



DATE: November 20, 2013

AGENDA ITEM # 4

TO: Design Review Commission
FROM: Sierra Davis, Assistant Planner
SUBJECT: 13-SC-22 – 64 Chester Circle

RECOMMENDATION:

Approve design review application 13-SC-22 subject to the listed findings and conditions

PROJECT DESCRIPTION

This is a design review application for construction of a two story residence. The following table summarizes the project:

GENERAL PLAN DESIGNATION: Single-family, Residential
ZONING: R1-10
PARCEL SIZE: 7,335 square feet
MATERIALS: Stucco, redwood siding, aluminum windows, single-ply membrane roofing, wood fascia, stucco soffits

	Existing	Proposed	Allowed/Required
LOT COVERAGE:	1,347 square feet	2,109 square feet	2,200 square feet
FLOOR AREA:			
First floor	1,347 square feet	1,976 square feet	
Second floor		591 square feet	
Total	1,347 square feet	2,567 square feet	2,567 square feet
SETBACKS:			
Front	19 feet	26 feet	25 feet
Rear	43 feet	27 feet	25 feet
Right side	15 feet	7.6 feet/16.4 feet	6.9 feet/14.4 feet
Left side	9 feet	8.3 feet/14.4 feet	6.9 feet/14.4 feet
HEIGHT:	16 feet	22 feet	27 feet

BACKGROUND

The subject property is located in a Diverse Character Neighborhood as defined in the City's Residential Design Guidelines. A neighborhood that is considered diverse is a result of homes which were built in different eras. In this case there are original homes adjacent to the subject property and

newer houses in the Chester Planned Unit Development (PUD) across the street. The homes in the neighborhood include smaller scale structures with simple forms and rustic materials. The street has improved shoulders and street tree pattern on one side; however on the subject side of the street the shoulder is unimproved and does not have a consistent street tree pattern.

DISCUSSION

Diverse character neighborhoods have varying styles, setbacks, and streetscape character; however there may be some elements of design such as scale and massing that are similar. The project relates well to the general character of the surrounding neighborhood, as it is compatible with the setback pattern, small-scale architectural forms and rustic materials.

The lot is asymmetrical, with a narrow frontage along Chester Circle of 46 feet and increasing to 100 feet at the rear property line. The front and rear setbacks are the required R1-10 setbacks, however the side setbacks are decreased to 10 percent of the average width of the lot. The average width of the lot is 69 feet for a required setback of 6.9 feet for the first story and 14.4 for the second story.

The project follows the shape of the lot, with a narrow second story centered at the front of the structure. The second story is sensitive to the adjacent properties, as the north (left) side of the structure is 14 feet in width and 25 feet in width on the south (right) side. A majority of the massing of the second story faces the rear of the property, which minimizes the impact to the adjacent neighbors.

The wall plate heights at the front of the structure are compatible within the neighborhood context at eight feet, however because of the modern style of the house the structure may appear taller. The right side of the structure has a uniform eave line that breaks up the massing of the front facade and separates the first and second story. The left side of the structure also has low eight-foot wall plate heights; however, the garage has a four-foot tall parapet extending above the plate and an angular roof at the second story. These architectural elements are integral to the design and are compatible with the scale within the neighborhood context. The design proposes an intermediate scale between the original small scale houses and the larger houses across the street. The overall height of the structure is a modest 22-feet.

The eaves at the rear of the structure vary in height and the shed roofs forms are angled upward which creates a bulky design. This design is acceptable because the bulk and scale of the house is directed toward the rear and not perceived at the street.

The proposed house uses materials compatible with the design concept and incorporates materials that are found in the neighborhood. The building materials are of a high quality and include Stucco, redwood siding, aluminum windows, single-ply membrane roofing, wood fascia, and stucco soffits.

Privacy and Landscaping

The windows on the north (right) side include a bathroom window and a window in Bedroom 4. The bathroom window is located towards the front of the structure and has a sill height of five and one half feet. This window does not present a privacy concern because the sill height makes it hard to view out of the window and down into the adjacent property. Bedroom 4 window is located at

the rear of the structure and has a low sill height of three and one-half feet. The oak trees on the on the property line will mitigate privacy concerns for views out of the corner window. The oak trees will be protected during construction with fencing in order to maintain the healthy trees. An arborist report by Don Araki, Arborist, The Tree Specialist, dated July 7, 2013, was submitted for review and has been included as an attachment. The recommended mitigation measures were incorporated in the conditions of approval.

The north (right) side elevations also have windows that are located farther back from the side property line and do not create a privacy concern. The windows located toward the front of the lot are located 21 feet from the property line which makes it hard to view down into the neighboring property. The window at the rear of the structure is a clear-story element.

The window on the south (left) side of the house is located in Bedroom 3, which toward the front of the house. The window has a sill height of three feet. Although this sill height is low, it does not present a privacy concern because the view is out and over the neighboring house and to the front yard. The front yard is considered a semi-public area and is not an unreasonable privacy impact.

ENVIRONMENTAL REVIEW

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

Cc: Chii-Luh Chen (Architect) and Li-Zen Ting, Owners

Attachments:

- A. Application
- B. Neighborhood Compatibility Worksheet
- C. Area Map and Vicinity Map
- D. Arborist Report by Don Araki, Arborist, The Tree Specialist, dated July 7, 2013

FINDINGS

13-SC-24—744 La Prenda Road

With regard to the construction of a single-family house, the Design Review Commission finds the following in accordance with Section 14.76.050 of the Municipal Code:

- A. The proposed project complies with all provision of this chapter;
- B. The height, elevations, and placement on the site of the proposed addition, 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 addition 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 addition has been designed to follow the natural contours of the site with minimal grading, minimum impervious cover, and maximum erosion protection.

