

PROJECT SUMMARY TABLE

SITE LOCATION: 1626 AUSTIN AVE. LOS ALTOS, CA 94024

APN: 318-07-012

	EXISTING	PROPOSED	ALLOWED / REQUIRED
LOT COVERAGE	2037.4 SF (21%)	2233.3 SF (23.7%)	2612.5 SF (30%)
FLOOR AREA			
1ST FLOOR	1863.1 SF	2143.3 SF (incl. garage)	
2ND FLOOR	223.6 SF	1117.1 SF	
TOTAL	2086.9 SF	3260.4 SF	3281.3 SF
	22.3%	34.7%	35%
SETBACKS			
FRONT	25'	25'	25'
REAR	49'	49'	25'
RIGHT SIDE (1ST/2ND)	10'/10'	7.5'/15.0'	7.5'/15.0'
LEFT SIDE (1ST/2ND)	10'/47'	7.5'/15.0'	7.5'/15.0'
HEIGHT	17'-11"	23'-5"	

NET LOT AREA:	EXISTING	CHANGE IN	TOTAL PROPOSED
	9375 SF.		
% FRONT YARD PAVING	438.0 SF.	299.0 SF.	737.0 SF 40.9%
HABITABLE LIVING AREA	2223.1 SF.	588.9 SF.	2612.0 SF.
NON-HABITABLE LIVING AREA	0 SF	448.4 SF.	448.4 SF.

SHEET INDEX

- A-1 SITE PLAN
- A-1.1 FLOOR AREA DIAGRAM
- A-2 EXISTING CONDITIONS
- A-3 PROPOSED ELEVATIONS
- A-4 PROPOSED ELEVATIONS
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- A-6 SECOND FLOOR PLAN
- A-7 ROOF PLAN
- A-8 BUILDING SECTIONS
- A-9 BUILDING DETAILS
- T-1 ARBORIST REPORT
- T-2 ARBORIST REPORT

VICINITY MAP



SCOPE OF WORK

1. FIRST FLOOR ADDITION
2. EXPAND EXISTING 2ND FLOOR
3. NEW FRONT ELEVATION & ROOFLINE FACING STREET
4. NEW STREET FACING WINDOWS (MINIMUM)
5. NEW 2-CAR DRIVEWAY
6. ALL EXISTING TREES TO REMAIN (#1-11)
7. ALL EXISTING LANDSCAPING TO REMAIN
8. REPLACE EXISTING WOOD SHINGLES WITH STUCCO & CLAPBOARD SIDING
9. RUN OVERHEAD POWER LINES UNDERGROUND
10. DEMOLISH 1ST FLOOR LIVING SPACE TO ADD NEW 2-CAR ATTACHED GARAGE

CONSULTANTS

OWNER:
RODRIGO LIANG
1626 AUSTIN AVENUE
LOS ALTOS, CA 94024
(408) 476-1418

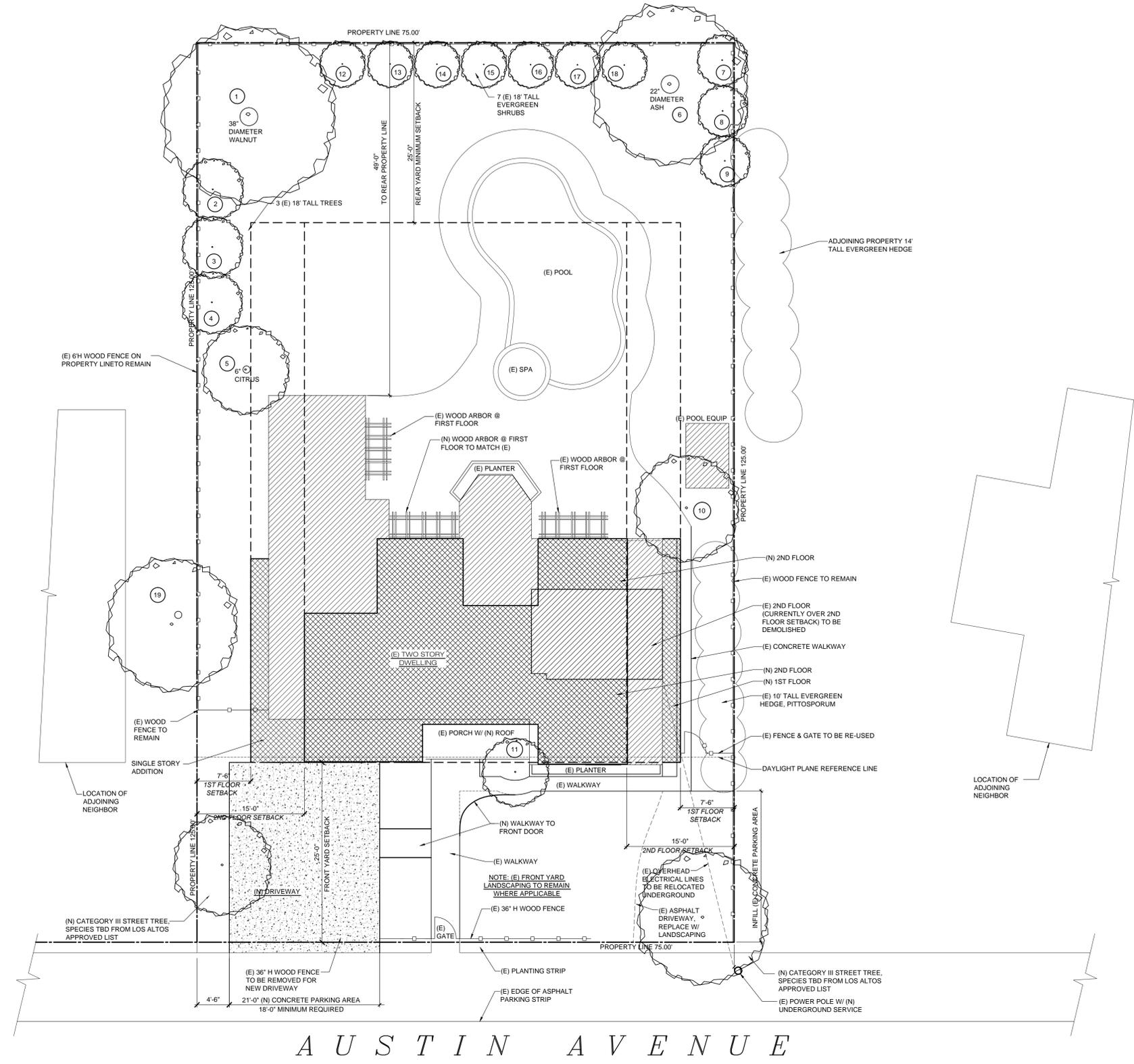
DESIGN:
INNERHOUSE DESIGN
15101 GEORGIA WAY
GRASS VALLEY, CA 95949
(408) 868-9475
(408) 868-9475 FAX

REVISIONS:

NO.	DESCRIPTION

SITE PLAN

A-1



AREA LEGEND

	EXISTING 1ST FLOOR
	EXISTING 2ND FLOOR
	NEW 1ST FLOOR
	NEW 2ND FLOOR

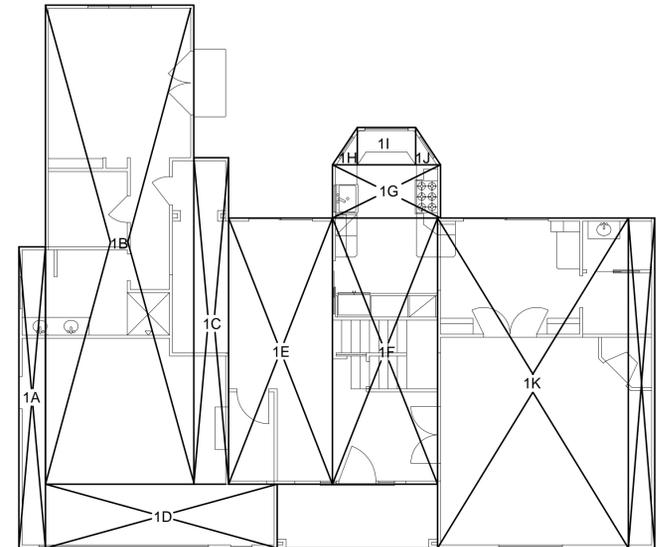
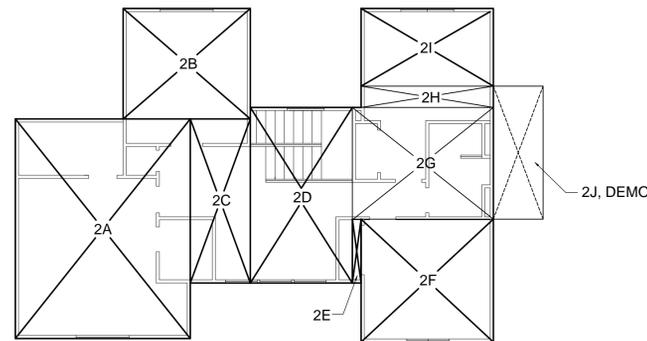
NOTE: ALL ORDINANCE SIZED TREES ARE TO REMAIN. PROTECT TREES FROM DAMAGE DURING CONSTRUCTION.

