160 - 164 WAVERLEY ST PALO ALTO, CA 94301

HEATHER YOUNG ARCHITECTS Palo Alto, CA 94301

REQUIRED AREA FOR CITY STAMPS

#### 81 Encina Avenue, Suite 100 650-459-3200 / hyarchs.com

### WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTAL
	1	

ISSUANCES

TITLE SHEET

PROJECT TEAM

Mc-Z WAVERLEY LLC 361 LYTTON AVE, SUITE 200 PALO ALTO, CA 94301

HEATHER YOUNG ARCHITECTS 81 ENCINA AVENUE, SUITE 100 PALO ALTO, CA 94301 650.459.3200

**ARCHITECT & OWNERS REPRESENTATIVE** 

CONTACT: HEATHER YOUNG EMAIL: HEATHER@HYARCHS.COM

**CIVIL ENGINEER** LEA & BRAZE

2495 INDUSTRIAL PARKWAY WEST HAYWARD, CA 94545 CONTACT: JEFF OSTERHOUT

**GEOTECHNICAL ENGINEER** ROMIG ENGINEERS

1390 EL CAMINO REAL, 2ND FLOOR SAN CARLOS, CA 94070 TEL: 650.591.5224 CONTACT: JONATHAN FONE EMAIL: JONATHAN@ROMIGENGINEERS.COM

LANDSCAPE ARCHITECT MARA YOUNG 836 18TH AVENUE MENLO PARK, CA 94025

TEL: 650.327.2644 CONTACT: MARA YOUNG EMAIL: MARAYOUNG@GMAIL.COM

CAL GREEN SPECIAL INSPECTOR

LATHEM HOME RATING 765 N. RENGSTORFF AVENUE MOUNTAIN VIEW, CA 94043 TEL: 650.450.1827 CONTACT: KATE LATHEM

EMAIL: KATE\_LATHEM@SBCGLOBAL.NET

## ZONING COMPLIANCE TABLE

#### ZONING COMPLIANCE TABLE

MINIMUM SITE SPECIFICATIONS 1	R/V	1-20 REQUIRED		
SITE AREA (SF)		8,500		
SITE WIDTH (FT)		70		
SITE DEPTH (FT)		100	PROPOSED	COMMENTS
SUBSTANDARD LOT SPECIFICATIONS <sup>1</sup>				
SITE AREA (SF)		SS THAN 8,500 SF	12,500	SUBSTANDARD
SITE WIDTH (FT)	AND	OR LESS THAN 70 FT IN WIDTH	50	WIDTH
MINIMUM SETBACKS <sup>1</sup>				
FRONT YARD (FT)		20	20	CONFORMS
INTERIOR SIDE YARD (FT) <sup>2</sup>		6	6.5	CONFORMS
INTERIOR REAR YARD (FT)		10	27	CONFORMS
MAXIMUM HEIGHT (SF) 1		30	SEE ELEVATIONS	CONFORMS
DAYLIGHT PLANES <sup>2</sup>				
INITIAL HEIGHT (FT)		10	10	CONFORMS
ANGLE (DEGREES)		45	45	CONFORMS
MAXIMUM SITE COVERAGE 3, 4				
BASE	35%	4,375	4,347	CONFORMS
ADDITIONAL AREA PERMITTED TO BE COVERED BY COVERED PATIOS OR OVERHANGS OTHERWISE IN COMPLIANCE WITH ALL APPLICABLE LAWS:	5%	625	594	CONFORMS
TOTAL:		5,000	4,941	CONFORMS
MAXIMUM FLOOR AREA RATIO (FAR) (SF) 1.5	0.5:1	6,250	6,248	CONFORMS
MAXIMUM RESIDENTIAL DENSITY (UNITS) 1				
MAXIMUM NUMBER OF UNITS PER ACRE	20	5.74 UNITS	3	CONFORMS
MINIMUM NUMBER OF UNITS PER ACRE	11	3.16 UNITS	3	CONFORMS
MINIMUM SITE OPEN SPACE (SF) 1.6	35%	4,375	6,469	CONFORMS
MINIMUM USABLE OPEN SPACE (SF PER UNIT) 1,6	150	450	5,408	CONFORMS
MINIMUM COMMON OPEN SPACE (SF PER UNIT) 1,6	75	225	527	CONFORMS
MINIMUM PRIVATE OPEN SPACE (SF PER UNIT) 1,6	50	150	4,881	CONFORMS
LANDSCAPE REQUIREMENTS 7				
LANDSCAPING	0.5	18.40.130 (a)(b)(e)	COMPLIANT	CONFORMS
PARKING 8	2 P	ER UNIT = 6 TOTAL	6	CONFORMS
NOISE ORDINANCE 10	1	< 110 dBA	< 110 dBA	CONFORMS