CONDITIONS

13-SC-24—744 La Prenda Road

1. The approval is based on the plans received on October 22, 2013 and the written application materials provided by the applicant, except as may be modified by these conditions.
2. Obtain an encroach permit issued from the Engineering Division prior to doing any work within the public street right-of-way.
3. 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.
4. Prior to the issuance of a demolition permit, install tree protection fencing around the dripline, or as required by the project arborist, of the following trees (nos. 1-3) as shown on the site plan. Tree protection fencing shall be a continuous six-foot-high chain link fence with an allowed two-foot opening to provide access for inspections. The posts shall be eight-feet tall by two-inches in diameter galvanized metal and driven into the soil. The tree protection fencing shall not be removed until the building permit is ready for final.

Pursuant to the arborist report by Don Araki, Arborist, The Tree Specialist, dated July 7, 2013, the fence should encompass as much of the root zone as possible, ideally five-feet beyond the drip lines (branch tips) or including the entire TPZ. For this project's design constraints, the fence locations are pulled back to hardscape perimeters.

5. The arborist report by Don Araki, Arborist, The Tree Specialist, dated July 7, 2013 shall be included as a full sheet in the plans and referenced on the site and grading and drainage plans.
6. Prior to zoning clearance, the project plans shall contain/show:
 - a. The conditions of approval shall be incorporated into the title page of the plans.
 - b. 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 a continuous six-foot-high chain link fence with an allowed two-foot opening to provide access for inspections. The posts shall be eight-feet tall by two-inches in diameter galvanized metal and driven into the soil." The tree protection fencing shall be installed prior to issuance of the demolition permit and shall not be removed until all building construction has been completed."
 - c. Verification that the house will comply with the City's Green Building Standards (Section 12.26 of the Municipal Code) from a Qualified Green building Professional.
 - d. Fire sprinklers to be installed pursuant to Section 12.10 of the Municipal Code.
 - e. The location of underground utilities pursuant to Section 12.68 of the Municipal Code. Underground utility trenches should avoid the drip-lines of all protected trees.

- f. The location of any air conditioning equipment on the site plan and the sound rating for such equipment.
- g. Show the measures to comply 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.).

7. Prior to final inspection:

- a. All front yard landscaping, street trees and privacy screening shall be maintained and/or installed as required by the Planning Division.
- b. Submit verification that the house was built in compliance with the California Green Building Standards pursuant to Section 12.26 of the Municipal Code.



ATTACHMENT A

SEP - 5 2013
 CITY OF LOS ALTOS
 PLANNING

CITY OF LOS ALTOS GENERAL APPLICATION

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

Permit # 1105791

<input type="checkbox"/>	One-Story Design Review	<input type="checkbox"/>	Sign Review	<input type="checkbox"/>	Multiple-Family Review
<input checked="" type="checkbox"/>	Two-Story Design Review	<input type="checkbox"/>	Sidewalk Display Permit	<input type="checkbox"/>	Rezoning
<input type="checkbox"/>	Variance(s)	<input type="checkbox"/>	Use Permit	<input type="checkbox"/>	R1-S Overlay
<input type="checkbox"/>	Lot Line Adjustment	<input type="checkbox"/>	Tenant Improvement	<input type="checkbox"/>	General Plan/Code Amendment
<input type="checkbox"/>	Tentative Map/Division of Land	<input type="checkbox"/>	Preliminary Project Review	<input type="checkbox"/>	Appeal
<input type="checkbox"/>	Subdivision Map Review	<input type="checkbox"/>	Commercial Design Review	<input type="checkbox"/>	Other:

Project Address/Location: 64 Chester Circle

Project Proposal/Use: New single family home

Current Use of Property: single family home

Assessor Parcel Number(s) 170-01-003 Site Area: 2,334.7 s.f.

New Sq. Ft.: 3,178 Remodeled Sq. Ft.: 0 Existing Sq. Ft. to Remain: 0

Total Existing Sq. Ft.: 969 Total Proposed Sq. Ft. (including basement): 3,178
1,347 (w/ garage) 3,528 (w/garage)

Applicant's Name: Chii-Luh (Caroline) Chen

Home Telephone #: (650) 969-2958 Business Telephone #: (650) 996-0622

Mailing Address: 718 Terrace Court

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

Property Owner's Name: Chii-Luh (Caroline) Chen & Li-Zen Ting

Home Telephone #: (650) 969-2958 Business Telephone #: (650) 996-0622

Mailing Address: 718 Terrace Court

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

Architect/Designer's Name: Caroline Chen Telephone #: (650) 996-0622

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

(continued on back)



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 64 Chester Circle

Scope of Project: Addition or Remodel _____ or New Home

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

Address: 64 Chester
Date: 7/8/2013

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.

Please see p.7 for neighborhood map.

Streetscape

1. Typical neighborhood lot size*:

Lot area: 3,000 ~ 8,600 square feet

Lot dimensions: Length 65 ~ 140 feet

Width 40 ~ 70 feet

If your lot is significantly different than those in your neighborhood, then note its: area 7334.7, length 106.8, and width 69.2.

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

Existing front setback if home is a remodel? N/A

What % of the front facing walls of the neighborhood homes are at the front setback 20 %

Existing front setback for house on left 20 ft./on right 20 ft.

