DATE: August 5, 2015

AGENDA ITEM # 3

TO: Design Review Commission

FROM: Zachary Dahl, Senior Planner

SUBJECT: 15-SC-27 – 540 Deodara Drive

RECOMMENDATION:

Approve design review application 15-SC-27 subject to the findings and conditions

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PROJECT DESCRIPTION

This is a design review application for a new two-story house with a basement. The project includes 3,415 square feet on the first story and 891 square feet on the second story. The following table summarizes the project's technical details:

GENERAL PLAN DESIGNATION:	Single-Family, Residential
ZONING:	R1-10
PARCEL SIZE:	15,594 square feet
MATERIALS:	Composition shingle roof, wood shingle and horizontal siding, aluminum clad wood windows, carriage style garage door, wood trim and details, and stone veneer

	Existing	**Proposed**	**Allowed/Required**
COVERAGE:	2,770 square feet	3,852 square feet	4,678 square feet
FLOOR AREA:			
First floor	2,770 square feet	3,415 square feet	
Second floor	616 square feet	891 square feet	
Total	3,386 square feet	4,306 square feet	4,309 square feet
SETBACKS:			
Front	30 feet	30 feet	25 feet
Rear	66.5 feet	52 feet	25 feet
Right side (1st/2nd)	11 feet/26.5 feet	12.5 feet/12.5 feet	10 feet/17.5 feet
Left side (1st/2nd)	20 feet/48.5 feet	10 feet/42 feet	10 feet/17.5 feet
HEIGHT:	21 feet	25.5 feet	27 feet

BACKGROUND

Neighborhood Context

The subject property is located in a Consistent Character Neighborhood, as defined in the City's Residential Design Guidelines. This section of Deodara Drive is a meandering street located between Arboretum Drive and Beechwood Lane. The subject property is located in the middle of this block with a rear yard that abuts Foothill Expressway. The houses in the Deodara Drive neighborhood are a mixture of one- and two-story structures that use simple forms, rustic materials and have large front yard setbacks. The landscape along Deodara Drive includes mature vegetation and many large mature trees (Redwoods, Oaks, Pines and Cedars).

DISCUSSION

Design Review

According to the Design Guidelines, in Consistent Character Neighborhoods, good neighbor design has design elements, materials and scale found within the neighborhood and sizes that are not significantly larger than other homes in the neighborhood. Proposed projects should fit in and lessen abrupt changes.

The new house uses a Craftsman architectural design style. To respect the larger front yard setbacks along Deodara Drive, the house is designed with a 30-foot front yard setback. The house includes a three car garage that orients two of the stalls to face the side yard to minimize the appearance of the garage as viewed from the street. The use of nine-foot tall walls on the first story and eight-foot tall walls on the second story creates lower eave lines that minimize the appearance of bulk and mass.

The project is using high quality materials, such as horizontal wood siding, wood shingles, aluminum clad wood windows and a carriage style garage door, which are integral to the architectural design of the house. Overall, the project design has architectural integrity and the design, materials and forms relate well with the surrounding neighborhood.

Privacy

The project includes a smaller second story with one window on the left side elevation and three windows on the right side elevation. The second story window on the left side is located in bedroom No. 4 and due to its placement near the front of the house and the large side yard setback of 48 feet; there are not any privacy issues related to it. The second story windows on the right side elevation are located in bedroom No. 3 and the bathroom, and have a setback of 20 feet, six inches. Due to their location closer to the front side of the house and their smaller size, as well as the placement of the structures on the adjacent property, there do not appear to be any privacy issues related to the windows this elevation. The project's rear yard abuts Foothill Expressway, so there are not any significant privacy issues related to views from the rear-facing sliding glass door.

The second story also includes three balconies – two facing the front yard and one facing the rear yard. The two balconies on the front elevation are smaller in size and face towards the street and front yard spaces on the neighboring properties. The balcony on the rear elevation is larger in size,

22 feet in width by five feet in depth, and is accessible from the common area (lounge) on the second floor. To the left side, this balcony has a 62-foot setback and is screened by existing trees and the roof ridge over the first floor covered terrace. To the right side, this balcony has a 28-foot setback and is partially screened by a second story element and the first story roof ridge. However, with the removal of the Oak tree (tree No. 6), which is discussed further below, a replacement evergreen tree along the right side property line would be appropriate to ensure that there is ample privacy screening. Based on the design and placement of the balconies, along with the new screening tree, the project will be maintaining a reasonable level of privacy.

Trees and Landscaping

There are 15 trees located on the subject property and along the project street frontage. An arborist report that reviews the trees and evaluates potential impacts related to the new house is included in Attachment D. As part of the project, six trees – one Coast Redwood, one Coast Live Oak, two Crape Myrtles and two ornamental fruit trees – are proposed for removal. The Coast Redwood (tree No. 5) is a very large tree that is in good health. However, it is located toward the middle of the lot and causing significant damage to the existing house due to roots cracking and raising the foundation. A significant building setback would be required if this tree were to be retained.

The Coast Live Oak (tree No. 6) is also larger in size and in good health. However, the tree would have a setback of approximately 10 feet to the edge of the house and the basement light well. According to the arborist report, the grading for the basement would result in the tree becoming structurally unstable and unlikely to survive. To preserve this tree, the house design would need to be revised in order to provide a larger setback to the basement. In order to protect the other existing trees during construction, a condition has been added that requires the arborist report recommendations to be incorporated into the building permit plans (Condition No. 10.b).

While there are many mature trees on and around this property, staff is recommending that a replacement tree be planted in the vicinity of where the Coast Live Oak tree is currently located. In addition to replacing the Coast Live Oak, the replacement tree would provide privacy screening as discussed above. The project will also be installing a new driveway, front walkway, low stone walls and landscaping in the front yard area. Due to the size of the area that will be re-landscaped, the project will need to provide a landscape and irrigation plan that complies with the City's Water Efficient Landscape Ordinance prior to submitting for a building permit (Condition Nos. 5 and 10.d). With the preservation of most of the existing trees and new front yard landscaping and hardscape, the project meets the City's landscaping regulations and street tree guidelines.

ENVIRONMENTAL CONTACT

This project is categorically exempt from environmental review under Section 15303 of the California Environmental Quality Act because it involves the construction of a single-family dwelling in a residential zone.

PUBLIC CONTACT

A public meeting notice was posted on the property and mailed to 10 nearby property owners on Deodara Drive.

cc: Russell and Donna Mirov, Applicant and Owners
RH Associates, Architect

Attachments:
A. Application
B. Neighborhood Compatibility Worksheet
C. Area, Vicinity and Public Notification Maps
D. Arborist Report

FINDINGS

15-SC-27 – 540 Deodara Drive

With regard to the new two-story house, the Design Review Commission finds the following in accordance with Section 14.76.050 of the Municipal Code:

a. The proposed new house complies with all provision of this chapter;

b. The height, elevations, and placement on the site of the new house, when considered with reference to the nature and location of residential structures on adjacent lots, will avoid unreasonable interference with views and privacy and will consider the topographic and geologic constraints imposed by particular building site conditions;

c. The natural landscape will be preserved insofar as practicable by minimizing tree and soil removal; grade changes shall be minimized and will be in keeping with the general appearance of neighboring developed areas;

d. The orientation of the proposed new house in relation to the immediate neighborhood will minimize the perception of excessive bulk and mass;

e. General architectural considerations, including the character, size, scale, and quality of the design, the architectural relationship with the site and other buildings, building materials, and similar elements have been incorporated in order to insure the compatibility of the development with its design concept and the character of adjacent buildings; and

f. The proposed new house has been designed to follow the natural contours of the site with minimal grading, minimum impervious cover, and maximum erosion protection.

CONDITIONS

15-SC-27 – 540 Deodara Drive

1. The approval is based on the plans received on July 22, 2015 and the written application materials provided by the applicant, except as may be modified by these conditions.

2. Plant a new evergreen tree along the right side property line in the rear yard area. The tree shall be a minimum 24-inch box in size.

3. Obtain an encroach permit issued from the Engineering Division prior to doing any work within the public street right-of-way.

4. Only gas fireplaces, pellet fueled wood heaters or EPA certified wood-burning appliances may be installed in all new construction pursuant to Chapter 12.64 of the Municipal Code.

5. The landscape plan is subject to the City's Water Efficient Landscape Regulations pursuant to Chapter 12.36 of the Municipal Code.

6. Fire sprinklers shall be required pursuant to Section 12.10 of the Municipal Code.

7. Any new utility service drops shall be located underground from the nearest convenient existing pole pursuant to Chapter 12.68 of the Municipal Code.

8. The applicant/owner agrees to indemnify, defend, protect, and hold City harmless from all costs and expenses, including attorney's fees, incurred by the City or held to be the liability of City in connection with City's defense of its actions in any proceeding brought in any State or Federal Court, challenging any of the City's action with respect to the applicant's project.

9. **Prior to the issuance of a demolition permit**, install tree protection fencing around the dripline of the all trees adjacent to the house, as shown on the site plan. Tree protection fencing shall be chain link and a minimum of five feet in height with posts driven into the ground.