NOTE: THIS DWELLING DOES NOT AND WILL NOT HAVE AN EXTERIOR A/C UNIT. NOISE CONTROL ORDINANCE (LAMC CHAPTER 6), NOT APPLICABLE

SITE PLAN
SCALE: 1/8" = 1'-0"



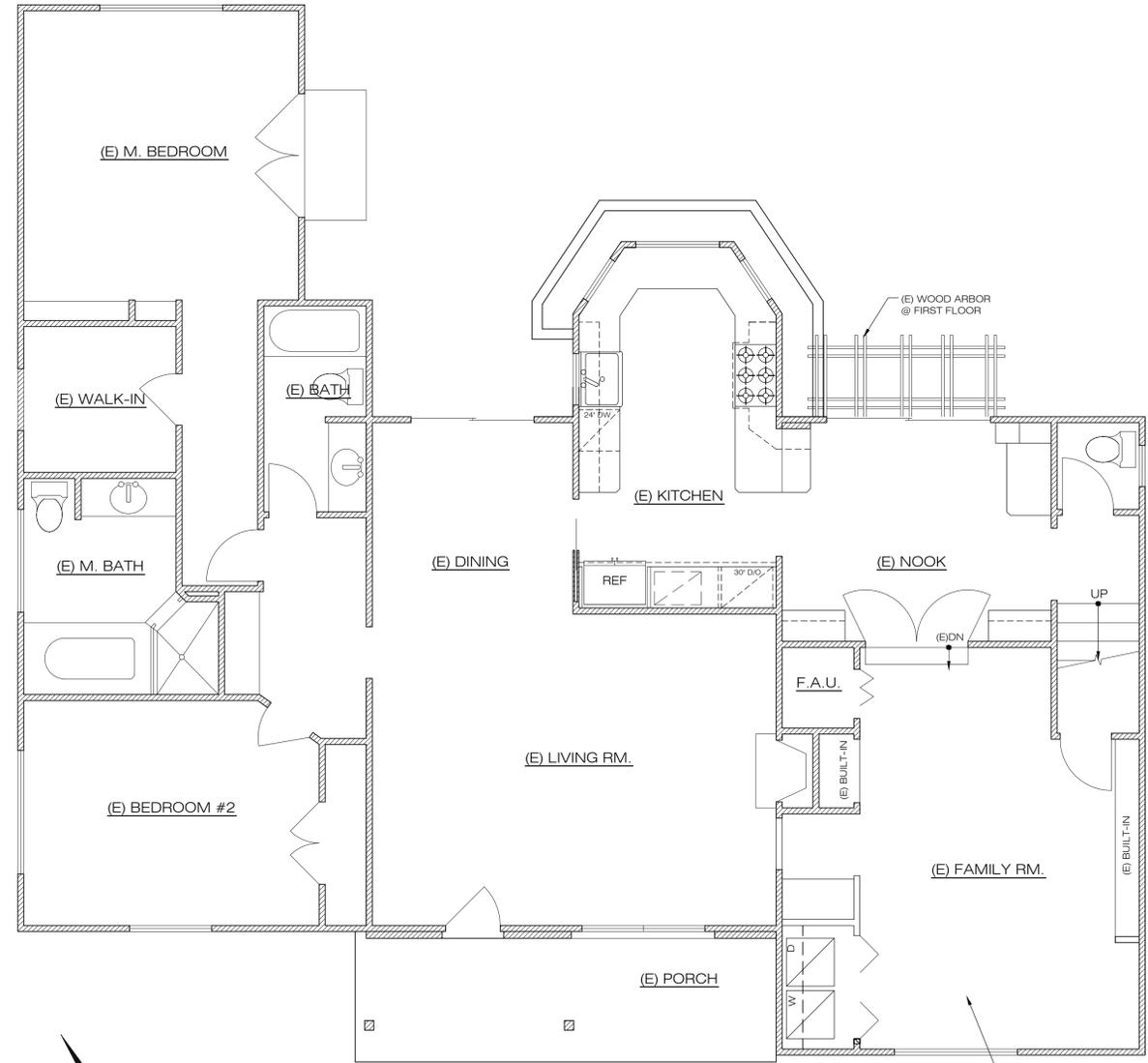
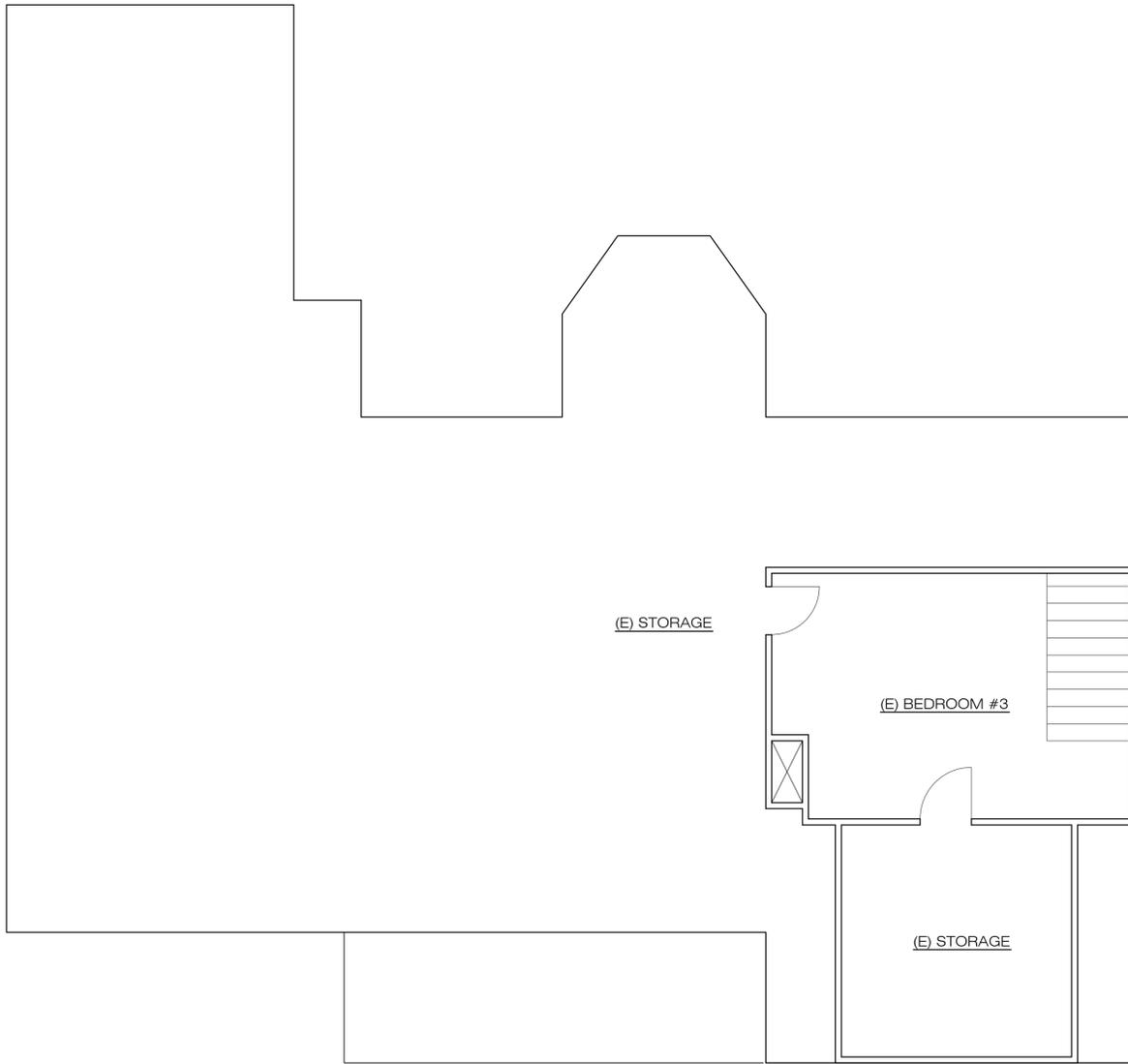
FLOOR AREA CALCULATION				
1ST FLOOR				
1A	2'-6" X 28'-4"	70.8	NEW	
1B	14'-0" X 51'-0"	714.0	EXISTING	
1C	3'-3" X 38'-6"	125.0	EXISTING	
1D	21'-10" X 6'-0"	130.5	NEW	
1E	9'-0" X 25'-0"	244.0	EXISTING	
1F	9'-11" X 25'-0"	248.0	EXISTING	
1G	10'-2" X 5'-0"	51.0	EXISTING	
1H	2'-4" X 3'-7" / 2	4.0	EXISTING	
1I	9'-7" X 3'-6"	19.5	EXISTING	
1J	2'-4" X 3'-7" / 2	4.0	EXISTING	
1K	18'-0" X 31'-0"	558.0	EXISTING	
1L	2'-6" X 31'-0"	77.5	NEW	
SUBTOTAL LIVING AREA:		2143.3	OF WHICH 273.8 IS NEW	
PORCH				
1K	9'-0" X 15'-0"	90.0	EXISTING	
SUBTOTAL PORCH:		90.0		
LOT COVERAGE:		2233.3		
2ND FLOOR				
2A	18'-6" X 20'-8"	341.0	NEW	
2B	12'-0" X 19'-4"	123.0	NEW	
2C	9'-8" X 15'-9"	91.3	NEW	
2D	9'-7" X 15'-6"	158.4	NEW	
2E	10' X 6'-0"	4.8	NEW	
2F	12'-0" X 11'-6"	143.7	NEW	
2G	13'-4" X 10'-6"	140.7	EXISTING	
2H	2'-0" X 12'-0"	25.0	EXISTING	
2I	12'-6" X 7'-4"	91.3	NEW	
2J	4'-8" X 12'-6"	-59.4	EXISTING, DEMO	
SUBTOTAL 2ND FLOOR:		1117.1	OF WHICH 893.5 IS NEW	
TOTAL FLOOR AREA: (1ST FL + 2ND FL)		3260.4		



