendix A) shows the tree mitigation quantities based on the expected construction impacts. The City of Mountain View requires two 24-inch box trees as mitigation for each heritage status tree removed. The number of mitigation trees required for the trees removed for construction is 160 24-inch box trees. If there is insufficient landscape area to install the total number, then in lieu fees are assessed at \$750.00 for each 24-inch boxed tree.

The current landscape plan specified 41 24-inch box trees for new planting. The total number of trees required for mitigation is calculated at 119 (160-41). The in-lieu fees are \$750.00 per tree, or \$89,250.00.

Individual Tree Evaluations

Following is a description of the various data used in the evaluations.

Tree #:

The trees are assigned a number as indicated on the Tree Location and Numbering Plan.

Common and Botanical Name (Species):

The botanical name and common name are provided for each tree.

Trunk Diameter (with Circumference) and # of Trunks:

Trunk diameter refers to measuring the trunk diameter at 54 inches above grade. The # of trunks notes single or multiple-trunk trees. Trunks must occur at or below 54 inches above grade for a tree to be considered to have multiple trunks for measurement purposes. Trunk measurements may differ from those shown on the plans due to the method and date of measurement. Also provided are the trunk circumferences, which are the measurements used in the Mountain View tree ordinance.

Height and Crown Diameters:

These fields are approximate measurements of the tree's height and crown spread. Accuracy is within plus or minus 10% of the indicated estimate.

Health and Structural Ratings and Descriptions:

The following chart describes the health and structural rating system used in the evaluation. It is a rating of relative conditions such as vigor, the extent of decay, structure, and insect or disease problems. Good and moderate ratings indicate limited structural problems, sufficient vigor, and no significant pest or disease problems. Poor and marginal ratings indicate serious health or structural problems, especially if the tree is near structures or public areas. Trees rated as poor or marginal are often hazardous.

Rating Chart:

3.0	Moderate (or better) condition	Normal and correctable problems of structure or pests and diseases.
2.5	Fair condition	Typically, it indicates moderately low vigor and foliage density with limited branch or twig dieback. Significant but correctable structural defects may be present.
2.0	Marginal condition	Indicates serious problems with health, structure, decay, or significant insect or disease problems.
1.0	Poor condition	Indicates very poor health, vigor, and/or hazardous structural condition.

Trees may be rated between two conditions, such as 2.5 or 3.5, which indicates the tree does not precisely meet the criteria for either of the two categories and allows the rating system to be used as a continuum.

The comments and observations describe the basis for the health and structural ratings. If possible, the specific pests, diseases, and structural defects observed are described and identified.

This evaluation is of the above-ground structure only, and additional defects may exist at the root collar. Often, larger mature and over-mature trees require a root collar examination to evaluate the primary structural roots and root collar for decay and disease. In addition, an aerial inspection of the limb structure may be required.

Comments/Observations:

This is a summary discussion of the health and structural ratings and identification of any significant pest or disease issues or structural defects.

Suitability for Preservation Ratings:

Rating Factors:

Tree Health: Vigorous and healthy trees are better able to tolerate construction impacts, including root loss or injury,

Structural Condition: Preserved trees should be structurally sound or have defects that can be effectively abated in areas near structures or high-use areas.

Tree Age and Species: Older trees may have a reduced ability to tolerate construction impacts and adapt to changed site conditions. Additionally, individual tree species have varying tolerances to environmental impacts and changes.

Rating Scale:

Good: Trees in good health and structural condition with high potential for longevity.

Moderate: Trees in fair health and/or with structural defects that can be abated with treatment.

Fair: Trees in marginal health or structural condition that could be mitigated or improved.

Poor: Trees in poor health and/or structural condition that probably cannot be effectively abated.

Heritage Tree Status:

Status of the tree according to the City of Mountain View Tree Ordinance.

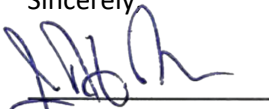
Construction Impact Assessment/Impact Code:

An assessment of the potential impact based on the tree location relative to grading limits and construction activity type. The impact code is a designation for sorting and filtering the

construction impact data.

Please contact me if additional information is required.