10. **Prior to building permit submittal, the plans shall contain/show:**

    a. The conditions of approval shall be incorporated into the title page of the plans.

    b. The arborist report tree protection recommendations.

    c. On the grading plan and/or the site plan, show all tree protection fencing and add the following note: "All tree protection fencing shall be chain link and a minimum of five feet in height with posts driven into the ground."

    d. A landscape plan prepared by a licensed landscape professional showing how the plans comply with the City's Water Efficient Landscape Regulations (LAMC Chapter 12.36).

e. Verification that the house will comply with the California Green Building Standards pursuant to Section 12.26 of the Municipal Code and provide a signature from the project's Qualified Green Building Professional Designer/Architect and property owner.

f. The location of underground utilities pursuant to Section 12.68 of the Municipal Code. Underground utility trenches shall avoid the drip-lines of all protected trees unless approved by the project arborist and the Planning Division.

g. The location of any air conditioning units on the site plan and the manufacturer's sound rating for each unit.

h. Compliance with the New Development and Construction Best Management Practices and Urban Runoff Pollution Prevention program, as adopted by the City for the purposes of preventing storm water pollution (i.e. downspouts directed to landscaped areas, minimize directly connected impervious areas, etc.).

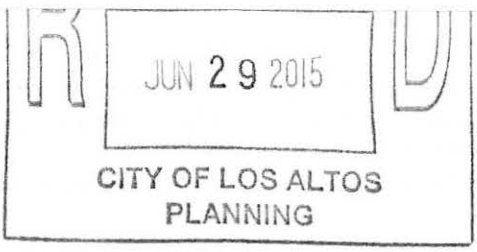
11. **Prior to final inspection:**

a. All front yard landscaping and trees shall be maintained and/or installed as required by the Planning Division; and

b. Submit verification that the house was built in compliance with the City's Green Building Ordinance (Section 12.26 of the Municipal Code).

c. Provide a landscape installation assessment by a certified landscape professional certifying that the landscaping and irrigation system were installed per the approved landscape plan pursuant to Chapter 12.36 of the Municipal Code.

ATTACHMENT A



CITY OF LOS ALTOS

GENERAL APPLICATION

Type of Review Requested: *(Check all boxes that apply)*

Permit # 1106732

	One-Story Design Review		Commercial/Multi-Family		Environmental Review
✓	Two-Story Design Review		Sign Permit		Rezoning
	Variance		Use Permit		R1-S Overlay
	Lot Line Adjustment		Tenant Improvement		General Plan/Code Amendment
	Tentative Map/Division of Land		Sidewalk Display Permit		Appeal
	Historical Review		Preliminary Project Review		Other:

Project Address/Location: 540 Deodara Drive

Project Proposal/Use: Single Family Residence **Current Use of Property:** Single Family Residence

Assessor Parcel Number(s): 342-03-005 **Site Area:** 15,594 s.f.

New Sq. Ft.: 4,306 **Altered/Rebuilt Sq. Ft.:** 0 **Existing Sq. Ft. to Remain:** 0

Total Existing Sq. Ft.: 3,386 **Total Proposed Sq. Ft. (including basement):** 7,215

Applicant's Name: Russell & Donna Mirov

Telephone No.: (650 966-8801 **Email Address:**

Mailing Address: 540 Deodara Drive

City/State/Zip Code: Los Altos, CA 94024

Property Owner's Name: Russell & Donna Mirov

Telephone No.: **Email Address:**

Mailing Address: 540 Deodara Drive

City/State/Zip Code: Los Altos, CA 94024

Architect/Designer's Name: RH Associates

Telephone No.: (530) 268-3055 **Email Address:**

Mailing Address: 22867 Sunset Ridge Dr.

City/State/Zip Code: Auburn, CA 95602

*** * * If your project includes complete or partial demolition of an existing residence or commercial building, a demolition permit must be issued and finaled prior to obtaining your building permit. Please contact the Building Division for a demolition package. * * ***

(continued on back)

ATTACHMENT B

City of Los Altos
Planning Division
(650) 947-2750
Planning@losaltosca.gov

NEIGHBORHOOD COMPATIBILITY WORKSHEET

In order for your design review application for single-family residential remodel/addition or new construction to be successful, it is important that you consider your property, the neighborhood's special characteristics that surround that property and the compatibility of your proposal with that neighborhood. **The purpose is to help you understand your neighborhood before you begin the design process with your architect/designer/builder or begin any formal process with the City of Los Altos.** *Please note that this worksheet must be submitted with your 1st application.*

The Residential Design Guidelines encourage neighborhood compatibility without necessarily forsaking individual taste. Various factors contribute to a design that is considered compatible with a surrounding neighborhood. The factors that City officials will be considering in your design could include, but are not limited to: design theme, scale, bulk, size, roof line, lot coverage, slope of lot, setbacks, daylight plane, one or two-story, exterior materials, landscaping et cetera.

It will be helpful to have a site plan to use in conjunction with this worksheet. Your site plan should accurately depict your property boundaries. The best source for this is the legal description in your deed.

Photographs of your property and its relationship to your neighborhood (see below) will be a necessary part of your first submittal. Taking photographs before you start your project will allow you to see and appreciate that your property could be within an area that has a strong neighborhood pattern. The photographs should be taken from across the street with a standard 35mm camera and organized by address, one row for each side of the street. Photographs should also be taken of the properties on either side and behind your property from on your property.

This worksheet/check list is meant to help *you* as well as to help the City planners and Planning Commission understand your proposal. Reasonable guesses to your answers are acceptable. The City is not looking for precise measurements on this worksheet.

Project Address 540 DEODARA DRIVE
Scope of Project: Addition or Remodel _____ **or New Home** Yes
Age of existing home if this project is to be an addition or remodel? n/a
Is the existing house listed on the City's Historic Resources Inventory? No

* See "What constitutes your neighborhood" on page 2.

Address: 540 Deodara Drive
Date: 6/1/15

What constitutes your neighborhood?

There is no clear answer to this question. For the purpose of this worksheet, consider first your street, the two contiguous homes on either side of, and directly behind, your property and the five to six homes directly across the street (eight to nine homes). At the minimum, these are the houses that you should photograph. If there is any question in your mind about your neighborhood boundaries, consider a radius of approximately 200 to 300 feet around your property and consider that your neighborhood.

Streetscape

1. Typical neighborhood lot size*:

Lot area: Varies square feet
Lot dimensions: Length Varies feet
Width Varies feet
If your lot is significantly different than those in your neighborhood, then note its: area 15,594 SF, length 140', and width 112'.

2. Setback of homes to front property line: *(Pgs. 8-11 Design Guidelines)*

Existing front setback if home is a remodel?_____
What % of the front facing walls of the neighborhood homes are at the front setback 0 %
Existing front setback for house on left 30 ft./on right 30 ft.
Do the front setbacks of adjacent houses line up? Yes

3. Garage Location Pattern: *(Pg. 19 Design Guidelines)*

Indicate the relationship of garage locations in your neighborhood* only on your street (count for each type)
Garage facing front projecting from front of house face 4
Garage facing front recessed from front of house face 0
Garage in back yard 3
Garage facing the side 2
Number of 1-car garages__; 2-car garages 9; 3-car garages __

* See "What constitutes your neighborhood", (page 2).

Address: 540 Deodara Drive
Date: 6/1/15

4. Single or Two-Story Homes:

What % of the homes in your neighborhood* are:
One-story 5
Two-story 4

5. Roof heights and shapes:

Is the overall height of house ridgelines generally the same in your neighborhood*? No
Are there mostly hip 9, gable style ____, or other style ___ roofs*?
Do the roof forms appear simple 5 or complex 4?
Do the houses share generally the same eave height No?

6. Exterior Materials: *(Pg. 22 Design Guidelines)*

What siding materials are frequently used in your neighborhood*?

__ wood shingle 3 stucco __ board & batten 6 clapboard
__ tile __ stone 4 brick __ combination of one or more materials
(if so, describe) Wood siding with brick wainscot

What roofing materials (wood shake/shingle, asphalt shingle, flat tile, rounded tile, cement tile, slate) are consistently (about 80%) used?
Comp
If no consistency then explain: (2) Shake and (1) Concrete tile

7. Architectural Style: *(Appendix C, Design Guidelines)*

Does your neighborhood* have a consistent identifiable architectural style?
☑ YES ☐ NO

Type? ✓ Ranch __ Shingle __Tudor __Mediterranean/Spanish
__ Contemporary __Colonial __ Bungalow __Other

* See "What constitutes your neighborhood", (page 2).

Address: 540 Deodara Drive
Date: 6/1/15

8. **Lot Slope:** *(Pg. 25 Design Guidelines)*

Does your property have a noticeable slope? No

What is the direction of your slope? (relative to the street)
Basically flat, slight slope to rear of lot from street

Is your slope higher _____ lower _____ same ✓ in relationship to the neighboring properties? Is there a noticeable difference in grade between your property/house and the one across the street or directly behind?

9. **Landscaping:**

Are there any frequently used or typical landscaping features on your street (i.e. big trees, front lawns, sidewalks, curbs, landscape to street edge, etc.)?
Big trees, front lawns, landscaping to street edge, no curb

How visible are your house and other houses from the street or back neighbor's property?
This property backs onto Foothill Expressway
The house will be visible from street

Are there any major existing landscaping features on your property and how is the unimproved public right-of-way developed in front of your property (gravel, dirt, asphalt, landscape)?
Large redwood trees at front corner of site. 18" high brick wall at edge of dirt parking area and concrete driveway to roadway

10. **Width of Street:**

What is the width of the roadway paving on your street in feet? 30
Is there a parking area on the street or in the shoulder area? Only at this house
Is the shoulder area (unimproved public right-of-way) paved, unpaved, gravel, landscaped, and/or defined with a curb/gutter? No definition landscaping to street edge

Address: 540 Deodara Drive
Date: 6/1/15

11. What characteristics make this neighborhood* cohesive?

Such as roof material and type (hip, gable, flat), siding (board and batten, cement plaster, horizontal wood, brick), deep front yard setbacks, horizontal feel, landscape approach etc.:

Some form of ranch style with comp roofs, wood siding and some brick wainscoting.