Do the front setbacks of adjacent houses line up? NO (see P.6)

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) line up w/ front of house 2

Garage facing front projecting from front of house face 0

Garage facing front recessed from front of house face 4

Garage in back yard 2

Garage facing the side 1

Number of 1-car garages 2; 2-car garages 2; 3-car garages 0

No Garage 1

Address: 64 Chester
Date: 7/8/2013

4. Single or Two-Story Homes:

What % of the homes in your neighborhood* are:
One-story 40%
Two-story 60%

5. Roof heights and shapes:

Is the overall height of house ridgelines generally the same in your neighborhood*? NO
Are there mostly hip 1, gable style 8, or other style 1 roofs*? gable + hip
Do the roof forms appear simple 5 or complex 5?
Do the houses share generally the same eave height NO? (one-story ones ye

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

What siding materials are frequently used in your neighborhood*?
1 wood shingle stucco board & batten 9 clapboard
 tile stone brick combination of one or more materials
(if so, describe) _____

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

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

Address: 64 Chester
Date: 7/8/2013

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)

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? NO

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.)?

front lawns, bushes with flowers, all size trees

How visible are your house and other houses from the street or back neighbor's property?

quite visible

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)?

gravel / dirt

10. Width of Street:

What is the width of the roadway paving on your street in feet? 28

Is there a parking area on the street or in the shoulder area? Yes

Is the shoulder area (unimproved public right-of-way) paved, unpaved, gravel, landscaped, and/or defined with a curb/gutter? gravel or

dirt on my side, sidewalk w/ curb across
on opposite side of street.

Address: 64 Chester
Date: 7/8/2013

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.:

Small & mid size houses w/ simple to slightly complex roof forms. Almost all houses have horizontal sidings as exterior wall finish. Small front yard setbacks w/ lawn & flowering bushes.

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 half in the 50s. half in the 90s.

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 One story house similar to other one story houses. Same for two

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 story houses.

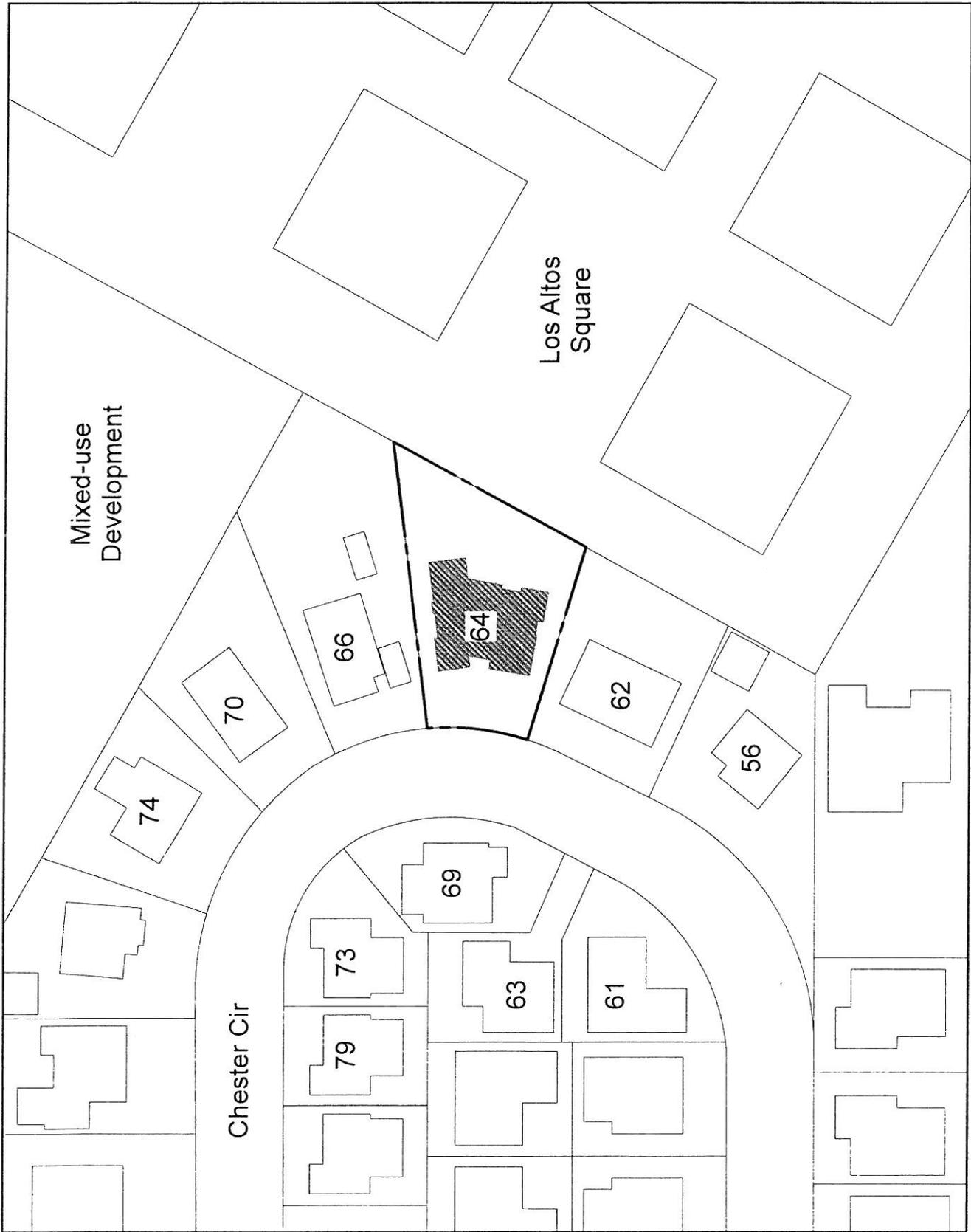
Proposed house does not relate very much in terms of style, but in its simplicity of form, friendly scale, and use of material.