Sincerely



James MacNair

ISA Certified Arborist WE-0603A

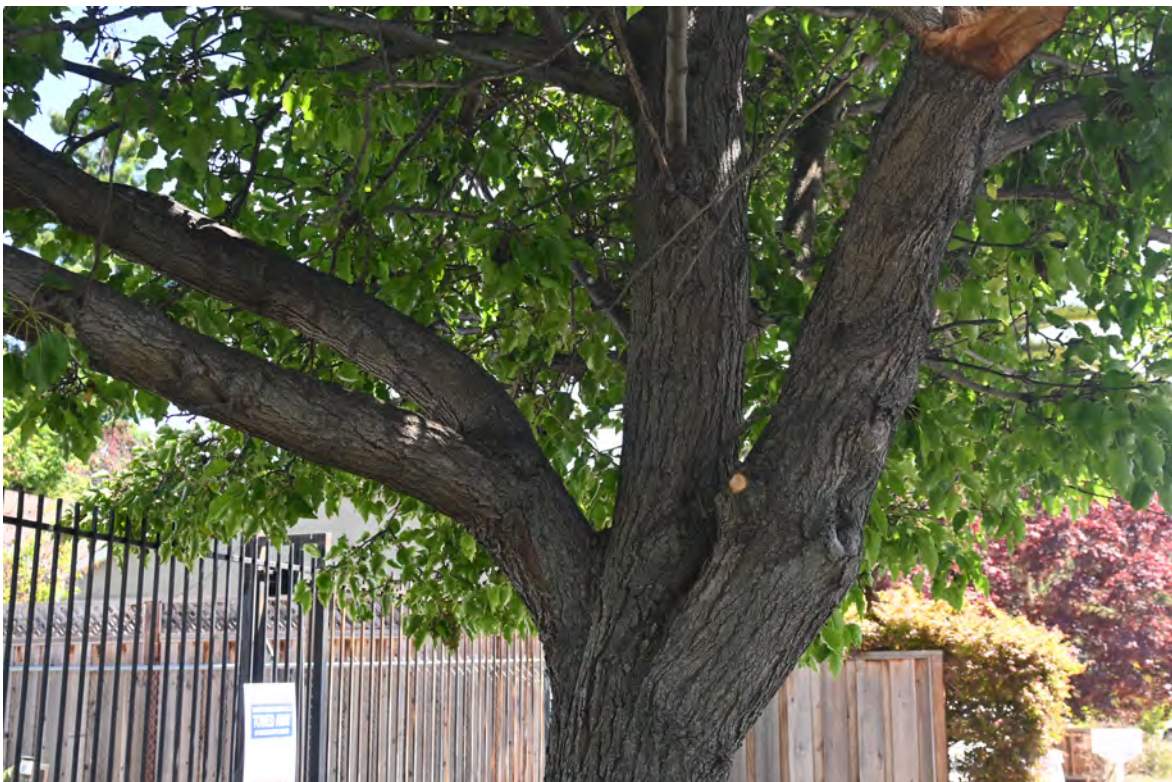
ISA Tree Risk Assessment Qualified

ASCA Tree and Plant Appraisal Qualified

Tree Images:



Bradford pear street trees growing along Independence Avenue.



Closely spaced limbs are characteristic of Bradford pears and are prone to failure.



The asymmetrical root system of a Bradford pear. This defect does not appear to be affecting the health or stability of these trees.



One of the four liquidambar street trees on Old Middlefield Way. The trees are in variable condition.



The surface rooting typical of liquidambar often causes pavement displacement.



Peruvian pepper, tree #9., and coast redwoods #10 and #11.



Liquidambars #13 and #14.



Redwoods #15, #16, and #17.



Redwoods, #21, #22, #22A, and #23.



Redwoods along the south perimeter. Trees #23,#24, #25, and #26.



Redwoods and tree-of-heaven are growing on the adjacent property in the south portion of the project site. Trees #28- # 32.



Tree-of-heaven cluster on adjacent property. (#32)



A white lead tree is growing on the adjacent property. (Tree #33)



Crape myrtle street trees. (Trees #34 and #35)



A hedge of redwoods borders the parking lot.

Appendix A

Individual Tree Data Matrix and Construction Impact Assessment

Magnussen's Toyota of Mountain View
 Tree Inventory and Construction Impact Data Matrix
 Appendix A

Magnussen's Toyota of Mountain View
 Tree Inventory and Construction Impact Data Matrix

Health and Structural Rating Key:

3.0 = Moderate or better condition
 2.5 = Fair
 2.0 = Marginal condition
 1.5 = Poor to marginal condition
 1.0 = Poor condition

Suitability for Preservation Ratings:

Good: Trees in good health and structural condition with high potential for longevity.
 Moderate: Trees in fair health and/or with structural defects that can be abated with treatment.
 Fair: Trees in marginal health or structural condition that could possibly be mitigated or improved.
 Poor: Trees in poor health and/or structural condition that probably cannot be effectively abated.

Construction Impact Code:

RC= Removal due to construction
 SI= Significant potential impact
 MI= Moderate impact
 LI= Limited impact
 NI= No impact

Tree #	Species	# of Trunks	Equivalent Trunk Diameter @ 4.5' (inches)	Equivalent Trunk Circumference @ 4.5' (inches)	Trunk #1 (Dia.)	Trunk #2 (Dia.)	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based Upon Condition)	Heritage Tree Status	Construction Impact Assessment	Construction Impact Code	Mitigation Quantity
1	Bradford pear (<i>Pyrus calleryana</i> 'Bradford')	1	16.0	50	16.0		25±	30±	2.5	2.0	Street tree. Mature tree with closely spaced, multiple limb attachments forming at 6'. Moderately low vigor with limited branch dieback occurring. Good foliage density. Asymmetrical root distribution.	Fair to Moderate	Yes (Street Tree)	Located in grading limits. Removal required.	RC	2
2	Bradford pear	1	12.0	38	12.0		25±	25±	3.0	2.0	Street tree. Mature tree with closely spaced, multiple limb attachments, and co-dominant trunks forming at 9'. Moderate vigor and foliage density. Asymmetrical root distribution. One branch failure.	Fair to Moderate	No (Street Tree)	4' from sidewalk. 11' from parking area. Potential for impact due to asymmetrical and surface roots.	MI	0
3	Bradford pear	1	15.5	49	15.5		25±	25±	2.5	2.0	Street tree. Mature tree with closely spaced, multiple limb attachments, and extended limbs. Moderately low vigor with limited branch dieback. Large diameter surface roots.	Fair to Moderate	Yes (Street Tree)	4' from sidewalk. 11' from parking area. Potential for impact due to surface roots.	MI	0
4	Bradford pear	1	14.5	46	14.5		25±	32±	3.0	2.0	Street tree. Mature tree with closely spaced, multiple limb attachments, and old trunk wound. Moderate vigor and foliage density. Large diameter surface roots.	Fair to Moderate	No (Street Tree)	4' from sidewalk. 11' from parking area. Potential for impact due to surface roots.	MI	0
5	Bradford pear	1	11.5	36	11.5		20±	25'-30'±	2.5	2.0	Street tree. Lower vigor tree with closely spaced limb attachments, and old lower trunk wound. Gall at base of trunk. Asymmetrical root system.	Fair to Moderate	No (Street Tree)	4' from sidewalk. 11' from parking area. Potential for impact due to asymmetrical and surface roots.	MI	0