General Study

A. Have major visible streetscape changes occurred in your neighborhood?
☐ YES ☑ NO

B. Do you think that most (~ 80%) of the homes were originally built at the same time? ☐ YES ☑ NO

C. Do the lots in your neighborhood appear to be the same size?
☐ YES ☑ NO

D. Do the lot widths appear to be consistent in the neighborhood?
☑ YES ☐ NO

E. Are the front setbacks of homes on your street consistent (~80% within 5 feet)? ☑ YES ☐ NO

F. Do you have active CCR's in your neighborhood? *(p.36 Building Guide)*
☐ YES ☑ NO

G. Do the houses appear to be of similar size as viewed from the street?
☐ YES ☑ NO

H. Does the new exterior remodel or new construction design you are planning relate in most ways to the prevailing style(s) in your existing neighborhood?
☑ YES ☐ NO

* See "What constitutes your neighborhood", (page 2).

Address: 540 Deodara Drive
Date: 6/1/15

Summary Table

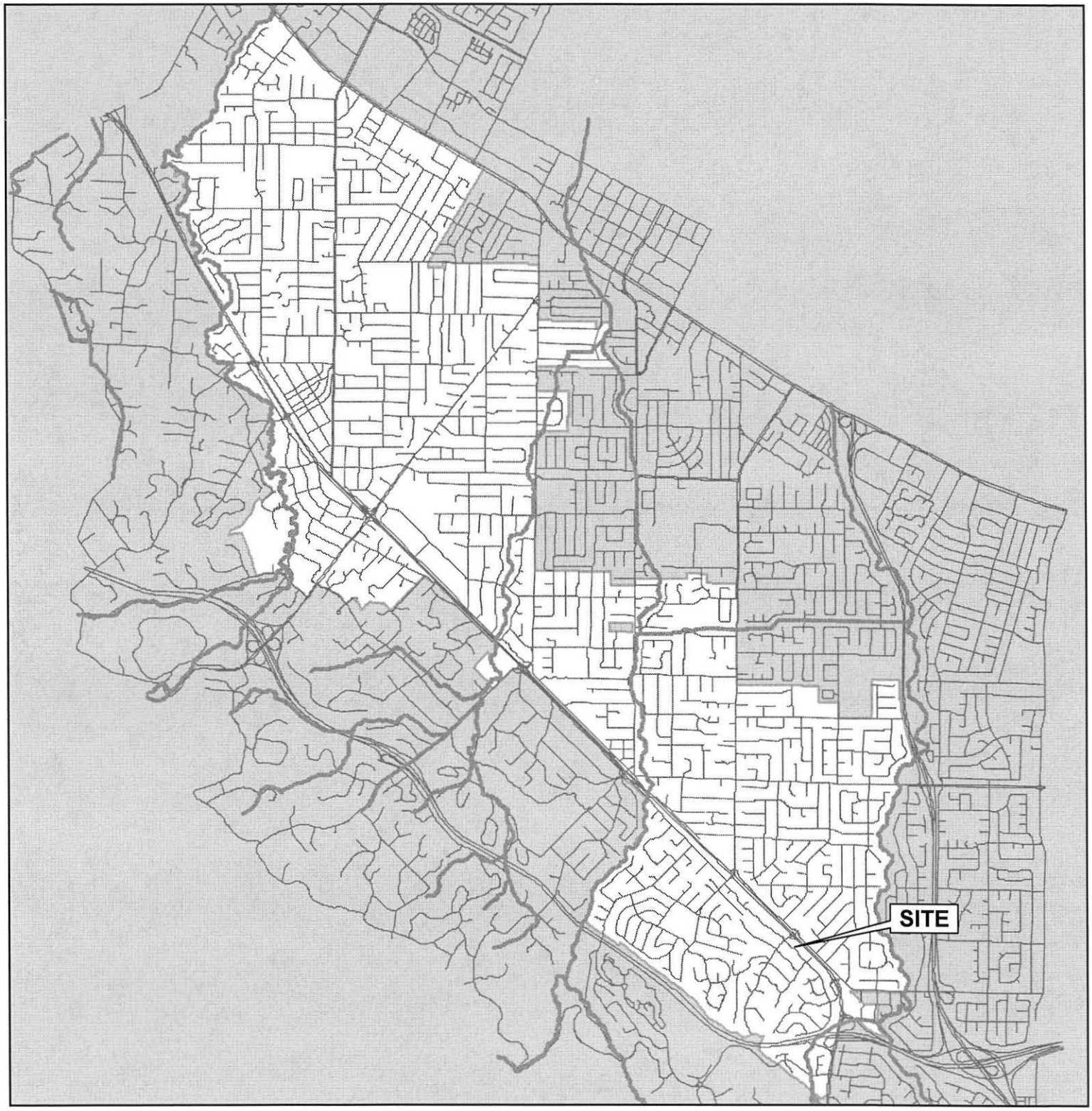
Please use this table to summarize the characteristics of the houses in your immediate neighborhood (two homes on either side, directly behind and the five to six homes directly across the street).

Address	Front setback	Rear setback	Garage location	One or two stories	Height	Materials	Architecture (simple or complex)
5245 Arboretum Drive	30'	30'	Front	One	18'	Wood/Brick Comp	Simple
524 Deodara Drive	30'	80'	Front	Two	22'	Wood/Brick Comp	Simple
558 Deodara Drive	30'	20'	Front	One	18'	Stucco Shake	Simple
576 Deodara Drive	30'	65'	Front	One	18'	Brick/Stucco Conc. Tile	Simple
523 Deodara Drive	30'	20'	Side	Two	24'	Wood/Comp	Complex
537 Deodara Drive	30'	20'	Side	Two	24'	Wood/Shake	Simple
551 Deodara Drive	30'	25'	Front	Two	22'	Brick/Stucco Comp	Comlex
569 Deodara Drive	30'	30'	Front	One	27'	Wood/Comp	Complex
585 Deodara Drive	30'	25'	Front	One	24'	Wood/Comp	Complex

* See "What constitutes your neighborhood", (page 2).