<sup>1</sup> PAMC 18.13.040 TABLE 2

 $^2$  FOR LOTS WITH WIDTH OF LESS THAN 70 FT, NO DAYLIGHT PLANE REQUIREMENT > 10 FEET FROM PROPERTY LINE

 $^{3}$  AS PER THE DEFINITION OF "SITE" IN 18.04.030 (133 AND 84) AND "LOT COVERAGE" IN 18.04.030 (86) (B) <sup>4</sup> ADU AND JADU FAR (800 SF MAX) AND LOT COVERAGE SHALL BE EXEMPT AS PER PAMC 18.09.040 TABLE 2 FOOTNOTE (4)

<sup>5</sup> PARKING FACIITIES INCLUDING ONE OR MORE PARKING SPACES, DRIVEWAYS, AISLES, TURNING AND MANEUVERING AREAS, CLEARANCES ARE EXEMPT FROM FAR IN MULTI-FAMILY PROJECTS, PAMC 18.04.030(65)(B)(i)

6 SUBJECT TO THE LIMITATIONS OF SECTION 18.13.040(e). USABLE OPEN SPACE IS INCLUDED AS PART OF THE MINIMUM SITE OPEN SPACE; REQUIRED USABE OPEN SPACE IN EXCESS OF THE MINIMUM REQUIRED FOR COMMON AND PRIVATE OPEN SPACE MAY BE USED AS EITHER COMMON OR

PRIVATE USABLE OPEN SPACE; LANDSCAPING MAY COUNT TOWARDS TOTAL SITE OPEN SPACE AFTER USABLE OPEN SPACE REQUIREMENTS ARE MET.

10 CHAPTER 9.10.060 (1) & (2): NO INDIVIDUAL PIECE OF EQUIPMENT SHALL PRODUCE A NOISE LEVEL EXCEEDING 110 dBA AT A DISTANCE OF 25 FT. THE NOISE LEVEL AT ANY POINT OUTSIDE OF THE PROPERTY PLANE OF THE PROJECT SHALL NOT EXCEED 110 dBA.

PERSPECTIVE VIEW



# VICINITY MAP Stanford Health Care - Planning, Design &... ≻Johnson Park Recreation area with a community

## PROJECT DESCRIPTION

REMOVAL OF THREE STRUCTURES AND A 3-CAR CARPORT. CONSTRUCTON OF TWO NEW STRUCTURES CONTAINING THREE APARTMENT FLATS. EACH FLAT IS 3 BEDROOM. 3-1/2 BATH AND HAS TWO COVERED PARKING SPACES. THE FRONT BUILDING HAS AT GRADE PARKING FOR ALL FLATS WITH A SECOND FLOOR APARTMENT ABOVE AND A ROOF TERRACE. THE REAR BUILDING HAS A GROUND FLOOR FLAT WITH A FRONT AND REAR YARD AND A SECOND FLOOR FLAT WITH A ROOF TERRACE.

### PROJECT DATA

APN	020-12-011
ZONING	RM-20 - (MULTI FAMILY DISTRICT)
BUILDINGS	TWO
APARTMENTS	THREE
PARKING	6 COVERED SPACES
FLOOD ZONE	X
HISTORICAL CATEGORY	NONE
FLOOR AREAS	SEE SHEET A-9

#### DRAWING INDEX

A-1	TITLE SHEET	A-14	160 WAVERLEY - SECOND FLOOR PLAN
A-2	GREEN BUILDING CHECKLIST	A-15	160 WAVERLEY - ROOF PLAN
A-3	environmental assessment worksheet	A-16	162/164 WAVERLEY - GROUND FLOOR PLAN
A-4	TREE PROTECTION	A-17	162/164 WAVERLEY - SECOND FLOOR PLAN
A-5	ARBORIST REPORT	A-18	162/164 WAVERLEY - ROOF PLAN
A-6	ARBORIST REPORT	A-19	160 WAVERLEY - ELEVATIONS
A-7	NEIGHBORHOOD CONTEXT	A-20	160 WAVERLEY - ELEVATIONS
A-8	OVERALL SITE SECTIONS	A-21	162/164 WAVERLEY - ELEVATIONS
A-9	FLOOR AREA CALCULATIONS	A-22	162/164 WAVERLEY - ELEVATIONS
A-10	OPEN SPACE	A-23	160 WAVERLEY - BUILDING SECTIONS
SU1	CIVIL SURVEY	A-24	162/164 WAVERLEY - BUILDING SECTIONS
C-2.0	PRELIMINARY GRADING AND DRAINAGE	A-25	WALL SECTION AND SCHEMATIC DETAILS
C-3.0	PRELIMINARY UTILITY PLAN	A-26	3D IMAGES
EX-1	TURNING TEMPLATE	A-27	SITE PHOTOMETRICS
A-11	DEMOLITION PLAN	L-1	LANDSCAPE PLAN
A-12	PROPOSED SITE PLAN	L-2	PLANT IMAGES
A-13	160 WAVERLEY - GROUND FLOOR PLAN		