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Tree #	Species	# of Trunks	Equivalent Trunk Diameter @ 4.5' (inches)	Equivalent Trunk Circumference @ 4.5' (inches)	Trunk #1 (Dia.)	Trunk #2 (Dia.)	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based Upon Condition)	Heritage Tree Status	Construction Impact Assessment	Construction Impact Code	Mitigation Quantity
6	liquidambar (<i>Liquidambar styraciflua</i>)	2	8.6	27	5.0	7.0	25±	20±	3.0	3.0	Low, two-trunk structure. No significant structural defects. Moderate vigor and foliage density. Adjacent electrical box. Pavement damage.	Moderate	No (Street Tree)	7' from bio-retention, 5' from sidewalk, and 10' from parking area. Potential for impact due to surface roots.	MI	0
7	liquidambar	1	5.0	16	5.0		20±	15±	3.0	3.0	Young tree with single trunk with no significant structural defects. Surface roots. Minor pavement displacement.	Moderate	No (Street Tree)	9' from bio-retention, 5' from sidewalk, and 10' from parking area. Potential for impact due to surface roots.	MI	0
8	liquidambar	2	3.0	9	1.5	2.5	10±	10±	3.0	1.5	Leaning tree with defective root system. Located adjacent to the pepper tree.	Poor	No (Street Tree)	Located in project grading limits. Removal required.	RC	1
9	Peruvian pepper tree (<i>Schinus molle</i>)	1	27.0	85	27.0		35'-40'±	25'-30'±	3.0	3.0	Mature tree with an extended second trunk. Lower trunk wounds and galls. Wound on southwest limb in mid-crown. Vigor and foliage density are moderate.	Moderate	Yes	Located in project grading limits. Removal required.	RC	2
10	coast redwood (<i>Sequoia sempervirens</i>)	1	16.0	50	16.0		45'-50'±	22±	3.0	3.0	Semi-mature tree with single trunk structure and no significant structural defects. Vigor and foliage density are moderate.	Moderate	Yes	Located in project grading limits. Removal required.	RC	2
11	coast redwood	2	10.7	26	6.5	8.5	20±	8±	1.5	2.0	Low two-trunk twisted structure. Vigor is low with significant branch dieback occurring.	Poor	Yes	Located in project grading limits. Removal required.	RC	2
12	coast redwood	1	23.0	72	23.0		40'-45'±	35±	2.5	3.0	Mature tree with single trunk structure. No significant structural issues. Moderately low vigor. History of drought stress.	Moderate	Yes	Variable distance of 16' to 22' from future driveway and parking areas	LI	0
13	liquidambar	1	6.0	19	6.0		10±	8±	1.0	1.0	Extensive crown dieback. Trunk sunscald damage.	Poor	No	Located in project grading limits. Removal required.	RC	1
14	liquidambar	1	12.5	39	12.5		35±	30±	2.0	2.5	Street tree. Closely spaced. Multiple limb attachments forming at 8'-10'. Wide crown form. Variable vigor with areas of branch dieback. Adjacent to electrical lines. History of pavement damage.	Fair	No	Located in project grading limits. Removal required.	RC	1
15	coast redwood	1	20.0	63	20.0		65±	30±	3.0	3.0	Mature tree with single trunk structure. No significant structural issues. Moderate vigor and foliage density. Pavement displacement occurring.	Moderate	Yes	Located in project grading limits. Removal required.	RC	2

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16	coast redwood	2	25.5	80	17.0	19.0	65±	30±	0.0	0.0	Tree is dead.	NA	Yes	Located in project grading limits. Removal required.	RC	2
17	coast redwood	1	23.0	72	23.0		65±	30±	2.5	3.0	Mature tree with single trunk structure. No significant structural issues. Moderately low vigor and foliage density.	Moderate	Yes	Located in project grading limits. Removal required.	RC	2
18	coast redwood	1	12.0	38	12.0		40'-45'±	22±	0.0	0.0	Tree is dead.	NA	Yes	Located in project grading limits. Removal required.	RC	2
19	coast redwood	1	16.0	50	16.0		50±	25±	1.5	3.0	Semi-mature tree in low vigor with significant branch dieback. Appears in decline.	Poor	Yes	Located in project grading limits. Removal required.	RC	2
20	coast redwood	1	16.0	50	16.0		45±	25±	2.5	3.0	Semi-mature tree with single trunk structure and no significant structural defects. Vigor and foliage density are moderately low. History of drought stress.	Moderate	Yes	Located in project grading limits. Removal required.	RC	2
21	coast redwood	1	20.0	63	20.0		55'-60'±	25'-30'±	1.5	3.0	Semi-mature tree in very low vigor with significant branch dieback. Appears in decline.	Poor	Yes	Located in project grading limits. Removal required.	RC	2
22	coast redwood	1	16.0	50	16.0		45±	25±	2.5	3.0	Semi-mature tree with single trunk structure and no significant structural defects. Vigor and foliage density are moderately low. History of drought stress.	Moderate	Yes	Located in project grading limits. Removal required.	RC	2
22A	coast redwood	2	32.0	100	19.0	26	65±	30'-35'±	3.0	2.5	Mature tree with low, two-trunk structure. Vigor and foliage density are moderate. No significant structural defects observed.	Moderate	Yes	Located in project grading limits. Removal required.	RC	2
23	coast redwood	1	15.0	47	15.0		55'-60'±	25'-30'±	0.0	0.0	Tree is mostly dead.	NA	Yes	Located in project grading limits. Removal required.	RC	2
24	coast redwood	1	25.0	79	25.0		60±	30±	2.0	3.0	Mature tree with single trunk structure. No significant structural issues. Vigor and foliage density are low. History of drought stress.	Poor to Fair	Yes	Located in project grading limits. Removal required.	RC	2
25	coast redwood	1	20.0	63	20.0		65±	30±	3.0	1.5	Semi-mature tree with single trunk structure and no significant structural defects. Vigor and foliage density are moderate. Extensive ivy on trunk. Probable significant damage to root system from adjacent property construction.	Poor to Fair	Yes	Located 21' to bio-retention and 24' to driveway. Masonry wall required next to trunk. Potential for cumulative root impacts.	MI	0