ATTACHMENT C

AREA MAP



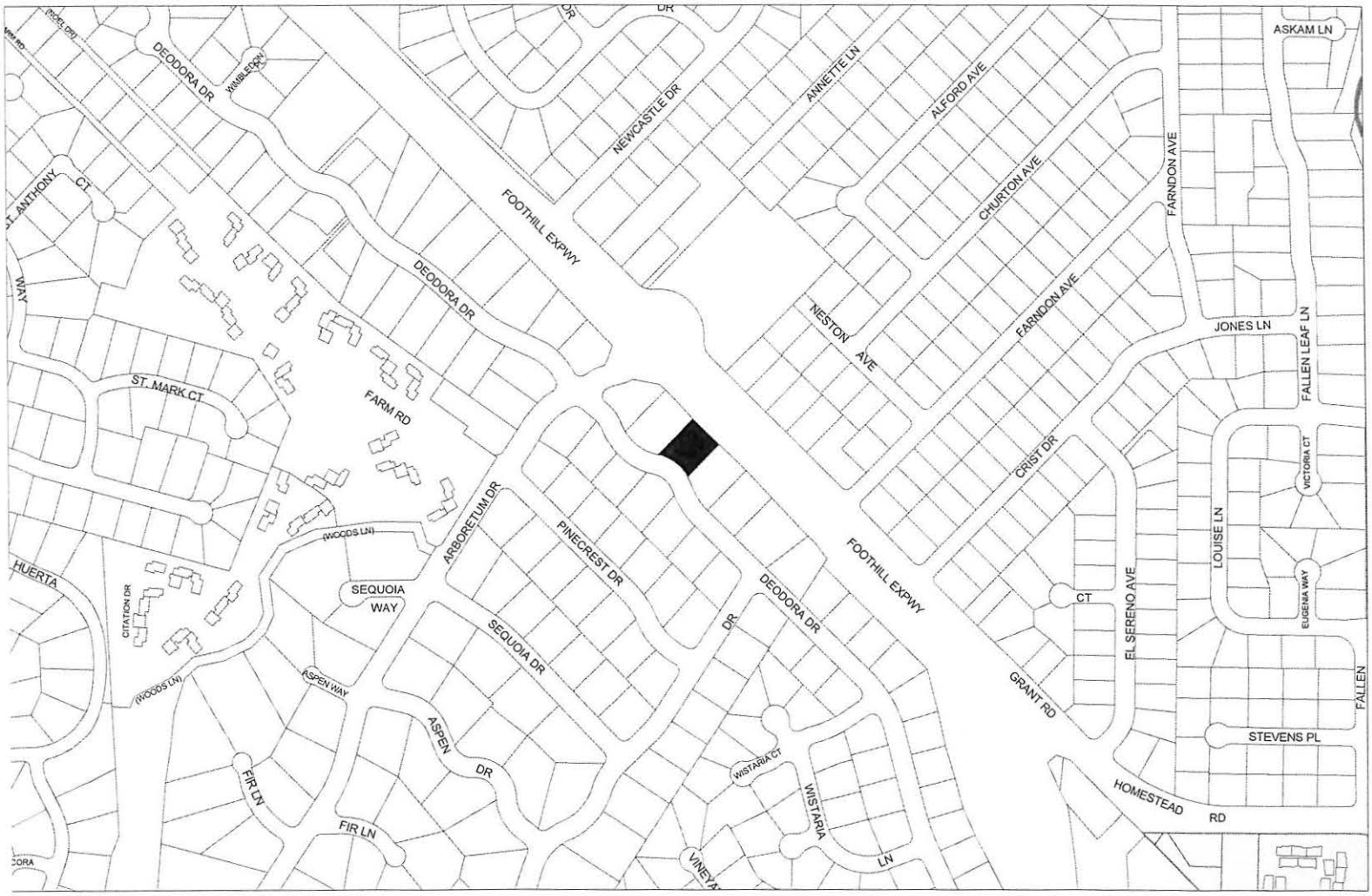
CITY OF LOS ALTOS

APPLICATION: 15-SC-27
APPLICANT: R. and D. Mirov
SITE ADDRESS: 540 Deodara Drive

N

Not to Scale

VICINITY MAP



SCALE 1 : 6,000

500 0 500 1,000 1,500

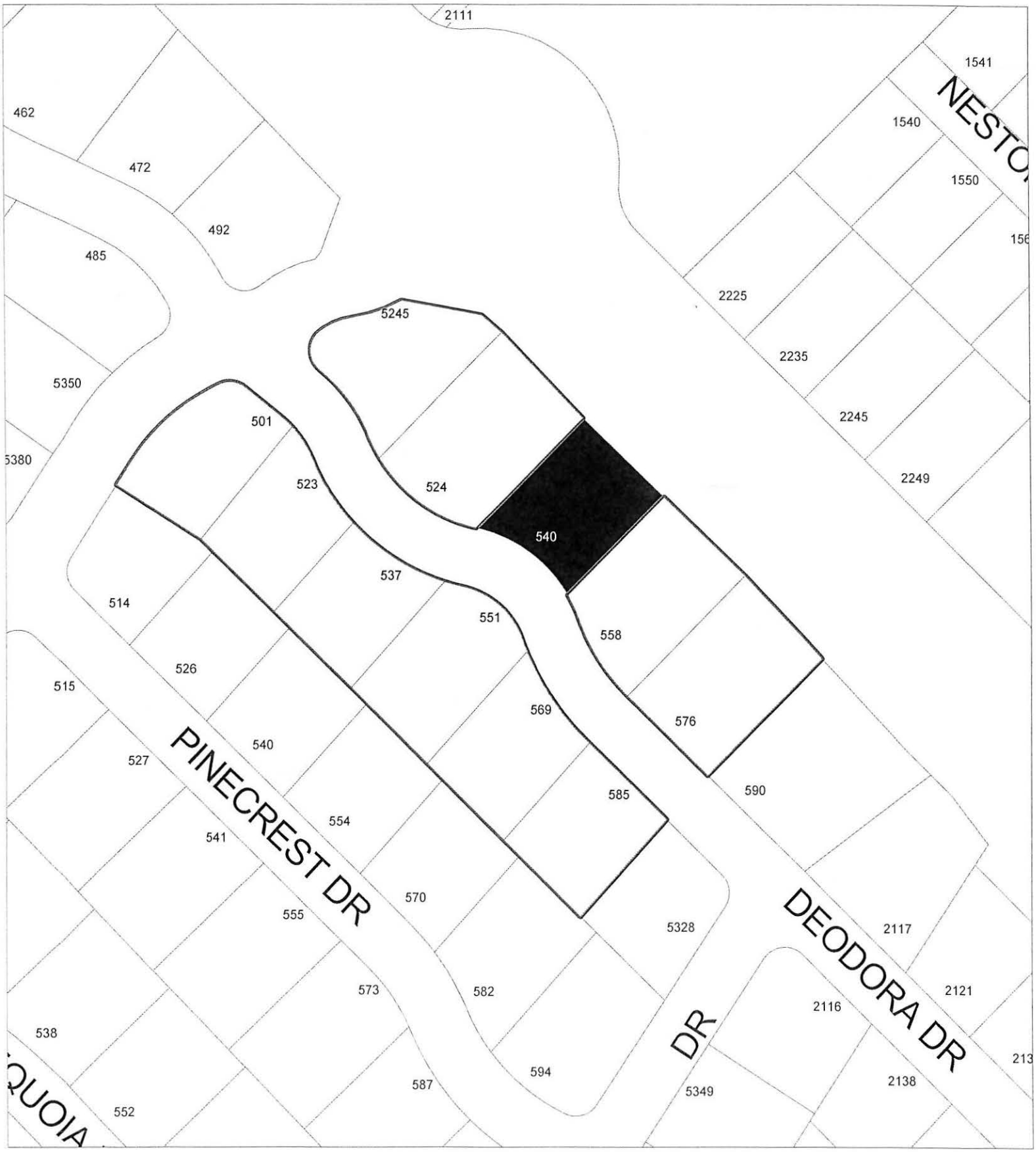
FEET

N

CITY OF LOS ALTOS

APPLICATION: 15-SC-27
APPLICANT: R. and D. Mirov
SITE ADDRESS: 540 Deodara Drive

540 Deodara Drive Notification Map



SCALE 1 : 1,500

100 0 100 200 300

FEET

N

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ACCREDITED TREE CARE INDUSTRY ASSOCIATION ETHICS QUALITY CONFIDENCE

RECEIVED
JUL 22 2015
CITY OF LOS ALTOS
PLANNING

7/21/2015

Donna and Russell Mirov
540 Deodara Drive
Los Altos, CA 94024
(650) 966-8801
donnamirov@yahoo.com
Russell.mirov@gmail.com

Re: Updated Tree Protection Plan for Single Family Residential Development Project at 540 Deodara Drive

Dear Donna and Russell,

At your request, I have visited the property referenced above to evaluate the trees present with respect to the proposed development project. This letter will serve to summarize my observations and recommendations.

This report has been updated from its original version, submitted on 6/24/2015.

Summary:

There are 25 trees present on and adjacent to this property. Eleven are of protected size. Fourteen trees are located on the property; nine are located behind the property, along Foothill Expressway; and two are located on neighboring private properties. Seven of the trees present are Coast Live Oaks (*Quercus agrifolia*); six are Coast Redwoods (*Sequoia sempervirens*); and the rest are of various species.

Six trees are planned for removal at this time: Coast Redwoods #5, Coast Live Oak #6, Weeping Cherry (*Prunus subhirtella*) #7, Edible Fig (*Ficus carica*) #8, and Crape Myrtles (*Lagerstroemia indica*) #14 and 15. All other trees are recommended for retention.

Assignment:

We have been asked to write a report detailing tree protection measures necessary for the construction of a single-family dwelling unit and a guest house on this property.

Introduction:

Many factors influence how a tree will be impacted by construction activities, including the extent of the activity; tree species; and tree health. Construction plans should accommodate trees insofar as practical, with the intent of preserving as many trees as reasonably possible.

In Los Altos, one category of protected trees is: "any tree which was required to be either saved or planted in conjunction with a development review approval (i.e. new two-story house)."

Background:

A new house will be constructed on this property in approximately the same location occupied by the existing house, which will be demolished.

This report is based on a set of construction drawings provided to me by the client on 6/4/2015.

Limits of the Assignment:

All observations were made from the ground. No root collar excavations or aerial inspections were performed.

Utility lines are not shown on the construction plans provided to me.

Locations shown on inventory map for trees, structures, and tree protection fencing are approximate.

Purpose & Use of the Report:

This report is intended to satisfy the City of Los Altos requirements for tree reporting for this project, based on the information currently available to us.

Observations:

Callery Pear #1 and African Fern Pine #3 will likely be impacted by the installation of the proposed wood walls. The extent of impact depends on the design of the wall.

Callery Pear #2 and African Fern Pine #4 are far enough away from proposed construction activities that they are unlikely to be substantially impacted.

Redwood #5, Weeping Cherry #7, and Edible Fig #8 are proposed for removal on the construction plans provided to me.

Coast Redwood #5 lies within the footprint of the proposed lower terrace, making construction of the proposed house physically impossible with the current design. Weeping Cherry #7 lies within the proposed garage footprint, making garage construction equally infeasible.

Edible Fig #8 has very poor structure resulting from a long history of poor pruning practices.

Installation of the retaining wall for the light well will require excavating within 1-2 feet of the trunk of Coast Live Oak #6.

Redwoods #9-11 and 13 are far enough away from proposed construction activities that they are unlikely to be substantially impacted.

Redwood #12 will likely be impacted by the installation of the proposed brick wall within its dripline. The extent of impact depends on the design of the wall, but some root loss is anticipated.

Crape Myrtles #14 and 15 lie within the footprint of the proposed courtyard and covered terrace, respectively. Both are positioned within several feet of the existing house.

Trees #16-25 are far enough away from proposed construction activities that they are unlikely to be substantially impacted.

Acacias #18, 21, and 24 are dead or nearly so at the writing of this report. Their bark is delaminating[1], and little foliage is present in their canopies.

The existing wooden shed, pool, and play equipment in the back yard will be retained as-is.

Testing & Analysis:

Because the City's definition of protected trees is quite broad for development projects, this inventory includes all trees over four inches in diameter.

Tree diameters were determined using a diameter measuring tape.

Numbers for Trees #1-12 are identical to the numbers used on page A1 of the construction plans I received. Trees #13-25 were not included in the plans.

The sizes of trees #16-18 were estimated, as their trunks are inaccessible.

All other observations were made visually.

The inventory map was created using QGIS and edited in Microsoft Word. Base imagery was obtained from the USGS National Map.

Discussion:

Tree driplines are used as a convenient metric by which to determine appropriate tree protection zones. Tree roots usually extend beyond driplines, but protecting the area within the driplines of reasonably symmetrical broad-canopied trees is generally considered sufficient in order to avoid substantial negative impacts.

When excavation occurs near trees, it is essential to perform all digging by hand, air spade, or hydrovac. This prevents tearing and allows care to be taken around large roots.

Large roots must be severed cleanly with a sharp pruning tool, in order to minimize the size of pruning wounds. Fungal pathogens can enter through pruning wounds, and minimizing their size allows the tree to compartmentalize (callus over) the wound as quickly as possible.