Address: 64 Chester
 Date: 7/8/2013

Summary Table

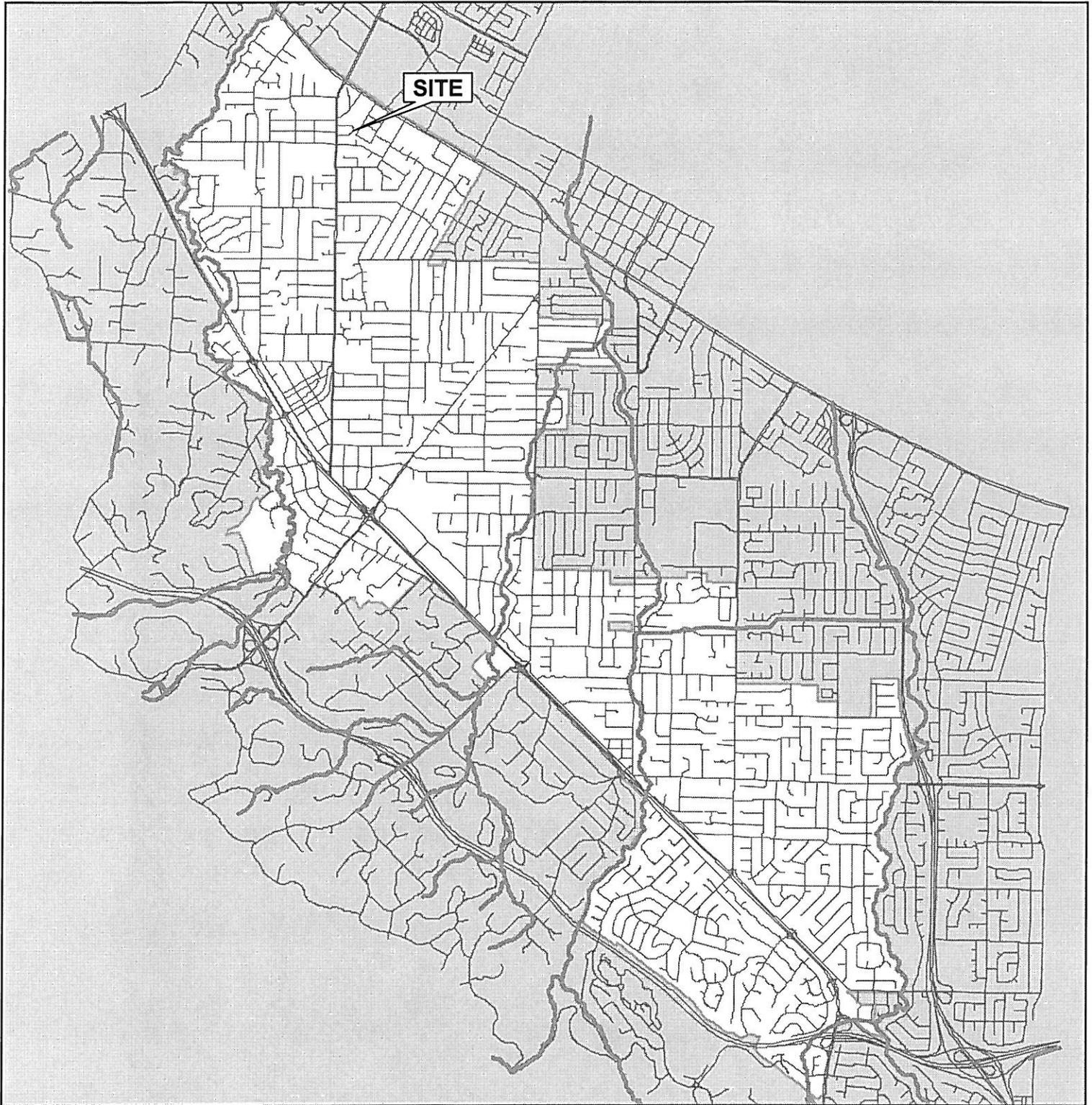
Please use this table to summarize the characteristics of the houses in your immediate neighborhood (two homes on either side, directly behind and the five to six homes directly across the street).

Address	Front setback	Rear setback	Garage location	One or two stories	Height	Materials	Architecture (simple or complex)
56 Chester	25	28	2 car rear	1	15.5	comp. roof shingles &	simple
62	20	32	1 car same as front of house	2	24	horizontal wood siding	"
66	20	50	1 rear carport	1	15.5	}	"
70	20	16	No garage	1	15.5		"
74	25	6	2 car same as front of house	1	15.5		"
79	12	12	2 car small recess	2	24		more complex than 56 ~ 74
73	8	12	"	2	24		"
69	N/A	N/A	"	2	24	"	"
63	N/A	N/A	"	2	24	"	"
61	10	15	"	2	24	"	"



scale 1/64" : 1'