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Tree #	Species	# of Trunks	Equivalent Trunk Diameter @ 4.5' (inches)	Equivalent Trunk Circumference @ 4.5' (inches)	Trunk #1 (Dia.)	Trunk #2 (Dia.)	Crown Height	Crown Diameter	Health Rating	Structural Rating	Comments/Observations	Suitability for Preservation (Based Upon Condition)	Heritage Tree Status	Construction Impact Assessment	Construction Impact Code	Mitigation Quantity
26	coast redwood	1	30.0	94	30.0		65'±	30'-35'±	3.0	1.5	Semi-mature tree with single trunk structure and no significant structural defects. Vigor and foliage density are moderate. Extensive ivy on trunk. Probable significant damage to root system from adjacent property construction.	Poor to Fair	Yes	Located 21' to bio-retention and 24' to driveway. Masonry wall required next to trunk. Potential for cumulative root impacts.	MI	0
27	coast redwood	2	33.5	105	15.0	30	55'-60'±	30'±	2.5	1.5	Mature tree with low, two-trunk structure. Vigor and foliage density are moderately low. Probable significant damage to root system from adjacent property construction.	Poor to Fair	Yes	Located in grading limits including bio retention area.	RC	2
28	coast redwood	1	24.0	75	24.0		50'±	25'-30'±	3.0	1.5	Mature tree with single trunk structure. No significant structural issues. Vigor and foliage density are moderate. Probable significant damage to root system from adjacent property construction.	Poor to Fair	Yes	Located in grading limits including bio retention area.	MI	0
29	coast redwood	1	32.0	100	32.0		60'±	30'±	3.0	3.0	Mature tree with single trunk structure. No significant structural issues. Vigor and foliage density are moderate. Located on adjacent property at fence line. Possible root loss from adjacent construction on south side.	Moderate	Yes	22' to parking area. Masonry wall required next to trunk.	MI	0
30	tree-of-heaven (<i>Ailanthus altissima</i>)	20±	2"-10"				40'-45'±	30'-35'±	3.0	2.0	Dense cluster of 20 or more stems surrounding original tree. Appears healthy. Located on adjacent property at fence line. Overhangs fence 30'.	Poor (Invasive)	Yes	Located in grading limits with significant grading cuts required and the construction of a masonry wall.	RC	1
30A	tree-of-heaven	15±	2"-10"				40'-45'±	30'-35'±	3.0	2.0	Dense cluster of 10 or more stems surrounding original tree. Appears healthy. Located on adjacent property at fence line. Overhangs fence 30'.	Poor (Invasive)	Yes	Located in grading limits with significant grading cuts required and the construction of a masonry wall.	RC	1
31	coast redwood	1	30.0	94	30.0		50'±	30'±	3.0	3.0	Mature tree with single trunk structure. No significant structural issues. Vigor and foliage density are moderate. Located on adjacent property at fence line.	Moderate	Yes	16' and 24' to parking area. Masonry wall required next to trunk.	MI	0

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32	tree-of-heaven	10±	3"-8"				40±	40±	3.0	2.0	Dense cluster of 10 or more stems. surrounding original tree. Appears healthy. Located on adjacent property at fence line. Overhangs fence 30'.	Poor (Invasive)	Yes	Located in grading limits with significant grading cuts required and the construction of a masonry wall.	RC	1
33	white lead tree (Leucaena sp.)	multi	Not measured.				25±	25±	2.5	n/a	Low, multiple trunk structure. Lower portion of tree not visible. Vigor appears moderately low. Overhangs fence 10'.	Moderate	Yes	Located on adjacent property adjacent to new masonry wall. Moderate impact likely.	MI	0
34	crape myrtle (Lagerstroemia indica x fauriei)	1	6.5	20	6.5		18±	14±	3.0	3.0	Street tree. Semi-mature tree with single trunk structure and no significant structural defects. Vigor and foliage density are moderate.	Moderate to Good	No (Street Tree)	Currently designated for transplanting.	MI	0
35	crape myrtle	1	8.0	25	8.0		18±	14±	3.0	3.0	Street tree. Semi-mature tree with single trunk structure and no significant structural defects. Vigor and foliage density are moderate.	Moderate to Good	No (Street Tree)	Currently designated for transplanting.	MI	0
36	coast redwood	61	4" +				12'	4'	3.0	2.0	Hedge of coast redwood planted 5' o.c. Topped at approximately 12'. Generally moderate health. 79 trees along the west and south sides of the Parcel 1 parking lot.	Fair	Yes	Located in project grading limits. Removal required.	RC	122
37	coast redwood	18	4" +				12'	4'	3.0	2.0	18 of the hedged redwood are now retained.	Fair	Yes	Now retained.	LI	0

Total Trees Removed: 83
Total Trees Retained: 33
Total Trees: 116
Total Heritage Trees Removed: 80
Total Non-Heritage Trees Removed: 3

Sub-Total Mitigation Trees: 160
Less Replacement Trees: 41
Total Mitigation Trees: 119

Appendix B

Individual Tree Protection Requirements

Magnussen's Toyota of Mountain View
 Tree Protection Requirements Matrix
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 Tree Protection Requirements Matrix

Health and Structural Rating Key:
 3.0 = Moderate or better condition
 2.5 = Fair
 2.0 = Marginal condition
 1.5 = Poor to marginal condition
 1.0 = Poor condition

Construction Impact Code:
 RC= Removal due to construction
 SI= Significant potential impact
 MI= Moderate impact
 LI= Limited impact
 NI= No impact