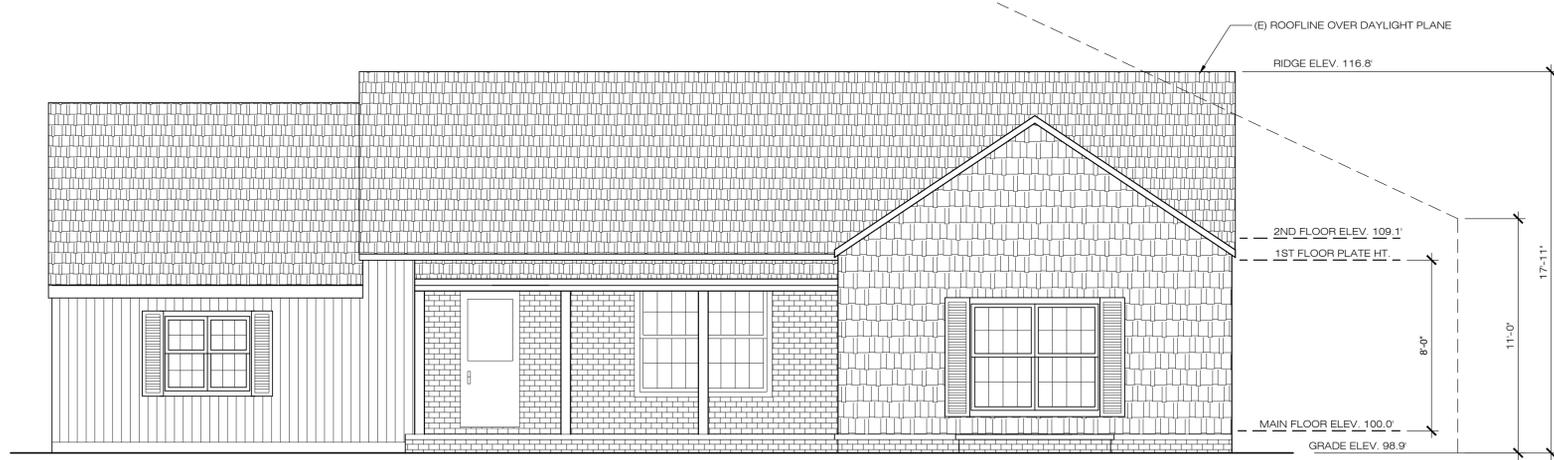
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REVISIONS:

AREA DIAGRAM
A-1.1



GROSS FLOOR AREA CALCULATION		
(E) 1ST FLOOR:	1863.3 SF.	LOT AREA: (75'X125') = 9375 SF.
(E) 2ND FLOOR:	359.8 SF.	ALLOWABLE FLOOR AREA (35%):
TOTAL:	2223.1 SF.	3281.25 SF.



REVISIONS:

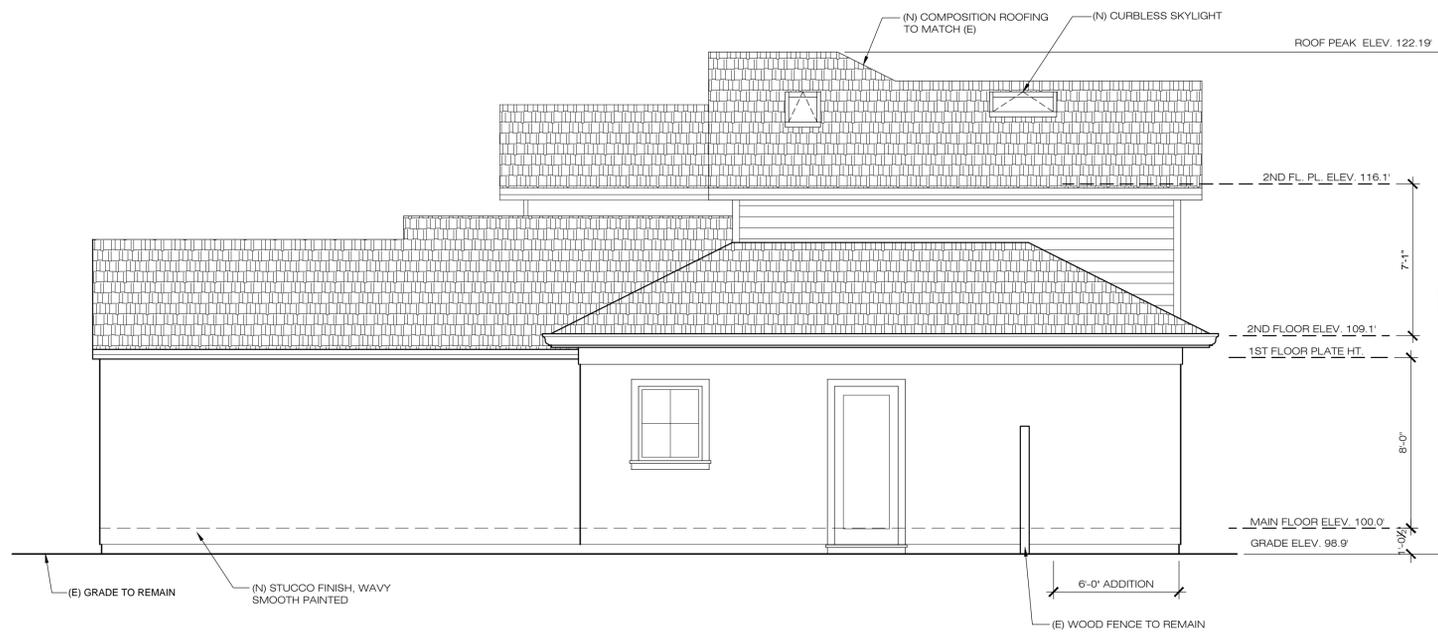
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EXISTING CONDITIONS
A-2



PROPOSED REAR ELEVATION

SCALE: 1/4"=1'-0"