AREA MAP



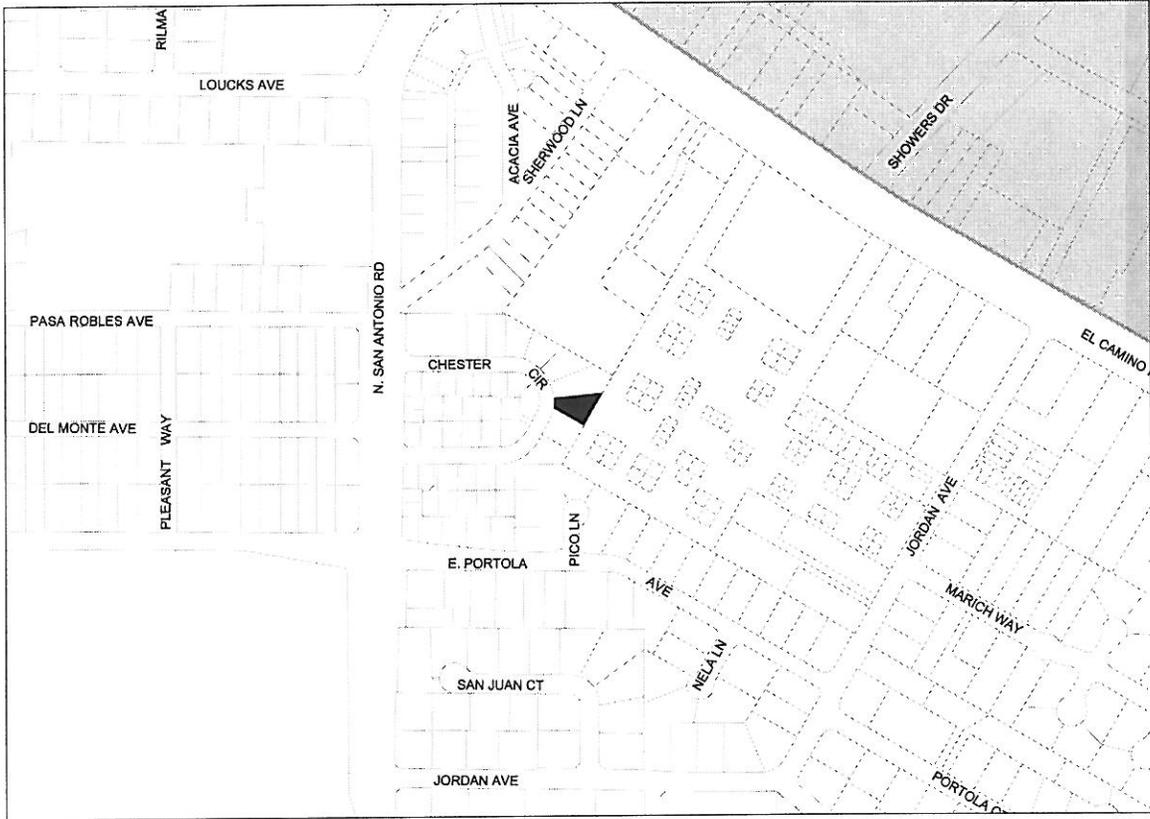
CITY OF LOS ALTOS

APPLICATION: 13-SC-22
APPLICANT: C. Chen and L. Ting
SITE ADDRESS: 64 Chester Circle

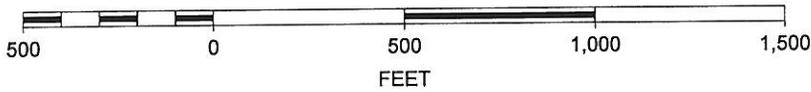


Not to Scale

VICINITY MAP



SCALE 1 : 6,000



CITY OF LOS ALTOS

APPLICATION: 13-SC-22
APPLICANT: C. Chen and L. Ting
SITE ADDRESS: 64 Chester Circle

The Tree Specialist
Don Araki
ISA Certified Arborist WE-6547A
(408) 209-1007

**Pre-Construction Tree Inventory and
Certified Arborist's Report**

Prepared for:
Caroline Chen
(650) 996-0622
Regarding Property Location:
64 Chester, Los Altos, CA

July 7, 2013

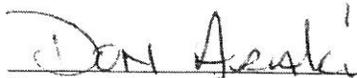
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5.0	CERTIFICATION



**1.0
AFFADAVIT**

Don Araki of **The Tree Specialist** is an ISA Certified Arborist: WE- 6547A having authority to offer advice and suggestions accumulated from industry standards and working knowledge based on 20 years of experience in residential and commercial tree service. This report is respectfully submitted to Caroline Chen for the spectrum of work to be done at the location: 64 Chester Circle, Los Altos, CA



Don Araki

7/9/13

Date

**2.0
EXECUTIVE SUMMARY**

Please be advised that the City of Los Altos, CA has established a strict code of compliance regarding tree work in your area titled "Heritage Tree Ordinance". For more information you may access this three page text at.

<http://losaltosca.gov/commdev/planning/>

The Community Development Department's "Permit Submittal Requirements" advise the submittal of two (2) copies of the Arborist Report pertaining to heritage trees in the vicinity. You may also have access to these requirements at

<http://www.losaltosca.gov/committees-commissions/environmental/home/pages/trees.html>

Since the design team has planned around this project's significant trees, the Heritage Trees can generally be preserved with the usual tree protection measures.

3.0 TREE PRESERVATION PRECEPTS

{Books have been written on this topic – but if I had to choose three basic concepts to highlight:

Start early to preserve trees that are assets, but preserve whole trees (including roots, not merely trunks.

The owner(s) must have the entire team committed to preserving each tree everyday (from the designer to the project manager to the guys with the nail bags).

Minimize impacts, or the tree will require you to mitigate, lest you destroy its rootlets or its structure or its environment.}

4.0 SITE-SPECIFIC INFORMATION

Location: 64 Chester Circle, Los Altos, CA

4.1 Existing Conditions (Tree Inventory)

{Tree list spreadsheet)

Observation Definition Guidelines

Tree Numbering System: We have tree identifiers attached to the tree with assigned numbers from 1 -3.

Names: We utilize the common Sunset names whenever possible or scientific/botanical to minimize confusion. We may describe a tree using Sunset or McMinn's key when necessary.