Tree #	Species	# of Trunks	Equivalent Trunk Diameter @ 4.5' (inches)	Equivalent Trunk Circumference@ 4.5' (inches)	Suitability for Preservation (Based Upon Condition)	Heritage Tree Status	Construction Impact Assessment	Construction Impact Code	Tree Protection Zone (Radius in Feet)	Critical Root Zone (Radius in Feet)	Specific Tree Protection Requirements
2	Bradford pear	1	12.0	38	Fair to Moderate	No (Street Tree)	4' from sidewalk. 11' from parking area. Potential for impact due to asymmetrical and surface roots.	MI	12'	5'	<ol style="list-style-type: none"> 1. Root pruning trench at edge of grading and excavation limits. Project arborist to assess root pruning impact. 2. Structural pruning and crown cleaning. 3. Provide supplemental irrigation before and after root pruning. 4. Install tree protection fencing prior to start of work. 5. All tree protection areas shall have a three inch depth of bark mulch approved by the project arborist.
3	Bradford pear	1	15.5	49	Fair to Moderate	Yes (Street Tree)	4' from sidewalk. 11' from parking area. Potential for impact due to surface roots.	MI	15'	5'	<ol style="list-style-type: none"> 1. Root pruning trench at edge of grading and excavation limits. Project arborist to assess root pruning impact. 2. Structural pruning and crown cleaning. 3. Provide supplemental irrigation before and after root pruning. 4. Install tree protection fencing prior to start of work. 5. All tree protection areas shall have a three inch depth of bark mulch approved by the project arborist.
4	Bradford pear	1	14.5	46	Fair to Moderate	Yes (Street Tree)	4' from sidewalk. 11' from parking area. Potential for impact due to surface roots.	MI	15'	5'	<ol style="list-style-type: none"> 1. Root pruning trench at edge of grading and excavation limits. Project arborist to assess root pruning impact. 2. Structural pruning and crown cleaning. 3. Provide supplemental irrigation before and after root pruning. 4. Install tree protection fencing prior to start of work. 5. All tree protection areas shall have a three inch depth of bark mulch approved by the project arborist.

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 Tree Protection Requirements Matrix
 Appendix B

Tree #	Species	# of Trunks	Equivalent Trunk Diameter @ 4.5' (inches)	Equivalent Trunk Circumference@ 4.5' (inches)	Suitability for Preservation (Based Upon Condition)	Heritage Tree Status	Construction Impact Assessment	Construction Impact Code	Tree Protection Zone (Radius in Feet)	Critical Root Zone (Radius in Feet)	Specific Tree Protection Requirements
5	Bradford pear	1	11.5	36	Fair to Moderate	No (Street Tree)	4' from sidewalk. 11' from parking area. Potential for impact due to asymmetrical and surface roots.	MI	12'	5'	<ol style="list-style-type: none"> 1. Root pruning trench at edge of grading and excavation limits. Project arborist to assess root pruning impact. 2. Structural pruning and crown cleaning. 3. Provide supplemental irrigation before and after root pruning. 4. Install tree protection fencing prior to start of work. 5. All tree protection areas shall have a three inch depth of bark mulch approved by the project arborist.
6	liquidambar (<i>Liquidambar styraciflua</i>)	2	8.6	27	Moderate	No (Street Tree)	7' from bio-retention, 5' from sidewalk, and 10' from parking area. Potential for impact due to surface roots.	MI	10'	5'	<ol style="list-style-type: none"> 1. Root pruning trench at edge of grading and excavation limits. Project arborist to assess root pruning impact. 2. Structural pruning and crown cleaning. 3. Provide supplemental irrigation before and after root pruning. 4. Install tree protection fencing prior to start of work. 5. All tree protection areas shall have a three inch depth of bark mulch approved by the project arborist.
7	liquidambar	1	5.0	16	Moderate	No (Street Tree)	9' from bio-retention, 5' from sidewalk, and 10' from parking area. Potential for impact due to surface roots.	MI	8'	5'	<ol style="list-style-type: none"> 1. Root pruning trench at edge of grading and excavation limits. Project arborist to assess root pruning impact. 2. Structural pruning and crown cleaning. 3. Provide supplemental irrigation before and after root pruning. 4. Install tree protection fencing prior to start of work. 5. All tree protection areas shall have a three inch depth of bark mulch approved by the project arborist.
12	coast redwood	1	23.0	72	Moderate	Yes	Variable distance of 16' to 22' from future driveway and parking areas	LI	24'	6'	<ol style="list-style-type: none"> 1. Root pruning trench at edge of parking and driveway limits. Project arborist to assess root pruning impact. 2. Structural pruning and crown cleaning if needed. 3. Provide supplemental irrigation before and after root pruning. 4. Install tree protection fencing prior to start of work. 5. All tree protection areas shall have a three inch depth of bark mulch approved by the project arborist. 6. Refer to demolition procedures in the General Tree Protection Specifications.

Magnussen's Toyota of Mountain View
 Tree Protection Requirements Matrix
 Appendix B