[1] Delaminate: to peel off; bark delamination is a positive indicator of tree death.

Excavation activity near trees exposes roots to the air, resulting in desiccation. This can be effectively mitigated by irrigating and covering the exposed area, and filling in excavated areas as quickly as practical.

After root loss, trees require supplemental irrigation in order to help them recover. This is true even for drought tolerant species.

If excavation occurs very close to tree trunks, large structural roots may be compromised, making trees prone to failure[2].

Decorative walls may be constructed in a variety of ways. All wall foundations require some compaction and excavation, which results in root loss. However, the extent of impact can be minimized by using posts rather than a continuous foundation.

Traditional concrete and asphalt inhospitable to tree root growth, as the soil underneath becomes dry, hot, and compacted. A variety of paving techniques have been developed which address these problems by using pervious paving materials, and base materials with larger pore spaces.

Because pervious paving materials reduce runoff by allowing for the retention of rainwater onsite, their use is recommended even when located some distance from existing trees.

Spreading wood chips within trees' driplines helps retain moisture and improve soil quality, increasing their likelihood of survival and thriving. This is true whether or not construction activity is occurring.

If the canopy of any tree is expected to conflict with construction equipment, the limb(s) of concern should be pruned in order to avoid tearing of the limb(s), damage to construction vehicles, and injury to construction personnel. A small amount of pruning (under 25%), performed by experienced arboricultural personnel, is not expected to harm a healthy tree, according to industry standards.

Conclusions:

If continuous foundations are used for the decorative walls in the front and back yards, Trees #1 and 12 are likely to experience substantial root loss and may decline or become structurally unstable. If the walls are built on posts instead, substantial impacts to these trees are unlikely.

Trees #2-4, 9-13, and 16-25 are suitable for retention, and are not expected to experience substantial impacts from the proposed project design with proper tree protection measures, outlined below.

Trees #5, 6, 7, 14, and 15 are incompatible with the proposed project design, due to their location within or very near the proposed building envelope.

Trees #5, 7, and 15 are located within the building envelope, making it physically impossible to both retain these trees and construct the building according to the proposed design. Trees #6 and

[2] Fail: to fall down

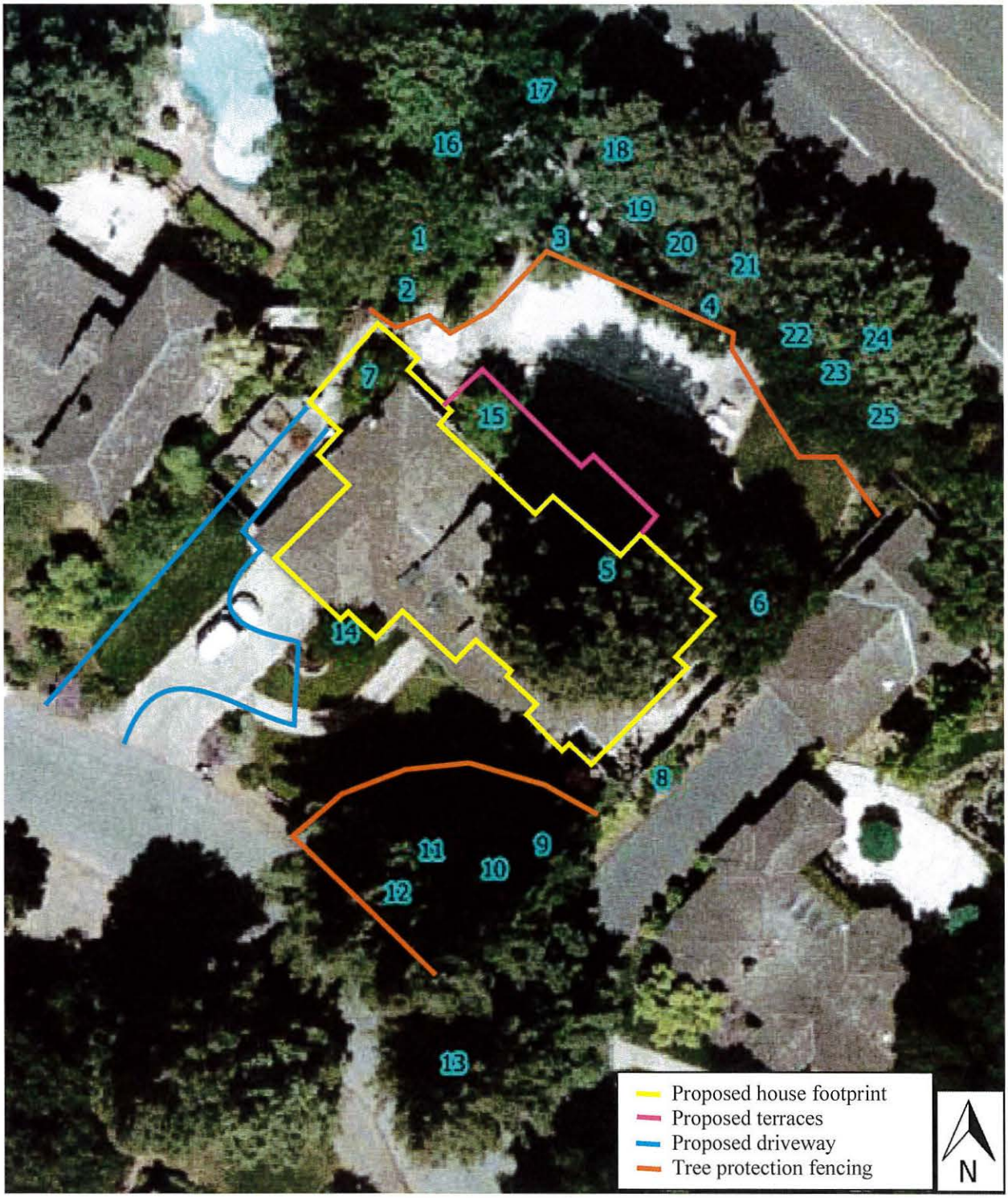
14 are located so close to the edge of the proposed building that they will likely become structurally unstable if retained, and are likely to die.

Edible Fig #8 is a low-value tree. While not necessitated by the proposed project design, removal of this tree would not frustrate the City's intent to retain trees with substantial current or future value.

Recommendations:

1. If project is approved as-is, remove Trees #5, 6, 7, 14, and 15 prior to commencement of construction activity.
2. Evaluate low-impact construction methods for the decorative walls near Trees #1 and 12. If viable, choose a construction method which minimizes impacts to trees; otherwise, consider removing Trees #1 and 12.
3. Consider using pervious paving materials for driveway construction.
4. Any limb pruning must be performed by experienced tree work personnel and supervised by an ISA-Certified Arborist. Ideally, any necessary pruning will be performed before construction begins.
5. Tree protection fencing must be installed before any equipment comes onsite, per the map below. Tree protection fencing is to remain in place throughout construction.
6. Tree protection shall be installed at or beyond the driplines of all trees except where existing pavement is to be retained, as on Deodara Drive.
7. Tree protection fencing shall consist of six-foot high chain link fencing. Tree protection fencing shall be posted with signs saying "TREE PROTECTION FENCE – DO NOT MOVE OR REMOVE WITHOUT APPROVAL FROM ARBORIST."
8. Spread wood chips at least four inches thick within tree protection fencing.
9. Installation of decorative walls may occur within tree protection fencing. This work shall be completed as quickly as possible, and no other construction activities may take place in these areas.
10. All other construction activities must take place within the work area delineated by tree protection fencing. This includes all vehicle operation, personnel access, and materials storage.
11. If live roots over one inch in diameter are encountered at any time, in any location, they must be pruned with a sharp saw or bypass pruners, as close to the edge of the excavation as possible. If roots over three inches in diameter are encountered, pruning of these roots must be supervised by an ISA-Certified Arborist.
12. If roots are severed, begin monthly irrigations immediately and continue through normal wet season (November-March) if rainfall continues to be below average.
13. If trench walls are to be left open for longer than 3-4 days, cover any exposed or severed roots with burlap or jute netting, in order to prevent sunscald damage. Irrigate excavation walls several times per week until work is complete.

Appendix 1: Inventory Map and Spreadsheet



Tree Number	Common Name	Species	DBH	Health	Species Construction Tolerance[3]	Notes
1	Callery Pear	*Pyrus calleryana*	9	Moderate; fireblight infection	Moderate; intolerant of root pruning	To be retained
2	Callery Pear	*Pyrus calleryana*	7	Moderate; fireblight infection	Moderate; intolerant of root pruning	To be retained
3	African Fern Pine	*Afrocarpus falcatus*	9	Good	Good[4]	To be retained
4	African Fern Pine	*Afrocarpus falcatus*	7.5	Good	Good	To be retained
5	Coast Redwood	*Sequoia sempervirens*	59	Good	Good; supplemental irrigation required if located out of native range, as well as during construction and following injury.	To be removed
6	Coast Live Oak	*Quercus agrifolia*	18	Good	Good	To be removed
7	Weeping Cherry	*Prunus subhirtella*	10.5	Good	Moderate[5]	To be removed
8	Edible Fig	*Ficus carica*	11, 10, 7	Good	Good[3]	To be removed; poor past pruning
9	Coast Redwood	*Sequoia sempervirens*	27	Good	Good	To be retained
10	Coast Redwood	*Sequoia sempervirens*	42	Good	Good	To be retained
11	Coast Redwood	*Sequoia sempervirens*	30.5	Good	Good	To be retained
12	Coast Redwood	*Sequoia sempervirens*	46.5	Good	Good	To be retained
13	Coast Redwood	*Sequoia sempervirens*	56	Good	Good	Neighboring tree
14	Crape Myrtle	*Lagerstroemia indica*	6	Good	Good[3]	To be removed
15	Crape Myrtle	*Lagerstroemia indica*	6.5	Good	Good	To be removed
16	Walnut	*Juglans sp.*	18 est	Good	Poor	Neighboring tree
17	Coast Live Oak	*Quercus agrifolia*	10 est	Good	Good	Along Foothill Expressway
18	Acacia	*Acacia sp.*	10 est	Dead or nearly so	Poor	Along Foothill Expressway