PROPOSED LEFT SIDE ELEVATION

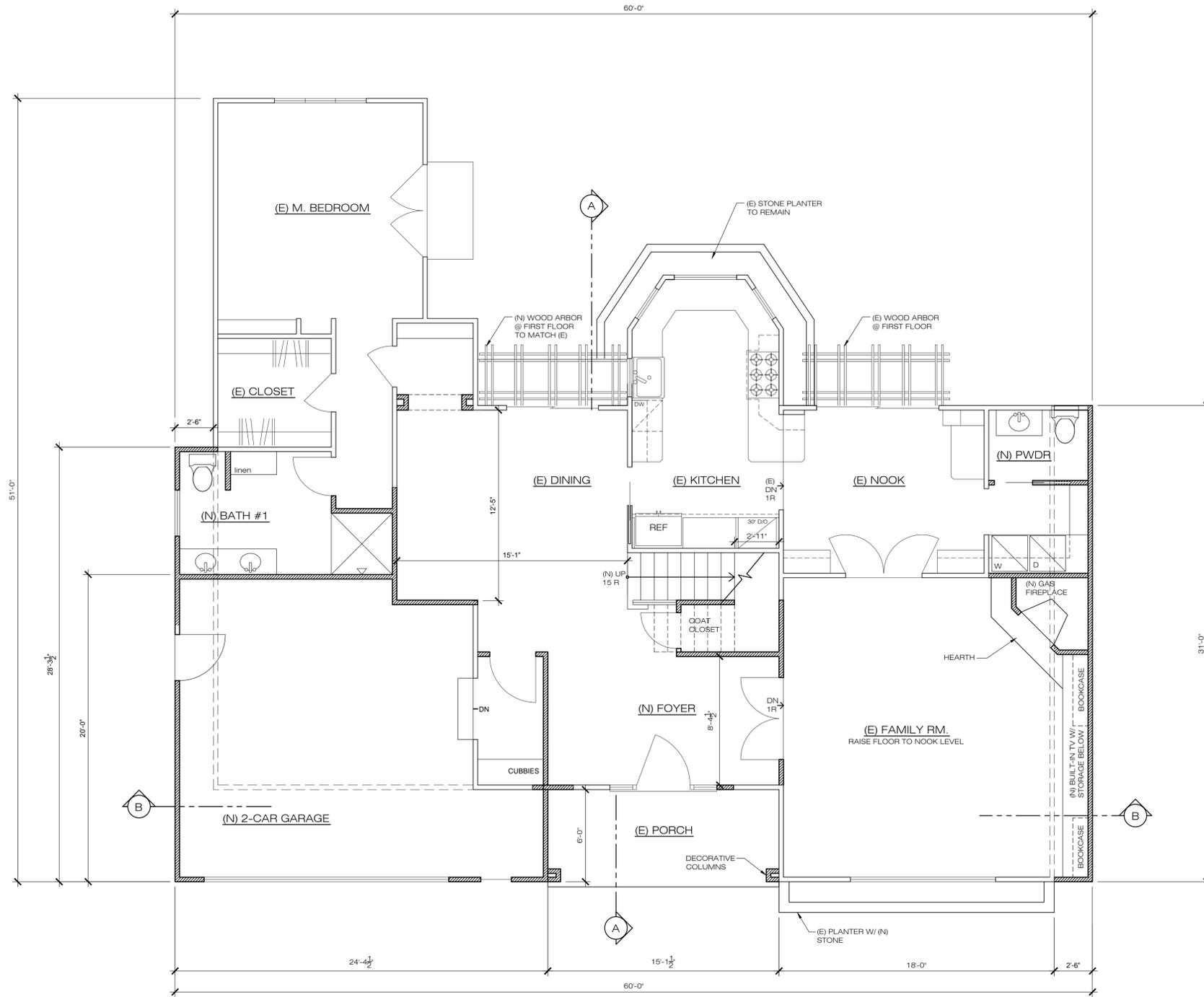
SCALE: 1/4"=1'-0"

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REVISIONS:

PROPOSED ELEVATIONS

A-4



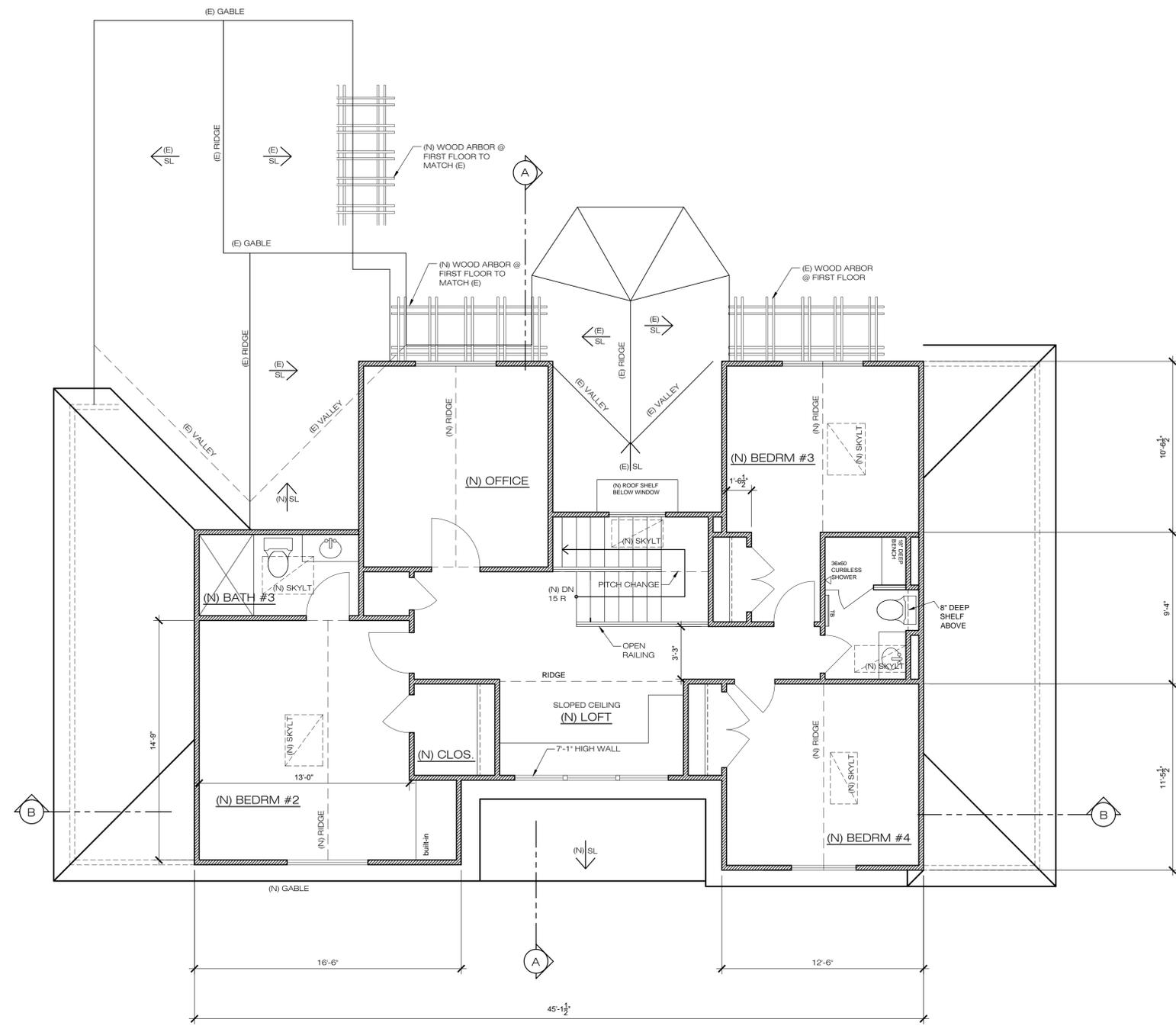
PROPOSED FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"



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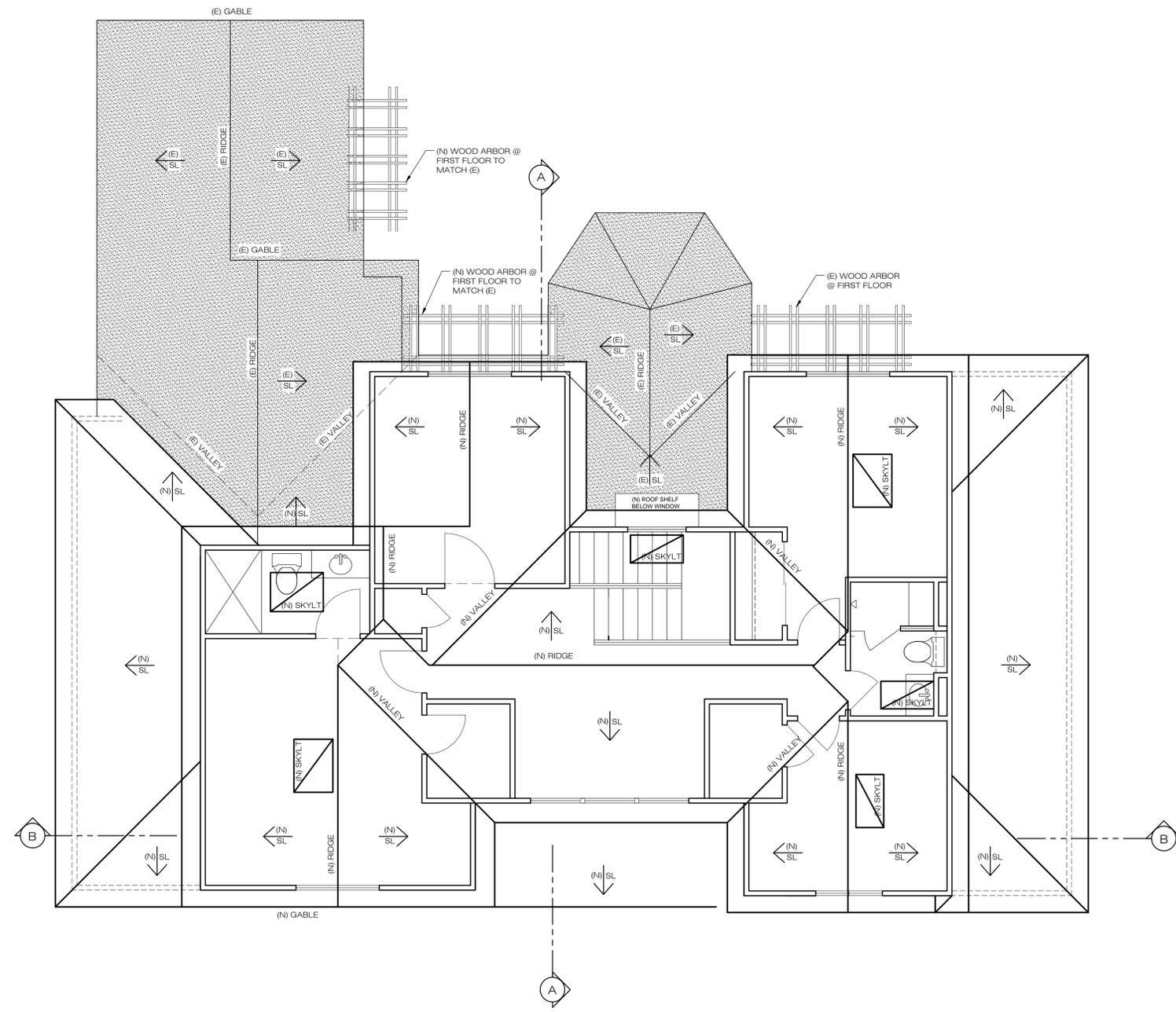
REVISIONS:



SECOND FLOOR PLAN
 SCALE: 1/4" = 1'-0"

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REVISIONS:



ROOF FLOOR PLAN

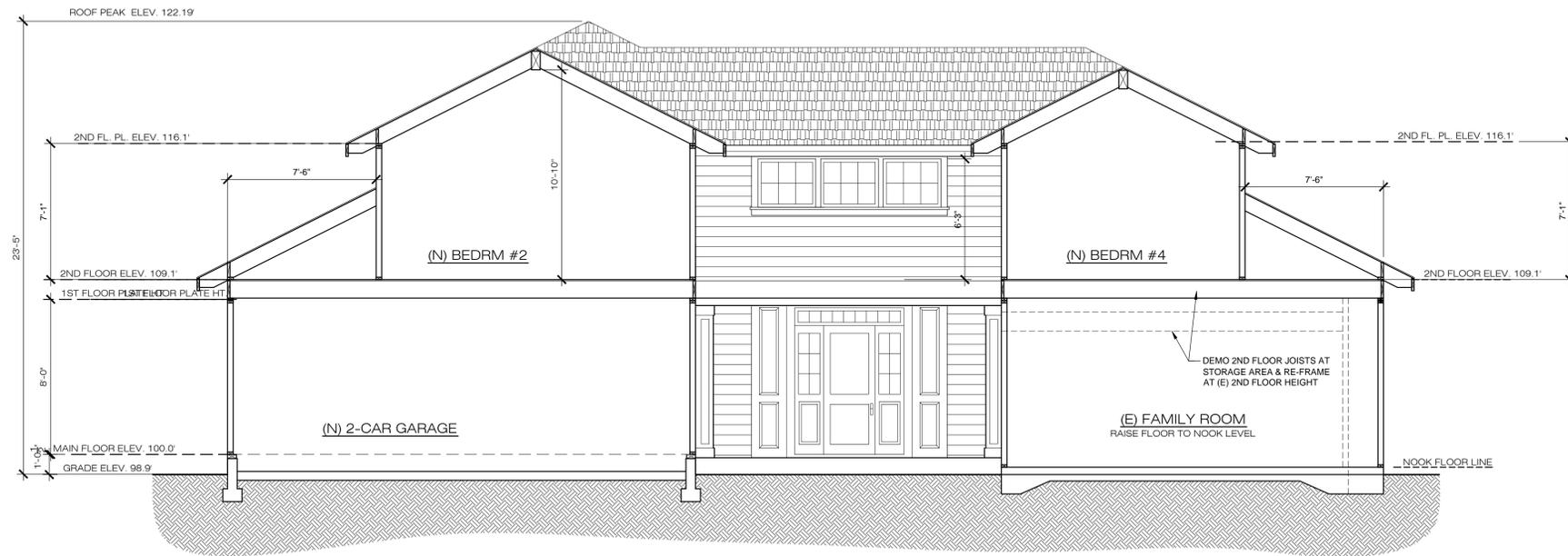
SCALE: 1/4"=1'-0"

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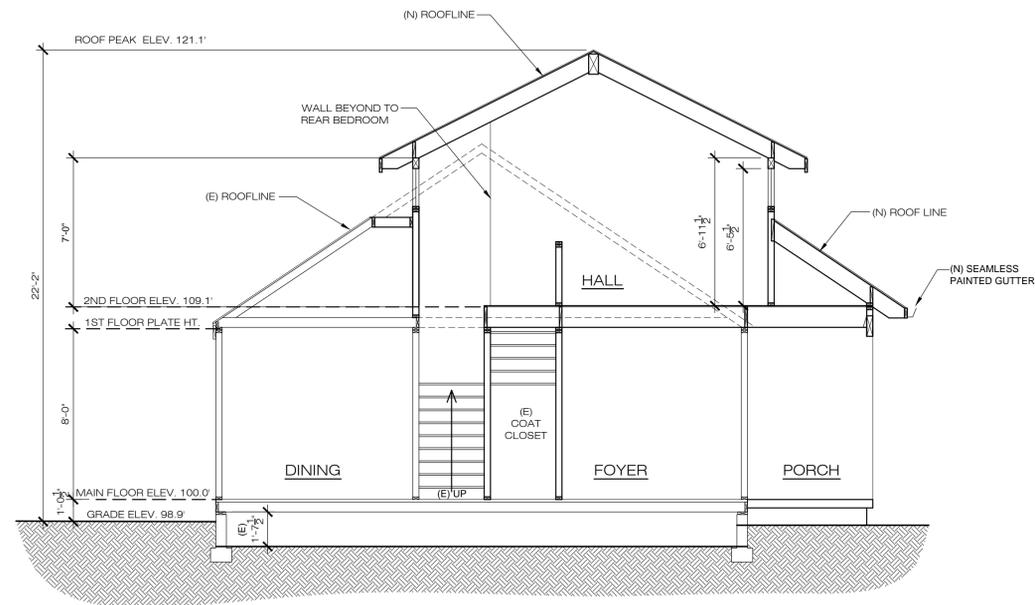
REVISIONS:

ROOF PLAN

A-7



SECTION B-B
SCALE: 1/4" = 1'-0"



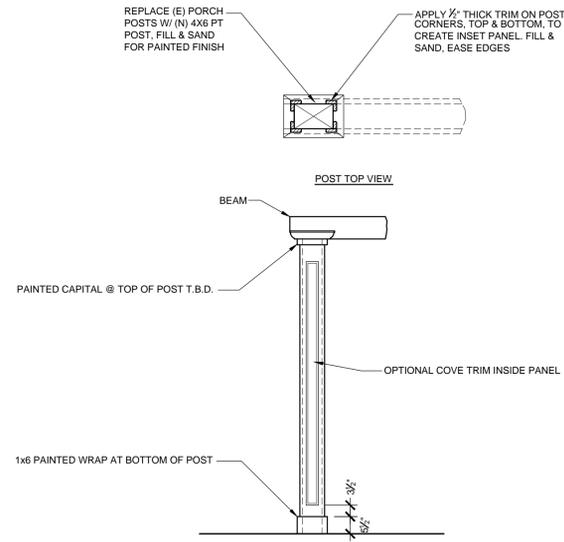
SECTION A-A
SCALE: 1/4" = 1'-0"

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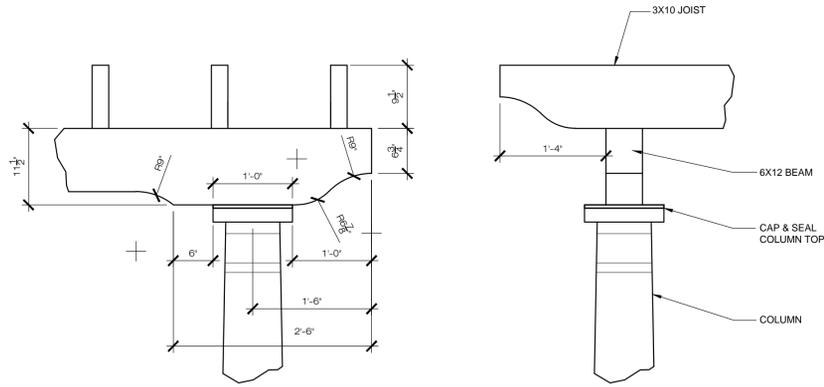
REVISIONS:

BUILDING SECTIONS

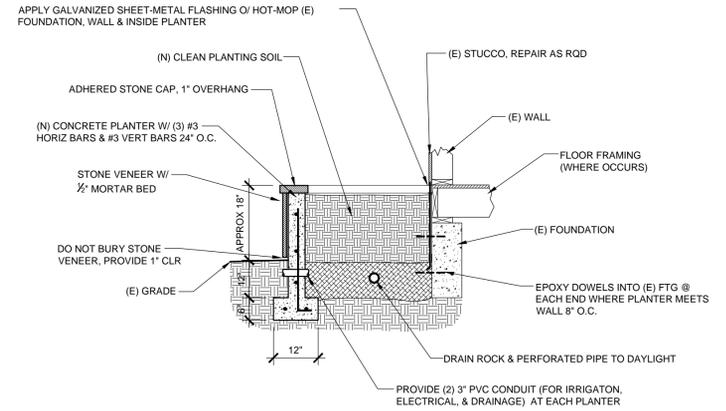
A-8



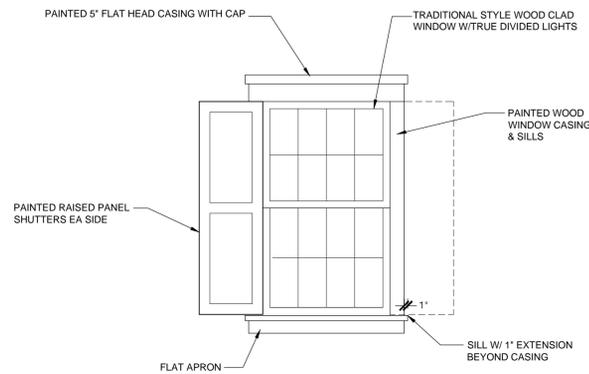
③ PORCH COLUMN DETAIL
NO SCALE



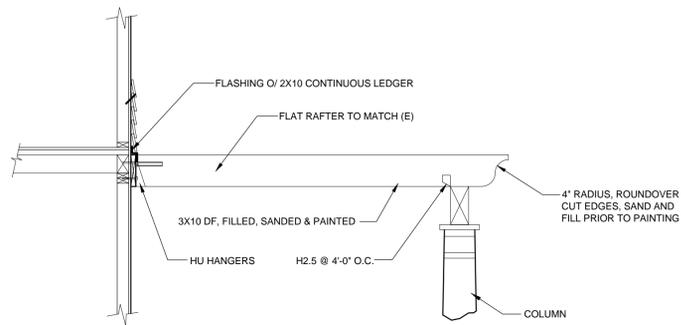
② ARBOR DETAIL
NO SCALE



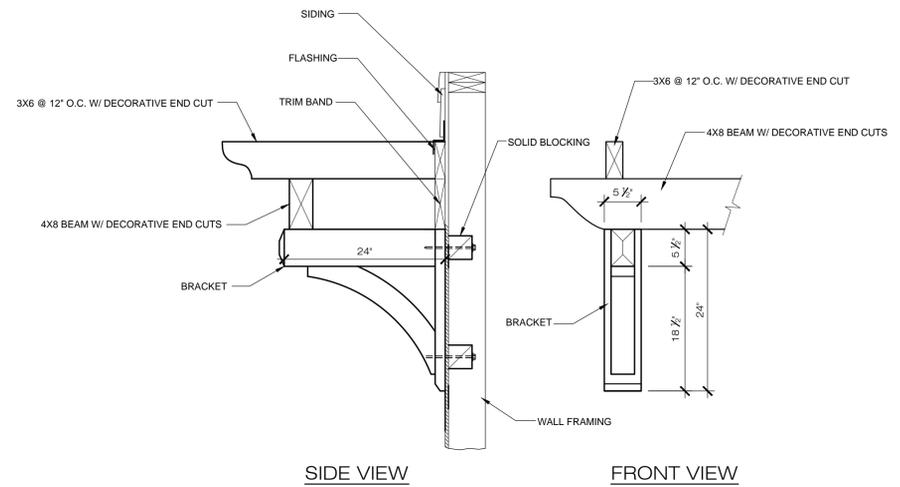
① RAISED PLANTER DETAIL
NO SCALE



④ EXTERIOR WINDOW DETAIL
NO SCALE



⑤ ARBOR DETAIL
NO SCALE



⑥ ARBOR BRACKET DETAIL
NO SCALE

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REVISIONS:

BUILDING DETAILS

A-9

Certified Arborist's Tree Inventory & Pre-Construction Report

August 18, 2015

Prepared for: **Rodrigo Liang** Contact: **Cindy** Site: **Liang Residence
 1626 Austin Avenue
 Los Altos, CA 94024**

Prepared by:
Ray Morneau
 ISA Certified Arborist #WE-0132A
 PNWISA Certified Tree Risk Assessor #1188

Contents

- 1.0 Assignment & Introduction
- 2.0 Discussion with leading summary
- 2.1 Summary
- 2.2 Discussion
- 3.0 Site Plan, Tree Data, and Data Legend
- 4.0 Tree Preservation Guidelines: Pre-Construction Maintenance Notes
- 5.0 Tree Preservation Guidelines: Tree Protection Measures
 - 5.1 Fencing and other root zone protection.
 - 5.2 Restrictions / Cautions / Requirements
 - 5.3 Construction-time Maintenance
- 6.0 Certification & Use Statement



1.0 Assignment & Introduction

I have been retained by Rodrigo Liang as the Project Arborist to provide the pre-construction tree inventory and Arborist's Report for his residential rebuild project at 1626 Austin Avenue in Los Altos.

A current site plan (Sheet A-1) dated 6/15/15, showing existing and proposed has been provided for my reference. I have added my tree numbers to that Sheet A-1 and included it in this report.

2.0 Discussion with leading summary

2.1 Summary

Nineteen (19) trees are associated with this property, eighteen (18) on site and one (1) overhanging from neighbors. I can provide more project-specific tree protection measures (TPMs) if plans change. Meanwhile, I include introductory TPMs herein.

Sheet A-1 shows the new house in essentially the same location as, but with a somewhat smaller footprint than, the existing. However, the driveway will come in to the garage from the southwest.

Percentage Range	Text Description	Quantity
0%	DEAD	1
1% to 25%	Very Poor	4
26% to 49%	Poor	3
50% to 70%	Fair	9
71% to 90%	Good	2
91% to 100%	Excellent	0
		19

Tree Summary Chart

*Per typical City of Los Altos comment letter, three columns have been added for species, remove, retain.

#	Name	species*	Diam.	Vigor	Form	Con- dition	Keep- able	Remove	Retain	Brief Comments
1	Walnut, Black	<i>nigra</i>	37.8"	55%	70%	Fair	Mod.	X		Huge black walnut with substantial deadwood.
2	Carolina Cherry Laurel	<i>caroliniana</i>	2.0"	50%	65%	Fair	Mod.	X		Recent young replant.
3	Carolina Cherry Laurel	<i>caroliniana</i>	2.0"	45%	60%	Fair	Mod.	X		Recent young replant.
4	Laurel, English	<i>laurocerasus</i>	4.4"	0%	0%	Dead	No	X		Standing dead - REMOVE
5	Orange	<i>sinensis</i>	7.7"	40%	40%	Poor	Mod.	X		Declining with branch tip dieback; 4-feet to house.
6	Ash, Shamel	<i>uhdei</i>	22.4"	35%	45%	Poor	Mod.	X		Huge ash tree, but declining with branch dieback.
7	Photinia, Redleaf	<i>fraseri</i>	2.0"	40%	10%	V Poor	Low	X		Small stunted sapling in back corner.
8	Photinia, Redleaf	<i>fraseri</i>	2.2"	45%	10%	Poor	Low	X		Small stunted sapling near back corner.
9	Photinia, Redleaf	<i>fraseri</i>	2.7"	66%	55%	Fair	Mod.	X		Small sapling along side fence.
10	Potato Tree	<i>erianthum</i>	21.5"	20%	10%	V Poor	Low	X		Overgrown shrub compromised by substantial internal decay.
11	Mayten	<i>boaria</i>	7.1"	60%	65%	Fair	Mod.	X		Small but nice front door tree.
12	Victorian Box	<i>undulatum</i>	4.1"	20%	5%	V Poor	Low	X		Along back fence line as a screening hedge.
13	Victorian Box	<i>undulatum</i>	5.3"	20%	5%	V Poor	Low	X		Along back fence line as a screening hedge.
14	Victorian Box	<i>undulatum</i>	11.3"	70%	65%	Fair	High	X		Along back fence line as a screening hedge.
15	Victorian Box	<i>undulatum</i>	10.5"	70%	65%	Fair	High	X		Along back fence line as a screening hedge.
16	Victorian Box	<i>undulatum</i>	10.9"	70%	70%	Fair	High	X		Along back fence line as a screening hedge.
17	Victorian Box	<i>undulatum</i>	7.9"	70%	70%	Good	High	X		Along back fence line as a screening hedge.
18	Privet, Glossy	<i>undulatum</i>	6.2"	70%	60%	Fair	High	X		Along back fence line as a screening hedge.
19	Oak, Coast Live	<i>agrifolia</i>	11"	72%	80%	Good	High	X		Neighbor's oak tree against side fence.