Tree #	Species	# of Trunks	Equivalent Trunk Diameter @ 4.5' (inches)	Equivalent Trunk Circumference@ 4.5' (inches)	Suitability for Preservation (Based Upon Condition)	Heritage Tree Status	Construction Impact Assessment	Construction Impact Code	Tree Protection Zone (Radius in Feet)	Critical Root Zone (Radius in Feet)	Specific Tree Protection Requirements
25	coast redwood	1	20.0	63	Poor to Fair	Yes	Located 21' to bio-retention and 24' to driveway. Masonry wall required approximately 4' from trunk. Potential for cumulative root impacts.	MI	20'	5'	<ol style="list-style-type: none"> 1. Root pruning trench at edge of grading and excavation limits. Project arborist to assess root pruning impact. 2. Structural pruning and crown cleaning. 3. Provide supplemental irrigation before and after root pruning. 4. Install tree protection fencing prior to start of work. 5. All tree protection areas shall have a three inch depth of bark mulch approved by the project arborist. 6. The redwoods along the south property line require a root collar excavation procedure to determine extent of root damage from the condominium construction. 7. Refer to demolition procedures in the General Tree Protection Specifications.
26	coast redwood	1	30.0	94	Poor to Fair	Yes	Located 21' to bio-retention and 24' to driveway. Masonry wall required approximately 4' from trunk. Potential for cumulative root impacts.	MI	30'	8'	<ol style="list-style-type: none"> 1. Root pruning trench at edge of grading and excavation limits. Project arborist to assess root pruning impact. 2. Structural pruning and crown cleaning. 3. Provide supplemental irrigation before and after root pruning. 4. Install tree protection fencing prior to start of work. 5. All tree protection areas shall have a three inch depth of bark mulch approved by the project arborist. 6. The redwoods along the south property line require a root collar excavation procedure to determine extent of root damage from the condominium construction. 7. Refer to demolition procedures in the General Tree Protection Specifications.

Magnussen's Toyota of Mountain View
Tree Protection Requirements Matrix
Appendix B

Tree #	Species	# of Trunks	Equivalent Trunk Diameter @ 4.5' (inches)	Equivalent Trunk Circumference@ 4.5' (inches)	Suitability for Preservation (Based Upon Condition)	Heritage Tree Status	Construction Impact Assessment	Construction Impact Code	Tree Protection Zone (Radius in Feet)	Critical Root Zone (Radius in Feet)	Specific Tree Protection Requirements
28	coast redwood	1	24.0	75	Poor to Fair	Yes	Located 21' to bio-retention and 24' to driveway. Masonry wall required approximately 4' from trunk. Potential for cumulative root impacts.	MI	24'	6'	<ol style="list-style-type: none"> 1. Root pruning trench at edge of grading and excavation limits. Project arborist to assess root pruning impact. 2. Structural pruning and crown cleaning. 3. Provide supplemental irrigation before and after root pruning. 4. Install tree protection fencing prior to start of work. 5. All tree protection areas shall have a three inch depth of bark mulch approved by the project arborist. 6. The redwoods along the south property line require a root collar excavation procedure to determine extent of root damage from the condominium construction. 7. Refer to demolition procedures in the General Tree Protection Specifications.
29	coast redwood	1	32.0	100	Moderate	Yes	22' to parking area. Masonry wall required near trunk.	MI	30'	8'	<ol style="list-style-type: none"> 1. Root pruning trench at edge of grading and excavation limits. Project arborist to assess root pruning impact. 2. Structural pruning and crown cleaning. 3. Provide supplemental irrigation before and after root pruning. 4. Install tree protection fencing prior to start of work. 5. All tree protection areas shall have a three inch depth of bark mulch approved by the project arborist. 6. The redwoods along the south property line require a root collar excavation procedure to determine extent of root damage from the condominium construction. 7. Refer to demolition procedures in the General Tree Protection Specifications.

Magnussen's Toyota of Mountain View
 Tree Protection Requirements Matrix
 Appendix B

Tree #	Species	# of Trunks	Equivalent Trunk Diameter @ 4.5' (inches)	Equivalent Trunk Circumference@ 4.5' (inches)	Suitability for Preservation (Based Upon Condition)	Heritage Tree Status	Construction Impact Assessment	Construction Impact Code	Tree Protection Zone (Radius in Feet)	Critical Root Zone (Radius in Feet)	Specific Tree Protection Requirements
31	coast redwood	1	30.0	94	Moderate	Yes	16' and 24' to parking area. Masonry wall required near trunk.	MI	30'	8'	<ol style="list-style-type: none"> 1. Root pruning trench at edge of grading and excavation limits. Project arborist to assess root pruning impact. 2. Structural pruning and crown cleaning. 3. Provide supplemental irrigation before and after root pruning. 4. Install tree protection fencing prior to start of work. 5. All tree protection areas shall have a three inch depth of bark mulch approved by the project arborist. 6. The masonry wall will need to be a pier and grade beam construction (and cantilevered) to bridge over the critical root zone. 7. Refer to demolition procedures in the General Tree Protection Specifications.
33	white lead tree (Leucaena sp.)	multi	?		Moderate	Yes	Located on adjacent property adjacent to new masonry wall. Moderate impact likely.	LI	18'	4'	Located on the adjacent property. A root pruning trench is required at the property line.
34	crape myrtle (Lagerstroemia indica x fauriei)	1	6.5	20	Moderate to Good	No (Street Tree)	Currently designated for transplanting.	MI	NA	NA	Designated for transplanting.
35	crape myrtle	1	8.0	25	Moderate to Good	No (Street Tree)	Currently designated for transplanting.	MI	NA	NA	Designated for transplanting.

Appendix C

Complete Tree Protection Specifications

Development of the project infrastructure, including roads, utilities, drainage facilities, etc., will alter the natural terrain and affect existing trees growing close to the construction areas. Impacts will primarily occur due to the site grading requirements and underground utility installations. The following procedures are recommended to maximize tree survivability.

1. Tree Protection Zone and Critical Root Zone

- 1.1. All construction activity (grading, filling, paving, landscaping) will respect a Tree Protection Zone (TPZ) around trees to be protected. The TPZ will typically be a one-foot radial distance from the trunk for each one-inch diameter. Exceptions to this standard may occur depending upon individual trees' age, condition, and species tolerance. The Critical Root Zone is the radial area around the trunk where all root impacts should be avoided or mitigated with specialized procedures. Typically, the critical root zone will be a radial distance equal to three times (3X) the trunk diameter.

2. Construction Observations and Supervision

- 2.1. All arboricultural and related soil work should be performed under the observation of an International Society of Arboriculture (ISA) Certified Arborist (Supervising Arborist) or Client designated representative.
- 2.2. All specified arboricultural work should be completed before site grading (root pruning, crown pruning, fencing, etc.)
- 2.3. The contractor is required to meet with the Supervising Arborist or Client designated representative to review the tree protection requirements, including work procedures, access routes, and storage areas.