DSH: Diameter at Standard Height: This measurement is the trunk diameter measured at the standard height defined by the jurisdiction in which the tree trunk grows. The industry standard is 54 inches above ground level, taken with a standard surveyor's diameter tape, recorded in inches (DBH: diameter at breast height). Exceptions to the 54" level are called out in several jurisdictions (to wit: San Mateo at 48"; Redwood City between 6" – 36"; San Jose at 24"). For multi-trunked trees, measurements were taken below the lowest branch swelling and/or individual stems at 54" inches, or an average depending on which height measurement is deemed to produce the best representative figure.

Crown Radius: The average radius measurement is shown in feet.

Ht (Height): Estimated distance foliage crown extends above grade, recorded in feet.

Vigor: Rigor for tree's growth and vitality as a blend of elements like leaf or bud size and color, twig growth (elongation), accumulation of deadwood, cavities, wound wood development, trunk expansion (growth "cracks"), etc.

Structure: Structure rating for tree's architecture as a composite of factors like branch attachment, lean and balance, effects of prior breakage, crossing-tangled-twisted limbs, co-dominant trunks and/or branches, decay and cavities, anchorage (roots), etc.

Overall Condition: Percentage rating assessing the tree's overall vigor, recent growth, insects/diseases, and structural defects. Relative text rating included in the same cell as: Excellent, Good, Fair, Poor, Very Poor. This corresponds to the "Condition Percentage" factor in tree valuations per the Council or Tree and Landscape Appraisers (CTLA) system used by the International Society of Arboriculture. (CTLA, 1992) It combines foliage, branches, limbs, and trunk and root ratings into a composite condition score. This rating is used in the calculation of these trees' appraised value required by the City of Los Altos.

Suitability for Preservation: Considers tree's condition (vigor and structure), longevity/age, adaptability, and aesthetics. This rating takes into account any announced intentions of changes in area/lot use. Degrees: High, Moderate, Low, and Very Low.

High: Tree in great condition and any existing defects or stresses are minor or can be easily mitigated.

Moderate: Notable vigor and/or stability problems but which can be moderated with treatment and /or increased tree protection zone.

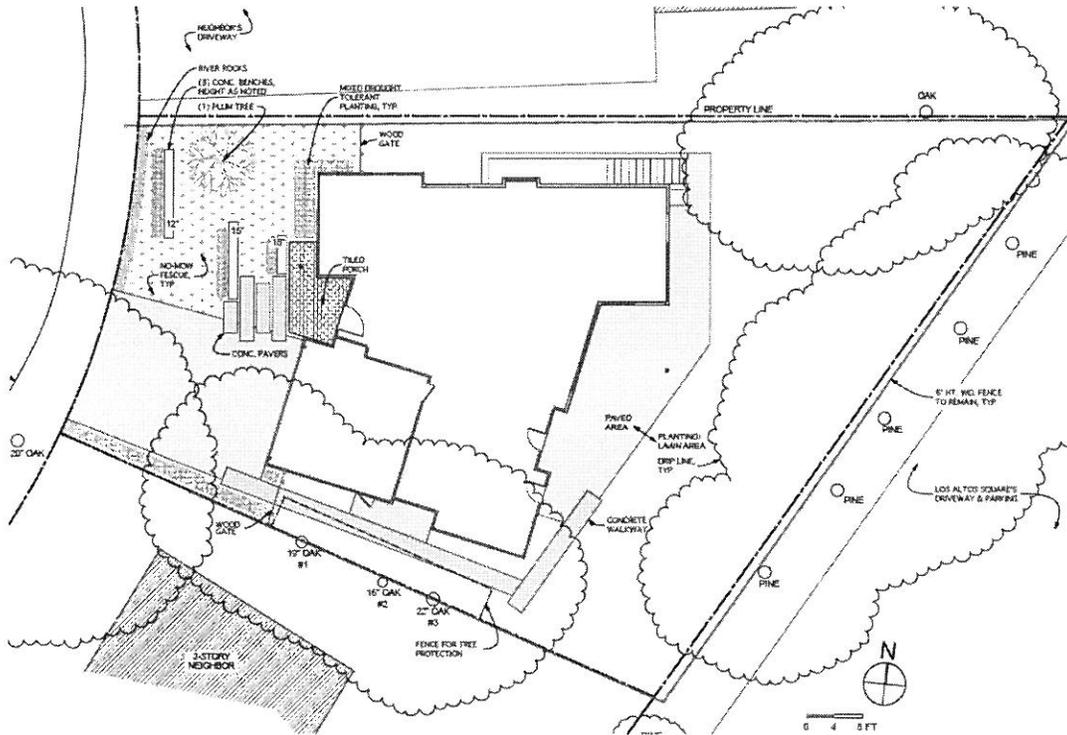
Low: Significant problems, including shorter life expectancy. Difficult to retain but has potential with a much larger tree protection zone.

Very Low: Substantial, existing problems, defects, stresses; unlikely to survive the impact of any project.

Age / Longevity: Rates tree's relative age: Young (long) / Semi- Mature / mature / Over-Mature.

Comment: Notes; most obvious defects, insects, diseases or unique characteristics.

4.2 Site Plan of Existing Trees based on submitted property plan created by Caroline Chen.



The Tree Specialist / Don Araki (408) 209-1007 FAX (408) 971-4614
Office: 1198 Nevada Avenue, San Jose, CA 95125
Copyright Don Araki 2008

Reference Picture #1 (In Attachments)

Tree Description Table

Created by Scott Araki, Tree Specialist, Inc.