[3] Taken from Matheny and Clark, *Trees and Development*, 1998
[4] No data available; inferred from good performance in stressful urban environments
[5] No data available on species; inferred from ratings for other species in genus

19	Coast Live Oak	*Quercus agrifolia*	10	Good	Good	Along Foothill Expressway
20	Coast Live Oak	*Quercus agrifolia*	11	Good	Good	Along Foothill Expressway
21	Acacia	*Acacia sp.*	12	Dead or nearly so	Poor	Along Foothill Expressway
22	Coast Live Oak	*Quercus agrifolia*	10.5	Good	Good	Along Foothill Expressway
23	Coast Live Oak	*Quercus agrifolia*	11.5	Good	Good	Along Foothill Expressway
24	Acacia	*Acacia sp.*	18.5	Dead or nearly so	Poor	Along Foothill Expressway
25	Coast Live Oak	*Quercus agrifolia*	11.5	Good	Good	Along Foothill Expressway

Appendix 2: Supporting Photographs

Image 1: Callery Pears #1 and 2 (Best Possible Angle)

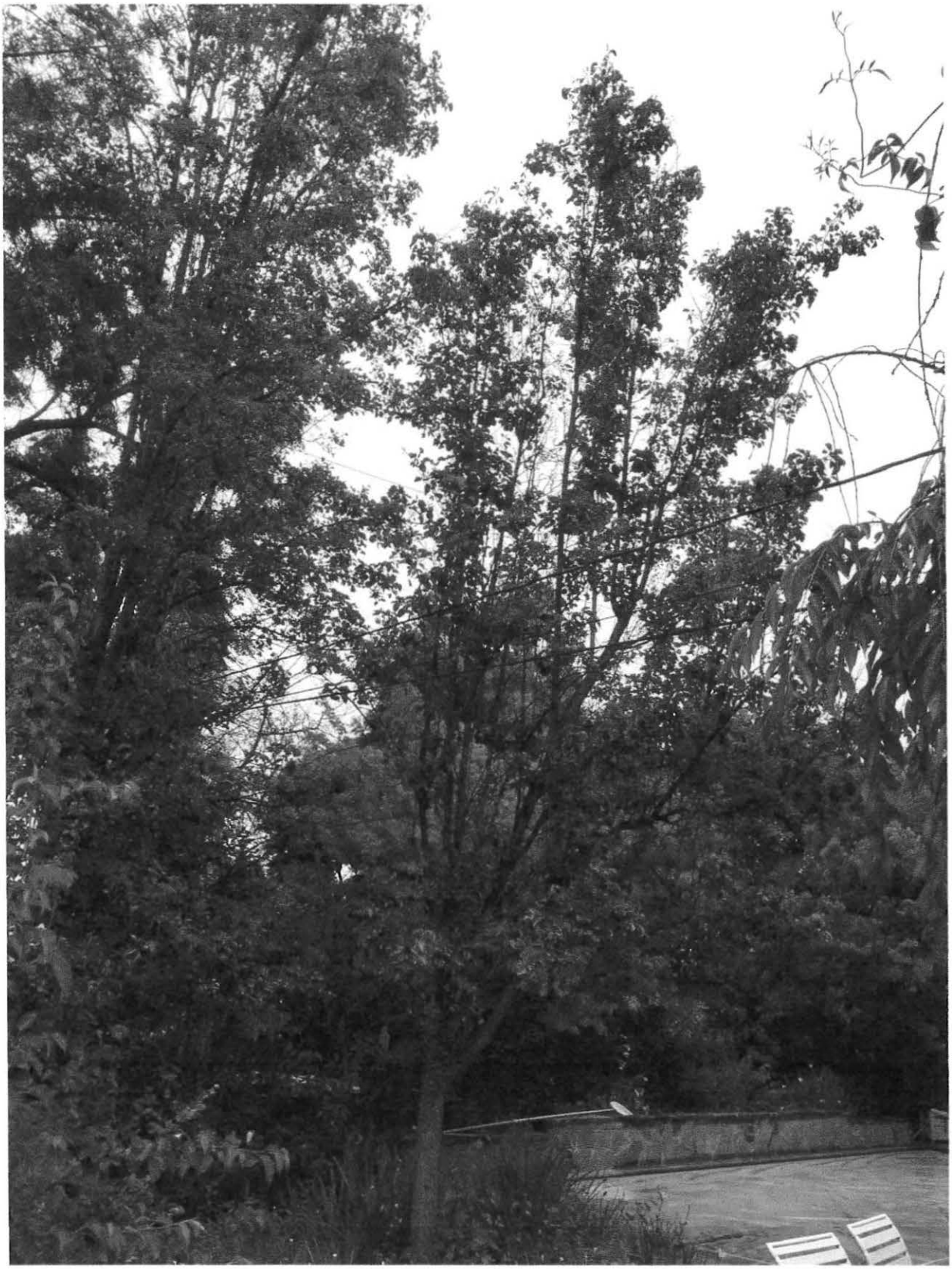


Image 2: African Fern Pine #3

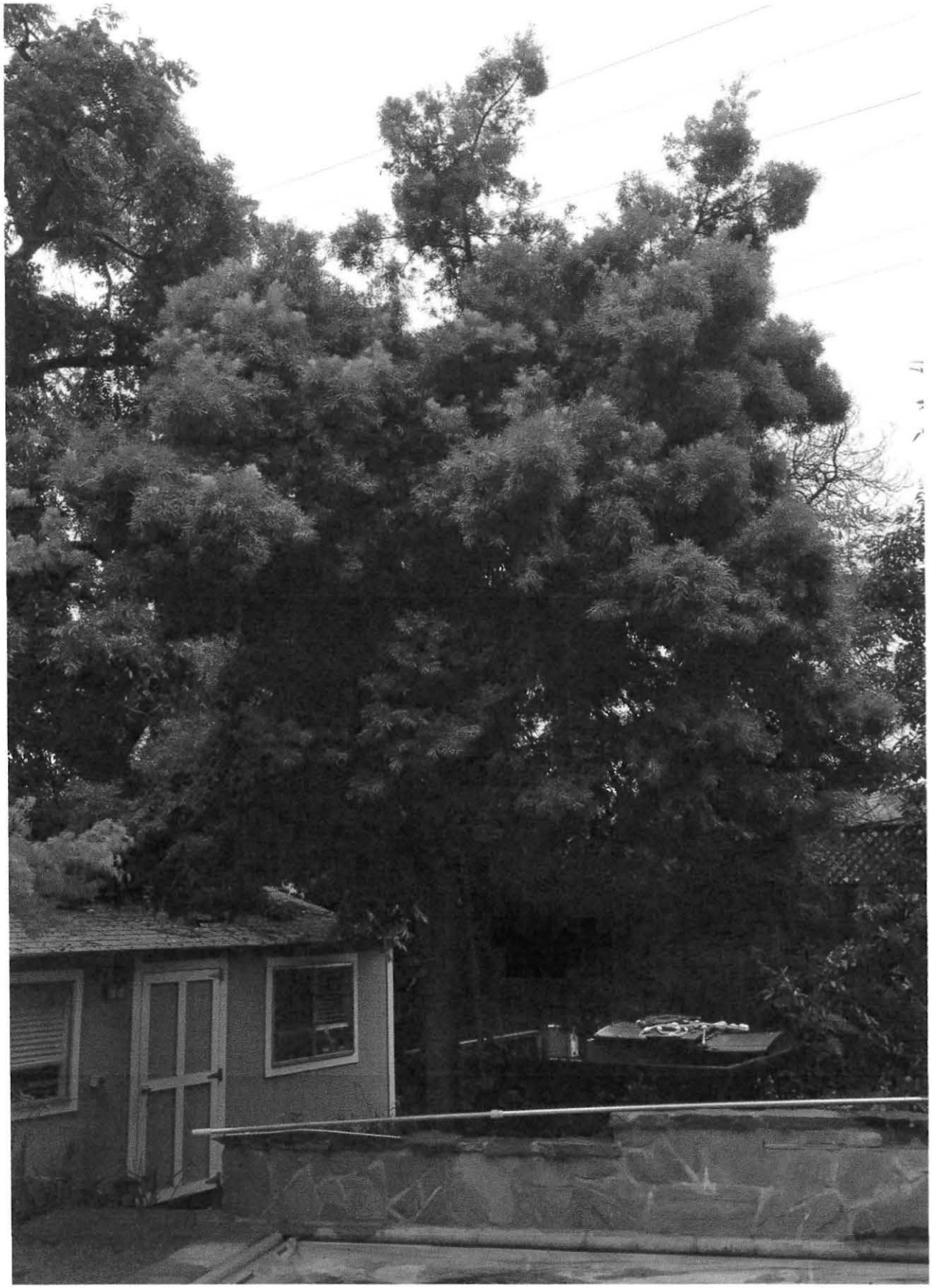


Image 3: African Fern Pine #4

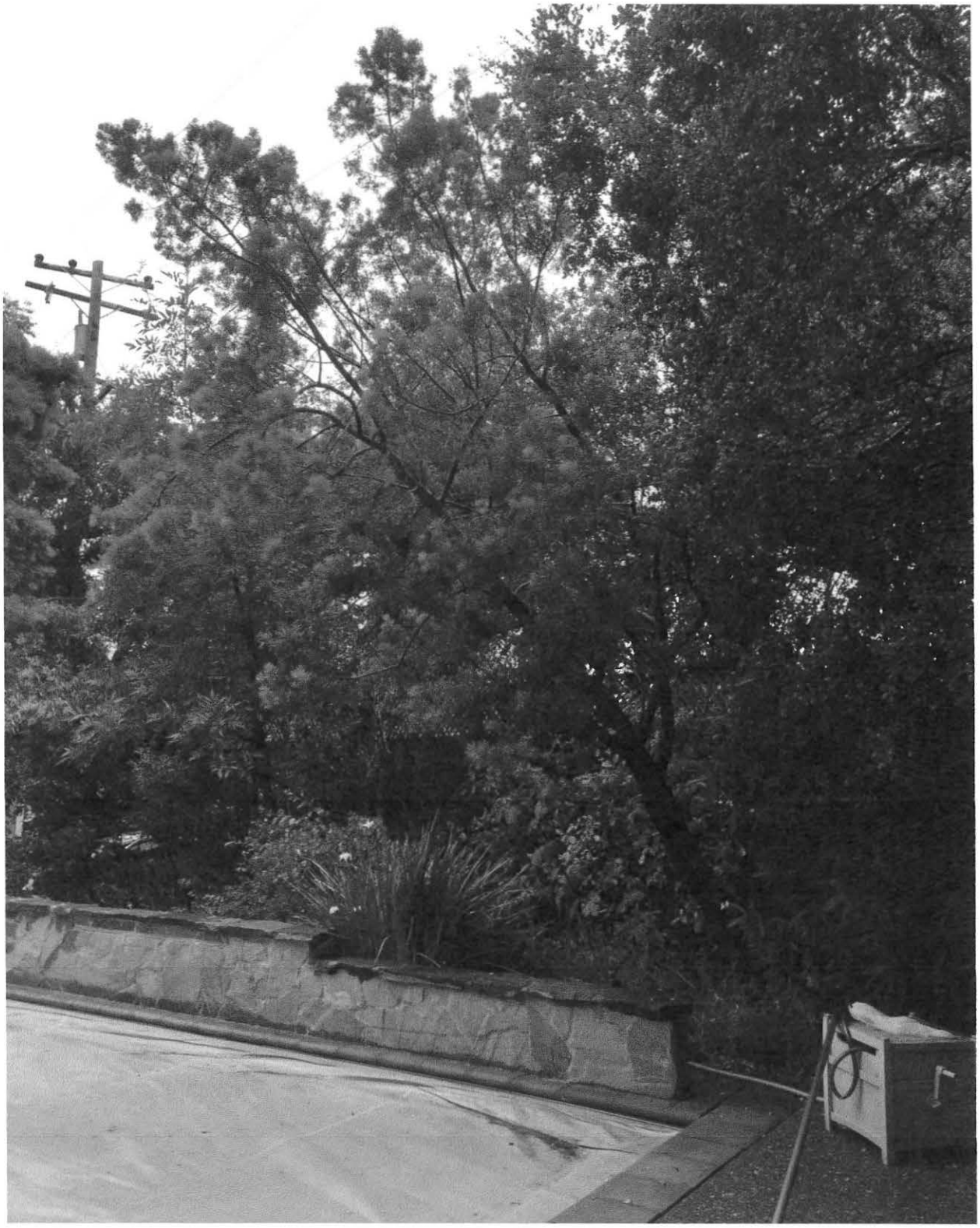


Image 4 – Coast Live Oak #18

Image 5, 6: Coast Redwood #5

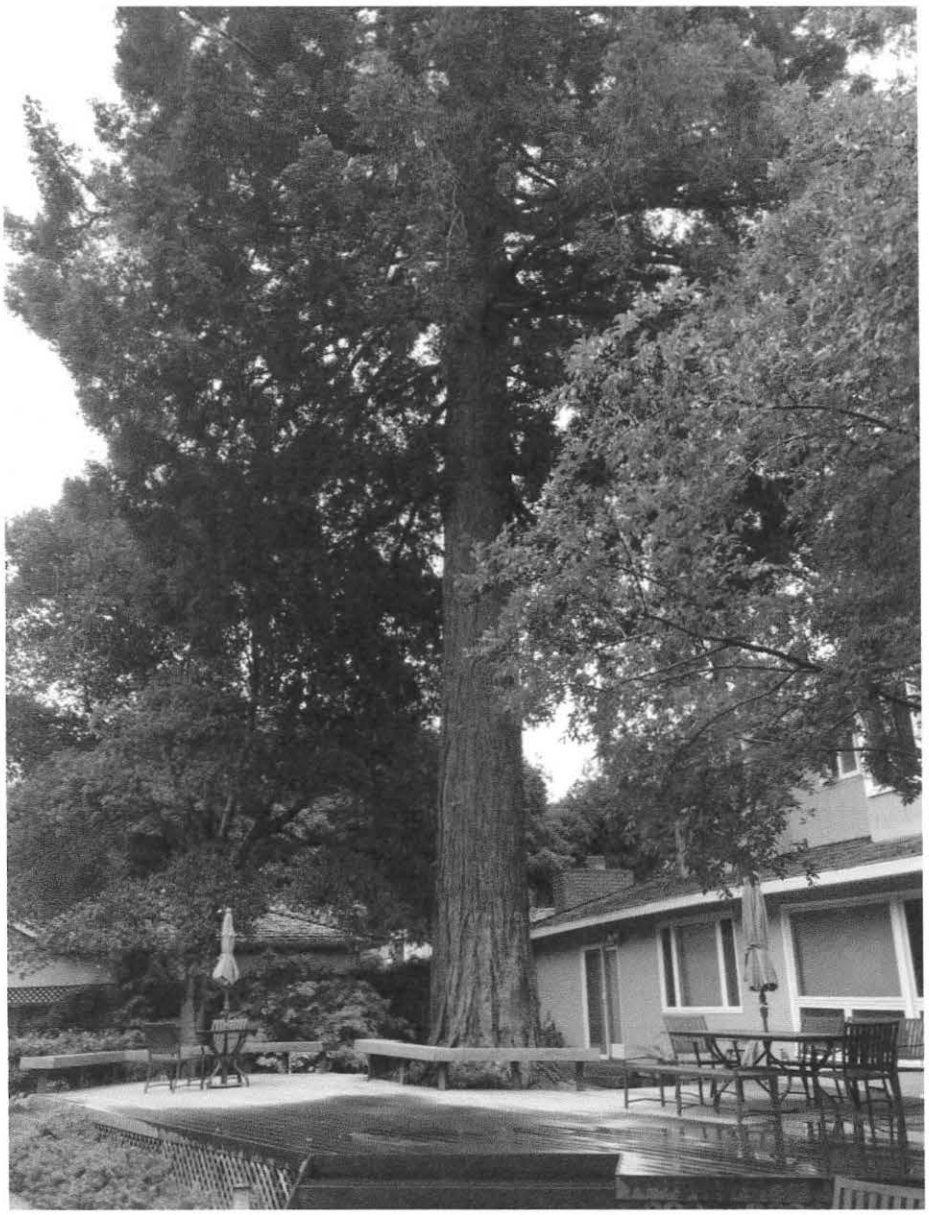


Image 7: Coast Live Oak #6

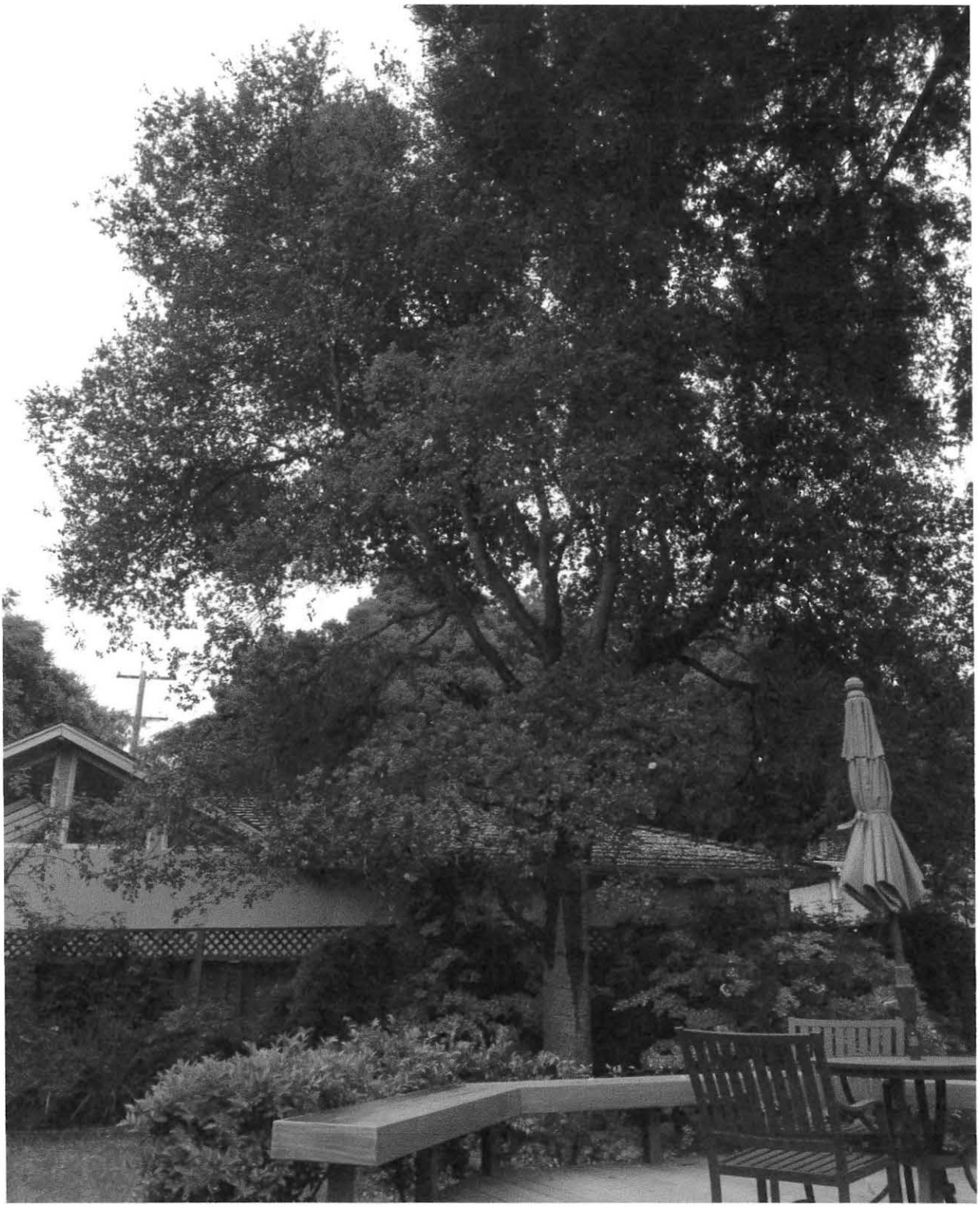
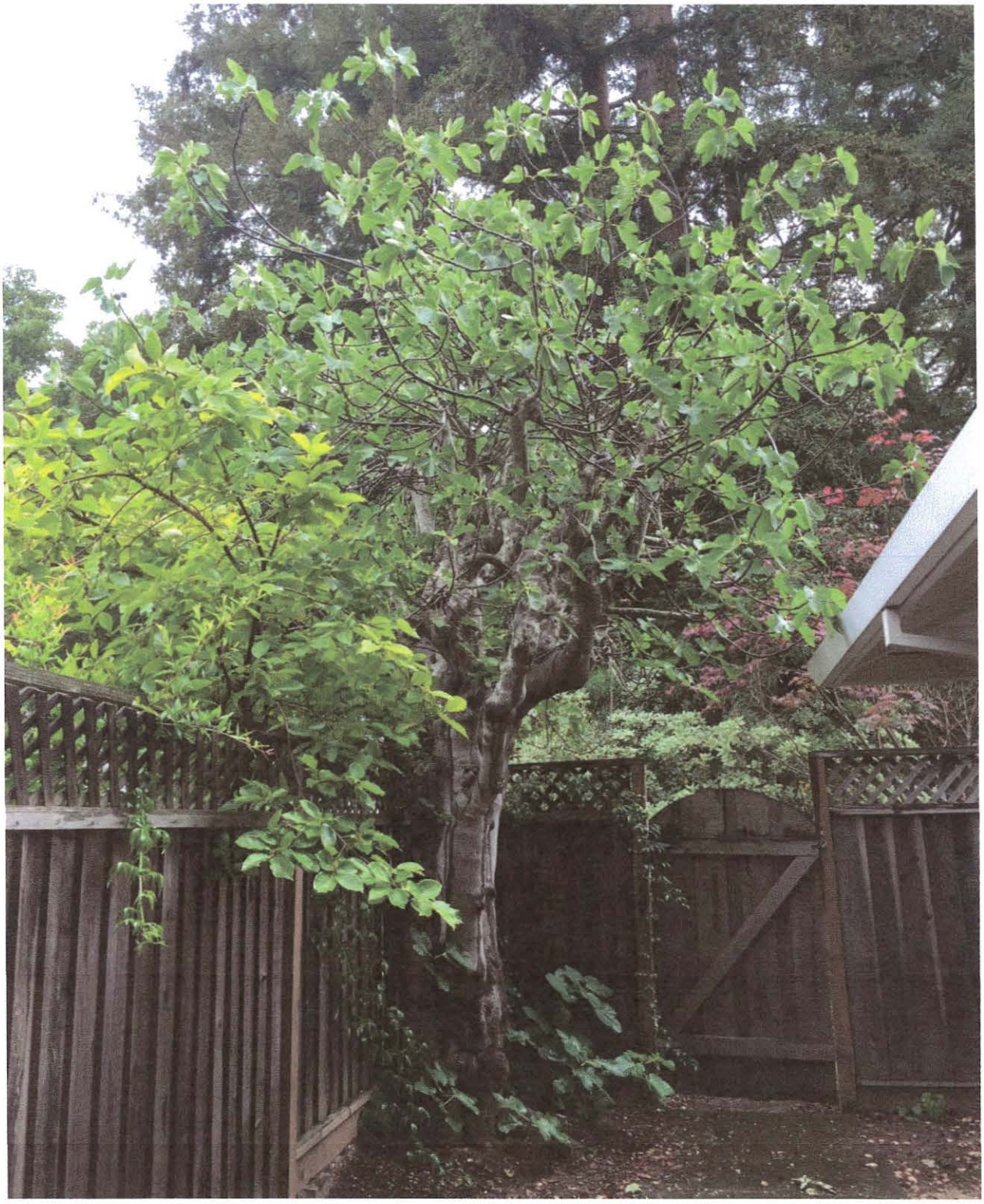


Image 8: Weeping Cherry #7