3. Tree Protection Fencing

- 3.1. Chain Link fencing at a minimum of six feet in height and marked to prevent inadvertent encroachment by heavy machinery should be installed either at the edge of the Tree Protection Zone (TPZ), the crown drip line (whichever is further from the trunk), or at the edge of the construction zone if the construction zone protrudes into the TPZ. The Supervising Arborist, or Client designated representative, should approve the location of the fencing. All fencing should be in place before any site grading. Fences may not be relocated or removed without the written permission of the Supervising Arborist or Client-designated representative.
- 3.2. Bilingual (English/Spanish) signage with a contact phone number shall be attached to the fencing in multiple locations with the following language:

**Tree Preservation Area
Entry Prohibited without Authorization by...**

- 3.3. Install trunk protection measures for trees within 10 feet of construction activities, which as a minimum shall include the installation of ½ in. closed cell foam padding around the trunk of each tree from soil grade to a height of 6 ft. above grade. 2" x 4" x 6' wood planks shall be

installed on top of the padding and secured with metal straps in at least two locations. No fasteners or other invasive hardware shall be driven into the protected trees.

- 3.4. The contractor shall maintain the protection fencing and prohibit construction personnel or equipment from accessing fenced areas until all site work is completed.
- 3.5. All structures, including construction trailers, equipment storage areas, and other construction traffic, are prohibited in fenced areas. Burning or debris piles are prohibited within fenced areas. No materials, equipment, spoil, waste, or washout water should be deposited or stored within fenced areas. Fences may not be moved without written permission from the supervising arborist or client-designated representative.
- 3.6. If temporary access within a fenced area is necessary, then a six-inch layer of bark mulch or gravel should be placed in all areas requiring access. This requirement for mulching should apply to all areas within the fenced area and subject to access. If equipment access is required, the mulch should be overlaid with metal plates of sufficient thickness to distribute the bearing load adequately.

4. Demolition/Site Clearing

- 4.1. The following work must be accomplished before any demolition or site-clearing activity occurs within 50 feet of protected trees.
- 4.2. The demolition contractor must meet with the site's project arborist or designated client representative before beginning work to review all work procedures, access and haul routes, and tree protection measures.
- 4.3. The limits of all tree protection zones shall be staked in the field.
- 4.4. Tree(s) to be removed with branches extending into the canopy of tree(s) to remain must be removed by a qualified arborist and not by demolition or construction contractors. The arborist shall remove the tree in a manner that causes no damage to the tree(s).
- 4.5. Any shrub clearing required within the tree protection zone shall be accomplished with hand-operated equipment.
- 4.6. Trees to be removed shall be felled to fall away from tree protection zones and to avoid pulling and breaking the roots of trees to remain. If roots are entwined, the consultant may require first severing the major woody root mass before extracting the trees. This may be accomplished by cutting through the roots by hand, with a vibrating knife, rock saw, narrow trencher with sharp blades, or other approved root-pruning equipment.
- 4.7. A qualified arborist shall remove trees from within the tree protection zones. The trees shall be cut near ground level, and the stumps shall be ground out.
- 4.8. All downed brush and trees shall be removed from the tree protection zone either by hand or with equipment set outside the tree protection zone. Extraction shall occur by lifting the material, not skidding it across the ground.
- 4.9. The brush shall be chipped and placed in the tree protection zone to a depth of 6 inches.
- 4.10. Structures and underground features to be removed within the tree protection zone shall use the smallest equipment possible and operate outside the tree protection zone.

The consultant shall be on-site during all operations within the tree protection zone to monitor demolition activity. Asphalt pavement removal within the tree protection zone shall be performed with hand equipment unless approved by the supervising arborist.

- 4.11. All trees shall be pruned in compliance with ISA Best Management Practices.
- 4.12. A 6-foot chainlink fence with posts sunk into the ground shall be erected to enclose the tree protection zone
- 4.13. Any damage to trees due to demolition activities shall be reported to the consulting arborist within 6 hours so that remedial action can be taken. Timeliness is critical to tree health.
- 4.14. If temporary haul or access roads must pass over the root area of trees to be retained, a roadbed of 6 inches of mulch or gravel shall be created to protect the soil. The road bed material shall be replenished as necessary to maintain a 6-inch depth.

5. Site Grading, Trenching, and Root Pruning

- 5.1. Keep site grading within designated construction zones. Grading cuts or trenching within the TPZ of a retained tree trunk requires special trenching procedures. Trenches should be dug manually with an air spade or using a root-cutting machine, rock cutter, or other approved root-pruning equipment. This root-pruning trench should be placed one foot inside the edge of the grading cut or trench edge. The depth of the trench should equal the depth of the grading cut to a maximum depth of 40 inches. All work expected to encounter roots must be monitored by the Supervising Arborist or Client designated representative.
- 5.2. A trench may be mechanically dug toward a tree until the edge of the TPZ is reached. Special trenching procedures shall apply from the edge of the TPZ.
- 5.3. Underground utilities, drains, and irrigation lines should be routed outside the TPZs. When lines must cross the TPZ, they should be bored or tunneled through the area at a depth approved by the supervising arborist. In these instances, a single shared utility conduit should be used to reduce impacts on trees.
- 5.4. Any roots one inch in diameter or larger requiring removal should be cut cleanly in sound tissue. The roots and surrounding soil should be moistened and covered with a thick mulch (4") to prevent desiccation. No pruning seals or paints should be used on wounds. Cut and exposed roots should be protected from drying. A water-absorbent material (i.e., burlap) should be secured at the top of the trench and draped over the exposed roots. This material should be kept moistened, and the soil replaced as soon as practicable.
- 5.5. Porous pavements are recommended for use within the TPZ. The pavement subbase should be constructed without grading cuts.