Table includes Tree Number (corresponding to Previous Page site plan), Species name, Diameter at Standard Height, Canopy height, Canopy Width, Suitability of Preservation Rating, and General Description of tree condition

Tree #	Species	D.B.H.	Canopy Height	Canopy Width	Preservation Suitability	Description
1	Coastal Live Oak	19"	25'	10'	Good	Poor
2	Coastal Live Oak	16"	25'	15'	Good	Good
3	Coastal Live Oak	22"	30'	20'	Good	Good

D.B.H. - Diameter at Breast Height

4.3 Basic Tree Preservation Measures (TPMs)

The basic tree protection fencing is just the first step in tree preservation. Many additional tools and procedures come into play. Usually restriction of space and time curtail the use of the more esoteric ones, but those below are significant. Ideally, the owner or designer makes decisions well ahead of the project's start so that only trees which can realistically be preserved are retained.

Tree Protection Fence (TPF)

- Install fence **BEFORE** any other phase of the project begins.
- Keep **fence in tact** until ready for final landscaping.
- Use **a continuous 6' foot high chain link fence with an allowed 2' foot opening to provide access for inspections**. The Posts = 8 ft. tall X 2" inch diameter galvanized posts driven 2 feet into the soil. Post Signs on the fence (8.5" X 11") warning of "penalty for working inside of fence or removal without written permission of Project or City Arborist (specific sign wording can be provided in memo form).

The Tree Specialist / Don Araki (408) 209-1007 FAX (408) 971-4614
Office: 1198 Nevada Avenue, San Jose, CA 95125
Copyright Don Araki 2008

· Fence *as much of the root zones as possible*, ideally 5' feet beyond the drip lines (branch tips) or including the entire TPZ. For this project's design constraints, the fence locations are pulled back to hardscape perimeters (with supplemental root zone protection described below).

· Prohibit *all construction impact* from disturbing the root zone area which can effect tree preservation.

·The “clinical” area of the trees are the trunk and the branch structures that we see above the ground, however to ensure the health of the tree and facilitate preservation we must also acknowledge and take into consideration the complex structures of the root system under the ground responsible for structural and nutritional health; therefore, *should work be required within the TPZ the advice and guidance of a Project Arborist should be employed.*

SUPPLEMENTAL PROTECTION – MULCH – ROOT ZONE BUFFER

Wood chip mulch shall be applied over open root zones (beneath trees' drip lines) to a depth of 4-6 inches, tapering to soil level within the 9 inches nearest the tree trunk.

Wood chips from tree pruning operations are ideal – they make a mulch that provides exceptional benefits to all trees – modifying the soil environment to conserve moisture, promote beneficial soil microbes, buffer against weather (desiccating sun, drying winds, pounding raindrops, temperature extremes), cushion the soil structure from foot (or vehicle) traffic.

Provide this for all trees – even inside of TPFs.

Where this buffer is used when TPFs cannot be placed at a drip line, additional supplemental material(s) may be required. When pre-existing driveway asphalt, or similar durable surface can be maintained intact, that may suffice. Otherwise for those cases, arborist sign-off is required, but generally depends on the traffic load:

- foot traffic and wheelbarrows: sheets of 5/8-inch plywood tacked together.
- Small bobcat-type vehicles and “Fergie” – size tractors: increase chip depth to 9 inches with 1-inch plywood sheets.
- Occasional full-size vehicles (cars, pickups, service vans): 9-inches of chips.
- Cement trucks, haulers, loaded dump trucks, heavy duty delivery trucks [“construction site temporary access road”]: a layer of biaxial geogrid (e.g. Tensar BX1200, or equal) on top of existing grade, topped with 12 inches of chips with 1-inch trench plate, tack welded together to avoid slipping apart.

Removal of any existing driveway or parking lot asphalt from over root zone areas must be performed with care. The excavator/tractor/trucks must keep all

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tires/tracks on the existing asphalt, picking it up as it goes. Re-laying the paving surfacing is done in reverse path, again keeping all tires/tracks on the hard surface above any root zone.

ROOT-SENSITIVE DESIGN

Additional preservation suggestions and techniques to consider can include:

- Pier and grade beam (on top of existing grade) to suspend construction above the roots.
- Trenchless technology to place utilities beneath roots without severing by trenching.
- Porous concrete, porous asphalt, open pavers can be used for some surfaces to let both air and water into root zones.
- Re-route the layout in a different location to avoid tree roots.
- Ramp over tree roots to avoid compacting their soil or severing them.

SUPPLEMENTAL WATERING AND FERTILIZING

Objective: To provide moisture to promote vigorous, healthy root growth.

Procedures:

Water application hints can be found in the ISA BMPs (Fertilization).

Generally, a basic rule is to provide a deep soaking once a month during the hottest months of the year. Start before construction commences. Continue for a year after project completion. Modify by on-site arborist observations, especially during the "dry season" or in "drought conditions".

One application of water can be made to be included with a fertilizer application. By surface application or soil injected to a depth of 6-8 inches.

Rules of thumb:

- 10-20 gallons of water per trunk diameter incher per month, applied evenly over the root zone.
- Applying one inch of water will wet a moderate clay soil to about a depth of 1 ft.
- Soil samples should be lab tested to determine nutrients lacking-lab fertilizer recommendations should be followed.

PRUNING

General: The care of trees is the obvious domain of tree care contractors. Any clearance pruning, removals, aesthetic trimming, removal of limbs, root pruning, stump grinding, and/or remedial repair must be performed by a tree care contractor with a current California Contractor's License – the appropriate classification is C61/D49, with workers being WC-ISA Certified Tree Workers supervised by an ISA Certified Arborist. This includes removal of trees and/or stumps with intertwining/overlapping branches or roots.

Routine: Typically trees would benefit from pruning near the end of a project, sometimes to improve the health and structure of some, but also to remove any deadwood, establishing a benchmark against which one can measure changes in the trees' status (e/g/, accumulation of new deadwood, hence decline).