2.2 Discussion

Sheet A-1 shows the backyard remaining essentially the same after as it exists now. That will be good for the nineteen (17) trees associated with this property.

Since construction projects can impact adjacent trees, I include here one (1) tree overhanging

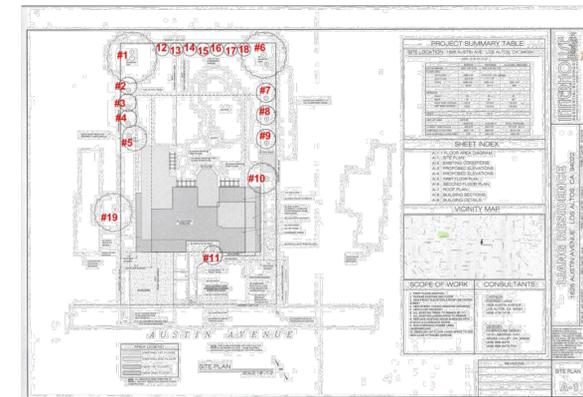
from neighbors. It is sufficiently distant so that no noticeable impacts will be expected.

The eighteen (18) on site trees vary from "Good" to "Dead" condition. It may be a challenge to preserve those in poorest condition. On one hand, all but the dead one (laurel #4) have good chances for survival. On another, this could be considered an opportunity to improve the overall plant palette here by removing and replanting the ones in poorest condition during the landscaping phase of this project.

At our 8/18 site meeting, Mr. Liang and I talked about typical basic tree protection measures (TPMs). Tree protection fencing (TPF) can be installed for the trees to be preserved, excluding traffic to minimize root zone compaction and overhead breakage. A wood chip buffer over the remaining root zones can help preserve root systems. I include first round TPMs below.

3.0 Site Plan, Tree Data, & Data Legend

3.1 Plan, with tree numbers added



Tree Numbers added to sheet A-1 "Site Plan" by Ray Morneau, Arborist to accompany report.

3.2 Tree Data (following two pages) 3.3 Data Legend (then following two pages)

Tree #	Name, Common (Botanical: Genus species)	dbh (Diameter at Breast Height)	Crown Radius	Height	Crown Class	% Vigor	% Structure	% Overall	Age / Longevity	Ability to Preserve	Additional Comments
1	Walnut, Black (<i>Juglans nigra</i>)	37.8"	27'	55'	Dom.	55%	70%	62%	Over-mature	Low	Prominent tree, but declining with substantial deadwood in the 3- to 6-inch diameter range. Side fence at 7-feet; back fence at 10-feet.
2	Carolina Cherry Laurel (<i>Prunus caroliniana</i>)	2.0"	2'	10'	Supp	50%	65%	57%	Young	Low	Recent owner-replant for something similar to #4 which died. Side fence at 2-feet.
3	Carolina Cherry Laurel (<i>Prunus caroliniana</i>)	2.0"	2'	10'	Supp	45%	60%	52%	Young	Low	Recent owner-replant for something similar to #4 which died. Side fence at 2-feet.
4	Laurel, English (<i>Prunus laurocerasus</i>)	4.4"	8'	16'	Supp	0%	0%	00%	Over-mature	n/a	All leaves crisp-brown-dead ... root zone fungus. Two 5-inch diameter stems from ground level. Side fence at 2-feet.
5	Orange (<i>Citrus sinensis</i>)	7.7"	8'	19'	Dom.	40%	40%	40%	Mature	Mod.	Thinning, declining foliage crown with branch tip dieback. Side fence at 7-feet; existing house corner at 4-feet.
6	Ash, Shamel (<i>Fraxinus uhdei</i>)	22.4"	25'	45'	Dom.	35%	45%	40%	Over-mature	Mod.	Another prominent tree, but declining with major branch dieback as typical for local, drought-stressed shamel ash trees.
7	Photinia, Redleaf (<i>Photinia fraseri</i>)	2.0"	3'	18'	Supp	40%	10%	25%	Young	Low	Defective, very weak, floppy root system on this young photinia ... closer to the back fence than was shown on the site plan. Side fence at 1-foot, back fence at 2-feet.
8	Photinia, Redleaf (<i>Photinia fraseri</i>)	2.2"	5'	18'	Supp	45%	10%	27%	Young	Low	Defective, weak, floppy root system on this young photinia ... closer to the back fence than was shown on the site plan. Side fence at 1-foot, back fence at 10-feet.
9	Photinia, Redleaf (<i>Photinia fraseri</i>)	2.7"	7'	18'	Supp	66%	55%	61%	Young	Mod.	Defective root system on this young photinia allowed the trunk to lean, but is now stable ... closer to the back fence than was shown on the site plan. Side fence at 1-foot, back fence at 16-feet.
10	Potato Tree (<i>Solanum erianthum</i>)	21.5"	12'	20'	Int.	20%	10%	15%	Over-mature	Very Low	Overgrown shrub. Extensive internal decay and sunburn of main trunks ... declining ... may require removal-replacement in a couple of more years (but not on account of a construction project). Four trunks from ground level.

Tree #	Name, Common (Botanical: Genus species)	dbh (Diameter at Breast Height)	Crown Radius	Height	Crown Class	% Vigor	% Structure	% Overall	Age / Longevity	Ability to Preserve	Additional Comments
11	Mayten (<i>Maytenus boaria</i>)	7.1"	12'	20'	Dom.	60%	65%	62%	Mature	Mod.	Nice front yard tree with weeping habit. Existing house at 2-feet, brick walk at 1-foot.
12	Victorian Box (<i>Pittosporum undulatum</i>)	4.1"	5'	12'	Co-dom.	20%	5%	12%	Over-mature	Very Low	Suppressed as this is crowded by others along back fence as part of the hedge-screen. Many 1- to 2-inch diameter trunks from ground level with extensive internal decay. Back fence at 5-feet.
13	Victorian Box (<i>Pittosporum undulatum</i>)	5.3"	6'	10'	Co-dom.	20%	5%	12%	Over-mature	Very Low	Suppressed as this is crowded by others along back fence as part of the hedge-screen. Many 1- to 3-inch diameter trunks from ground level with extensive internal decay. Back fence at 5-feet.
14	Victorian Box (<i>Pittosporum undulatum</i>)	11.3"	7'	20'	Co-dom.	70%	65%	67%	Mature	High	Crowded by others along back fence as part of the hedge-screen. Two trunks from ground level. Back fence at 5-feet.
15	Victorian Box (<i>Pittosporum undulatum</i>)	10.5"	8'	25'	Co-dom.	70%	65%	67%	Mature	High	Crowded by others along back fence as part of the hedge-screen. Two trunks from ground level. Back fence at 5-feet.
16	Victorian Box (<i>Pittosporum undulatum</i>)	10.9"	8'	30'	Co-dom.	70%	70%	67%	Mature	High	Crowded by others along back fence as part of the hedge-screen. Two trunks from ground level. Back fence at 5-feet.
17	Victorian Box (<i>Pittosporum undulatum</i>)	7.9"	9'	35'	Co-dom.	70%	70%	70%	Mature	High	Crowded by others along back fence as part of the hedge-screen. Two trunks from near ground level. Back fence at 5-feet.
18	Privet, Glossy (<i>Ligustrum lucidum</i>)	6.2"	8'	25'	Co-dom.	70%	60%	65%	Mature	High	Crowded by others along back fence as part of the hedge-screen. Back fence at 5-feet.
19	Oak, Coast Live (<i>Quercus agrifolia</i>)	11"	16'	33'	Dom.	72%	80%	70%	Mature	High	Neighbor's tree against side fence. Foliage branch tips touch both roots, but what structure is visible above the fence appears to be good form.

REVISIONS:

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ARBORIST REPORT

T-1

3.3 Legend - Tree Inventory Headers

Observations were made and data gathered during my on-site inspection August 18, 2015. Further conclusions and protection measures were refined from office research, seminar information, and past experience based on those observations and data.

Unless otherwise defined as a limited inventory, all site trees larger than a minimum diameter (usually 54-inch) were numbered and inspected. The gathered data was entered into a Microsoft Excel database. The data is encapsulated into the accompanying "Tree Inventory Data" section. The categories are typically self-descriptive with only the following notes.

Tree Number: Sequentially assigned tree numbers from 1 to 19. A 1" by 3" plastic tag is stapled to each tree at about eye level. I add a prefix "14" to identify each as linked with this inventory, thus differentiating it from any other numbering system.