Image 9: Edible Fig #8

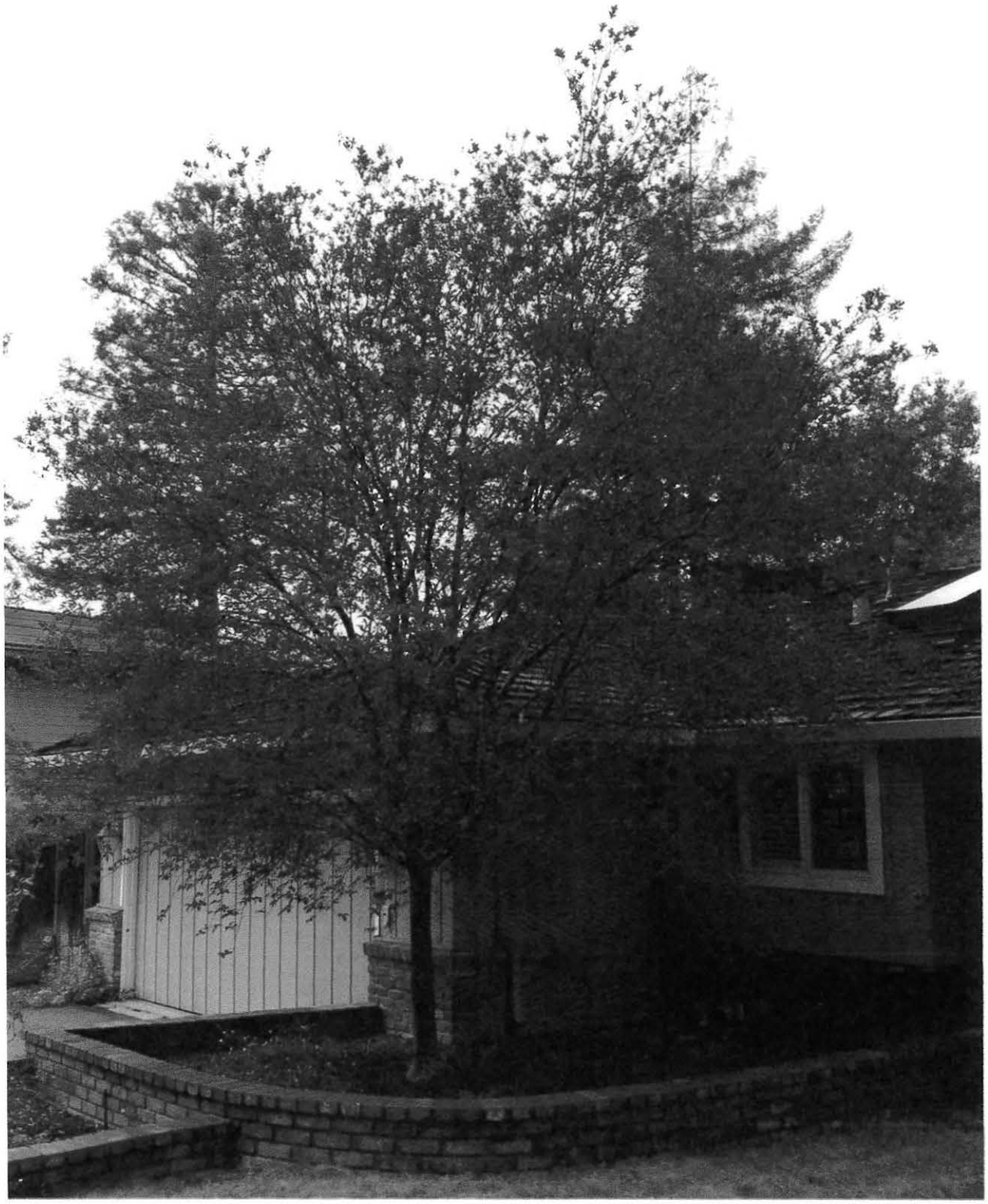


Images 9, 10: Coast Redwoods 9-12 (foreground), and 13 (background, middle)

Images 11, 12: Coast Redwood #13

Image 13: Crape Myrtle #14

Image 14: Crape Myrtle #15



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

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

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9. Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.

10. Unless expressed otherwise - 1) information in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in future.

Respectfully submitted,

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