6. Site Drainage

- 6.1. All grading shall be designed to provide positive drainage away from the base of the tree trunk and not create ponding within the TPZ.

7. Pruning and Cabling

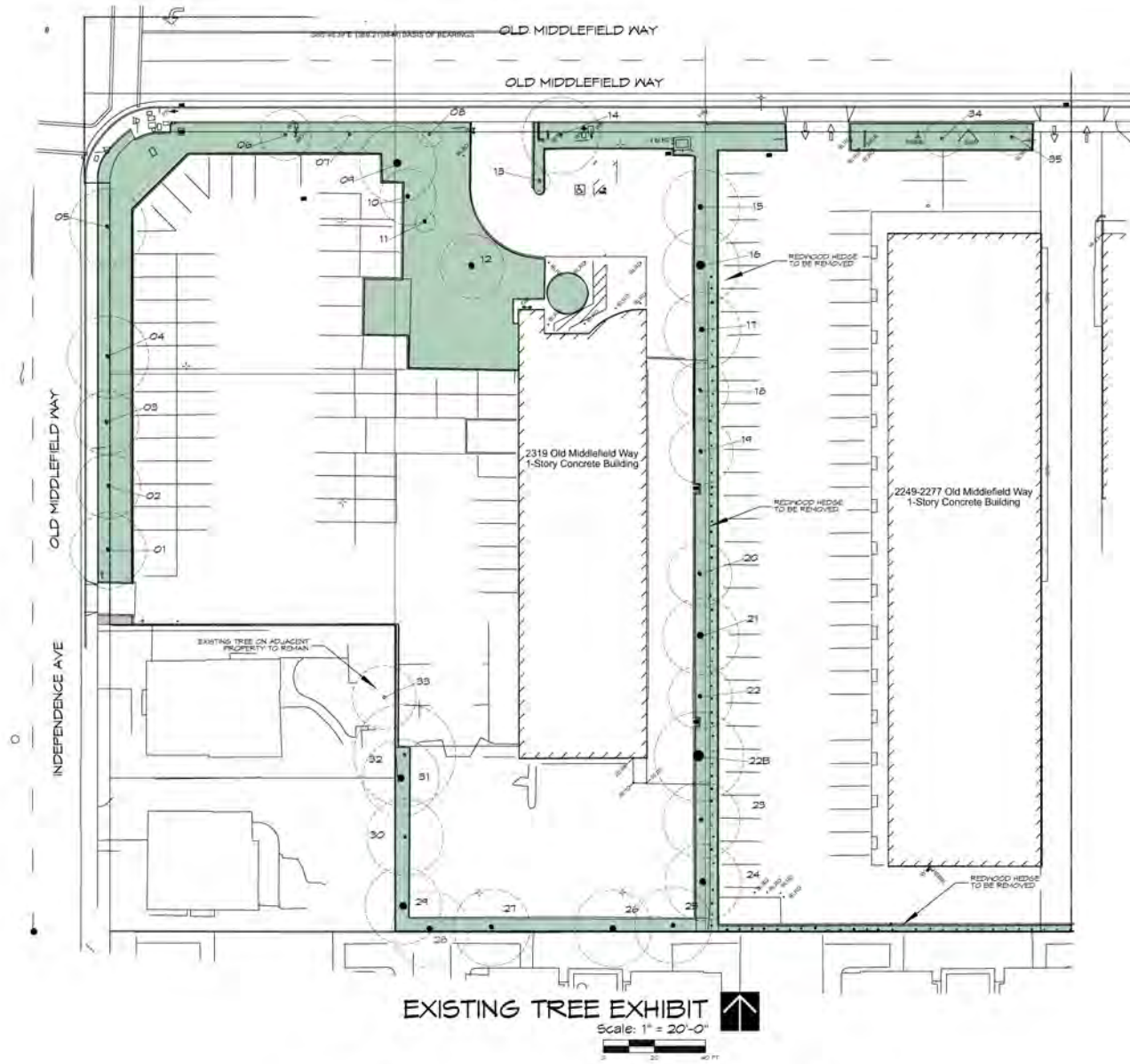
- 7.1. Any tree pruning, cabling, or other similar activity that may be proposed as part of site construction will be included in site plans and reviewed by a qualified arborist or client-designated representative.
- 7.2. Pruning methods shall conform to the ANSI A 300-2001 Pruning Standard Practices and be performed by an ISA Certified Arborist or Certified Tree Worker. Cabling or other support systems shall conform to the ANSI A 300 (part 3)-2000 Standard Practices

8. Tree Damage Mitigation

- 8.1. Trees damaged or significantly impacted during construction shall be evaluated by the Supervising Arborist or Client designated representative. Proper mitigation measures shall be specified and may include:
- 8.2. Pruning of damaged and dead wood.
- 8.3. Installation of a drip irrigation system to provide supplemental irrigation for three to five seasons following damage.
- 8.4. Proper low nitrogen fertilization timed to growth response and phenological development of the tree.
- 8.5. Periodic risk assessment of tree.
- 8.6. Replacement of tree per client requirements.
- 8.7. Alleviation of severe compaction by vertical mulching with augers or hydraulic soil probes.
- 8.8. Alleviation of surface compaction by light cultivation or raking and mulch application.

Appendix D

Existing Tree Exhibit



REFER TO ARBORIST REPORT FOR ADDITIONAL INFORMATION.

REV	NO	DATE	DESCRIPTION



EXISTING TREE EXHIBIT

MAGNUSSEN'S TOYOTA
OF MOUNTAIN VIEW
OLD MIDDLEFIELD WAY
MOUNTAIN VIEW, CA

DATE: 5/4/24
PLA JOB #: 2023-14
SCALE: 1" = 20'
DRAWN: EPH

L3.2