Names: We employ the initial common names from McMin, if listed, otherwise from Sunset. Scientific/botanical names are included to minimize confusion. As applicable, we used McMin's key and/or Sunset's descriptions.

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. Multi-trunked tree's diameters are measured 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 (CR): The averaged radii's measurement is shown in feet... $(N+S+E+W) / 4 = CR$.

Canopy Cover: Estimated averaged radii of foliage canopy cover (crown's shadow at noon on the ground below). (This column is omitted when not project-relevant.)

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

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

Form: Structure rating for tree's architecture as a composite of factors like branch attachment, lean and balance, effects of prior breakage, crossing-angled-twisted limbs, codominant 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 of Tree and Landscape Appraisers (CTLA) system used by the International Society of Arboriculture. (CTLA, 1992)

This combines foliage, branches, limbs, trunk, and root ratings into a composite condition score. This rating is used calculating these trees' appraised values required by some jurisdictions like Palo Alto.

Aptitude to Preserve: Considers the species' tolerance to construction impacts and the tree's condition (vigor & structure), longevity/age, adaptability, and aesthetics. This rating takes into account most announced intentions of changes in area/lot use. Degrees: High, Moderate, Low, Very Low, In Footprint.

- 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 &/or increased tree protection zone.
- Low: Significant problems, including shorter life expectancy. Difficult to retain but potential with much larger tree protection zone.
- Very Low: Substantial existing problems, defects, stresses. Unlikely to survive impact of any project.
- In Footprint: So close to the proposed construction impacts that it is rated as being within the new footprint.

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

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

4.0 Tree Preservation Guidelines: Pre-Construction Maintenance notes

- Identify a TPZ (Tree Protection Zone) for each tree to remain after the project closes. A TPZ is defined by the jurisdiction in which the project is located to provide above-ground- and root-zone-protection for trees. In the absence of a specific local definition, the TPZ shall be a circle with a radius of 10-feet for every 1-foot of trunk diameter. Within the TPZ shall be identified a CRZ (Critical Root Zone) – a no man's land within which no activity may occur without Project Arborist or City Arborist monitoring and/or sign-off. Unless otherwise specified, the CRZ shall be the larger of 3-foot-radius-circle or a circle with a radius of 2-feet for every 1-foot of trunk diameter.
- Supplemental watering should be provided for trees to remain. A rule of thumb for construction site stressed trees is 10-20 gallons per trunk diameter inch per month, particularly critical during hot weather. This is modified by the Project Arborist on site with root zone inspections and monitoring as water demands will obviously be lower during cool, damp weather. Inspection should find soil between 3" and 18" below grade moist enough for roots to thrive.

- Other than pruning oak #19 for roof clearance, no pruning is absolutely needed at this time, though pruning to reduce foliage branch endweights could usually make for better-structured trees. Typically, crown raising for clearance over some areas of a site is useful (7-foot over bike lanes, 14-foot for vehicle access, 1- to 3-foot over roofs [species-dependant]). Nevertheless, deadwood removal and endweight reduction is commonly performed to improve existing site and neighboring trees. And, usually project trees benefit from "Crown Cleaning" for deadwood removal and "Crown Thinning" to lighten branch endweights) at sometime before the close of the project. Then the owner has a benchmark against which to compare future status of the trees. All work must conform to published ISA BMPs keyed to ANSI A-300 Standards as the basis for written pruning specifications drafted by an ISA Certified Arborist (or equivalent).
- Approaching project commencement, when the foundations, driveways, and other hardscape features (including trenches) have been staked/located, then some pruning may likely be needed. Raising/clearance can be minimized for space to work. Root pruning along the lines within 15-feet on either side of mature trees' trunks can sever roots cleanly, reducing shock to these trees' systems. Root pruning prior to excavating for the foundation and driveway must be done to avoid excessive root damage (rips, tears, shatter, breakage). This is commonly performed with a trencher until 1-inch diameter roots are encountered, at which time the crew continues with exposing larger roots for hand pruning with a sharp saw (hand saw, Sawz-All®, or equivalent). This can be done by careful hand-digging or air/hydraulic excavation to avoid damaging tree roots.
- All project tree work performed before, during, or after construction is to be done by WCISA Certified Tree Workers under the supervision of an ISA Certified Arborist (or equivalents, if they possess sufficient skill for approval by Project Arborist). This includes all pruning, removals (including stump removals) within driplines of trees to be preserved, root pruning, and repair or remedial measures.

5.0 Tree Preservation Guidelines: Tree Protection Measures

- Fencing and other root zone protection is usually specified as a drip-line installation of 6-foot high chain link fence on galvanized drive posts, plus root zone wood chip mulch. However, due to the inevitable myriad project variables, alternatives are frequently allowed – but require careful strategies arranged with and signed off by the Project Arborist or City Arborist. For this project, it is highly likely that all site trees could be retained/preserved, except the dead laurel #4. On the other hand, now is an opportune time to modify this property's design, plant palette, and configuration ... a time to make improvements to the owners' liking. This set of Tree Preservation Guidelines can serve here as a project-specific Tree Preservation Plan (TPP) to help protect the trees to be saved. The TPP must be established and its procedures in place before demolition or any other project site work begins.

- Though generally expected to extend to the dripline, here the TPF can be installed as close to that as possible. One 24- to 36-inch opening or gate should be left for inspection access to each area. Fence material is to be 6-foot-high chain link fence supported by 8-foot long, 2-inch diameter galvanized fence posts driven 2-feet into the soil.
- Where no plant material root zone buffer is growing (e.g. ivy), a wood chip mulch is to be spread evenly to a 4-inch depth from the dripline to 6-inches from the base of the trunk. Taper to existing ground level at the base of the trunk with a slope of about 2:1.
- Additional root zone areas requiring protection can be buffered as Project Arborist requires, e.g., if project scope changes. Commonly acceptable buffer materials often include wood chips, crushed rock, plywood, steel trench plates, and/or a combination of such materials. Consult Project Arborist for depth specifications (which vary depending on use of area and/or specific traffic).
- Root zone areas to be protected may be modified by the Municipal Arborist or Project Arborist as plans develop.
- Restrictions / Cautions / Requirements
 - No parking or vehicle traffic over any root zones, unless using buffers approved by Project Arborist or City Arborist.
 - Monitor root zone moisture and maintain as per above.
 - Have an ISA Certified Arborist repair any damage promptly.
 - No pouring or storage of fuel, oil, chemicals, or hazardous materials under any trees' foliage canopies or future plant materials' root zone areas.
 - No grade changes (cuts, fills, etc.) under these foliage crowns without prior Project Arborist approval. For instance, hand excavation and thinner base prep may be required in some root zone areas.
 - Any additional pruning required must be performed under arborist supervision – including root pruning – clean, smooth cuts with no breaking, scraping, shattering, or tearing of wood tissue and/or bark.
 - No storage of construction materials under any foliage canopy without prior Project Arborist or City Arborist approval.
 - No trenching within the critical root zone area. Consult Project Arborist before any trenching or root cutting beneath any tree's foliage canopy. It is best to route all trenching out from under trees' driplines. Often trenches in root zones must be hand excavated to leave roots intact.
 - No clean out of trucks, tools, or other equipment over any essential root zone. Keep this debris outside of any existing or future root zone.
 - No attachment of signs or other construction apparatus to these trees.
 - Construction-time Maintenance
 - Monitor root zone moisture and maintain as per above (\$4.1).
 - Maintain/repair tree protection fences and/or root zone mulch/buffer material.
 - Have a certified arborist promptly repair any damage to trees.

- Develop the plan for follow-up care so, as the project closes, the care of the trees can be handed over for continuing management by the owner and/or landscape contractor.
- Post-Construction Follow-Up
 - Monitor root zone moisture, especially during/following drought/dry seasons. [A dry season is any time more than 60 days elapse since significant rainfall (2-inches or less).]
 - Monitor root zone mulch (if used), maintain depth, and scarify (approximately once or twice annually) to break up compaction/matting.
 - Monitor for insect pests and diseases, especially insects with sucking/chewing mouthparts or boring insects (bark beetles).
 - Inspect for structural safety before storm season and after severe weather events.
 - Follow California Oak Foundation guidelines as to not irrigating and/or planting water loving plant material within 10-feet of the trunks of mature trees.

6.0 Certification & Use Statement

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.

The instant report is applicable to this project at 1626 Austin Avenue and may not be adopted elsewhere without site-specific updates/revisions/adaptations by this Project Arborist.

Thank you for the opportunity to apply my knowledge and expertise working with your trees. Good luck with the construction project and tree care decisions ahead of you. If I can answer any further questions for you, the City staff, tree care contractors, or anyone with concerns about your trees, please call or e-mail to inform me.

Respectfully submitted,

Raymond J. Morneau

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ISA Certified Arborist #WE-0132A
PNW-ISA Certified Tree Risk Assessor #1188

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REVISIONS:

ARBORIST REPORT

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