Project-Critical: Of particular importance here may be a project clearance issues. Depending on the owner's decision about which trees to retain, crown cleaning, thinning and raising may be needed, especially structural pruning for the near at hand perimeter trees.

Standards: All tree work must comply with applicable tree-specific ANSI Standards and be performed within the guidelines of the ISA Best Management Practices – qualified tree care contractors will be thoroughly familiar with those published industry standards.

Typical pruning types to be used are described in the cited standards. Most of the trees would benefit from “cleaning” to remove deadwood and diseased or superfluous branches; plus, they can be improved structurally by “thinning” to reduce foliage branch end weights; many will require “raising” for project clearance.

Over-Pruning: Care must be taken to avoid over-pruning trees that one seriously wants to preserve. Not only does that ruin trees' structure, but it also removes so many food producing leaves that it stresses the trees (puts them on a diet), sometime irrecoverably.

Generally, one can prune 25% from a young, vigorously growing oak or redwood without resulting in a stress reaction. Mature trees usually show stress when 15% is pruned out. Over-mature specimens can readily show decline when even 5% of the live foliage is removed from an area of the foliage canopy.

Pruning Specifications: Objectives and procedures must be project-specific. As project details take shape, the Project Arborist can draft tree-specific pruning specs in line with those general guidelines, depending on the extent to which the project is designed to accommodate tree preservation.

Root Pruning: Any roots that must be severed must be cut cleanly (no shatter, rip, tear). A tree care contractor must root prune along any line, cut, or trench will disrupt roots larger than 1-inch in diameter. This root pruning is best scheduled prior to the installation contractor's work – this actually both speeds up the work for the contractor and cause less damage to the trees.

CUTS / FILLS

Cuts into the root zones must be minimized, per roots and root zones discussions above. Preview by Project or City Arborist required before commencing.

ROOT CROWN CHANGES / DISTURBANCES

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Root crown: the base of a tree – where the trunk ends and scaffold roots flare off into the surrounding soil. No change or disturbance may occur in any root crown area and all materials inadvertently or intentionally accumulating there must be removed.

ATTACHMENTS

No construction apparatus shall be attached to any tree (braces, signs, slings, etc.).

TRENCHES

Proactively avoid routing any trench under any tree's drip line (including utility, sewer, phone, cable, electric, drainage, irrigation, decorative lighting, pool supply, etc.).

In the unlikely event that a trench must cross a root system, the plan must be reviewed by the Project Arborist before that work can be done.

Consider alternatives – Tunnel with trenchless technology equipment? Hand dig? Trench straight toward a tree's trunk from both sides and then follow tunneling procedures for the short distance between (tree-specific distances recommendations can be made, based on an individual subject tree's size)?

When trenching across a root zone is necessary on-site monitoring by Project Arborist is required.

EQUIPMENT CLEANING

Establish a "Clean Out" site for such equipment as concrete trucks, cement forms, plastering apparatus, paint tools, etc. This must be located well away from any tree's root zone – or even any future planting areas.

All (sub) contractors must be on-notice that equipment must never be cleaned out over any tree's root zone – only within the designated "Clean Out" site.

STORAGE

No storage of gasoline, oil, or other chemicals over any tree's root zone.
No storage of any construction materials inside of any tree protection fence.

CHEMICAL SPILLS

Promptly confine and clean up any chemical spill over any root zone.

PARKING

No parking under tree canopies unless the root zones are protected. This will be precluded if they can be fenced at the drip lines. Even ore important is the root zone wood chip mulch.

Traffic causes irreparable harm to the soil structure and to the tree's roots due to the compaction.

Root zone compaction under a traffic load can be reduced by thickening the root zone buffer – say, beefing up to 6-8 inches of wood chips. Alternative buffer surfaces might include (alone or in combination): crushed rock, plywood sheets, steel plate, etc.

And one still must be careful of clearances to avoid bark bruising, trunk scrapes and limb breakage.

PUBLICATION & NOTICE

A copy of these tree protection measures must be on site, available to all workers, so they will be on notice regarding the tree's requirements.

One effective method is to paste up these pages on a sheet (usually titled "Tree Preservation Plan, Sheet T-1", or equivalent) and be certain that it is included in every set of construction drawings issued.

LANDSCAPE PLAN

A well-thought-out landscaping plan can be essential. It must take into account the status and longevity of this site's existing trees. Plan for the irrigation lines to be laid on top of existing grade, placed beneath the wood-chip-mulch layer. Expect no irrigation or water-loving plants within 10 feet of any mature tree's trunk.

MONITORING

Project Arborist inspections begin with a sign-off to confirm that initial tree protection measures are in place before commencement of any other part of the project.

The City of Los Altos requires periodic monitoring inspections by the Project Arborist verifying that the tree preservation measures continue to be effective, with monthly reports faxed to the owner and the City Arborist.

PENALTIES

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All (sub) contractors and their personnel must understand that they are responsible for their actions around these trees.

Circumventing tree protection measures will most certainly cause the tree(s) additional stress. This can be calculated as a change in the tree's status and there are formulae for assessing damage dollar amounts (see CTLA, Council of Tree and Landscape Appraisers).

Besides penalties derived from action on the City Ordinance, court have required contractors to pay penalties directly to the property owner suffering the damage/loss (diminution in tree value), sometimes assessed as double or triple if intentional action.

5.0 CERTIFICATION

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

Thank you for the opportunity to be of service to you. Should you have any questions or concerns please feel free to contact me at any time of the day.

Respectfully submitted,


Don Araki

ISA Certified Arborist #WE-6547A

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