						Co	mpliance Par	h Verificati	on
					Plan Ch	neck	Rough GB Inspection	Final Inspe	ction IVR # 153
				Plan Sheet, Spec or	T IdiT Of	look	IVR # 152	Part 1 Part 1	Part 2 Part 2
4.1	Planning and [	Design Control of the	Code Section Y N	Attachment Reference	CORR II	NITIAL (	CORR INITIAL	CORR INITIA	L CORR INITIAL
	Mandatory	Storm water drainage and retention during construction (less than one acre)	4.106.2 X		a .				
	Tier 2 Mand.	Topsoil protection - Tier 2 requirements	PAMC 16.14.070/ A4.106.2.3 X		n				
	Mandatory	Grading and paving	4.106.3 X						
~	Tier 2 Mand.	Water permeable surfaces for 30% - Tier 2 requirements	A4.106.4 X		n				
ator.	Tier 2 Mand.	Cool roof for reduction of heat island effect -Tier 2 requirements	PAMC 16.14.070/ A4.106.5 X						
nda	Tier 2 Mand.	Electric vehicle (EV) charging for residential structures (Locally amended)	PAMC 16.14.420 / A4.106.8 X						+ +
Ma		EV Charging: New single family residences	PAMC 16.14.420/ A4.106.8.1		H:				+ + -
	-	EV Charging: New multi-family residential structures	PAMC 16.14.420/ A4.106.8.2 X						+ + -
		EV Charging: New Hotels	PAMC 16.14.420/A4.106.8.3	(				-+	
		Bicycle Parking [MF] (locally amended)When an addition or change of use results in increased parking	PAMC 18.54.060/ A4.106.9 X				$\longrightarrow$	-+	+ +
	Elective	Site selection	A4.103.1 X				$\longrightarrow$	-+	+ +
		Community connectivity	A4.103.2				$\overline{}$		+
		Supervision and education by a Special Inspector (Locally amended)	PAMC 16.14.090/ A4.104.1		D:		<del>-   -  </del>	-+-	+ + -
4		Deconstruction (Locally amended, Mandatory on or after July 1, 2020)	PAMC 16.14.130/ A4.105.1 X		0		$\rightarrow$		+ + +
Se		Reuse of existing materials (Locally amended)	PAMC 16.14.130/ A4.105.1		E:		$\rightarrow$		+ + +
9		Soil analysis	A4.106.2.1 X					-+	+
၂၁		Soil protection	A4.106.2.1		0			-+	+
Š			A4.106.2.2		0		$\longrightarrow$	-+	+
Electi		Landscape design			0		$\longrightarrow$		+
ũ	Elective	Vegetated roof  Reduction of heat island effect for nonroof areas	A4.106.6 A4.106.7		19		$\longrightarrow$		+
			PAMC 16.14.170/ A4.106.10		10		$\longrightarrow$		+
		Light pollution reduction (Locally amended)			<u> </u>		$\longrightarrow$		+
		Innovative concepts and local environmental conditions	A4.108.1		Io .				
	MC 16.17 Energ		DAMO 40 47 410/ 2010 77/2 21 7 1 2 1	Dala Alka D. II II	para a a a ta	pagagaga ana d			
ory.		Effective April 1, 2020:  All-Electric Design with performance approach specified within the 2019 California Energy Code shall be used to	PAMC 16.17.110/ 2016 Title 24, Part 6 X	Palo Alto Building Inspector will verify Title 24 Energy Compliance in					
date	Mandatory	All-Electric Design with performance approach specified within the 2019 California Energy Code shall be used to demonstrate the energy budget calculated for the proposed design building is no greater than the energy budget calculated		the Field.	ń				
Mandatory		for the Standard Design Building. Exception: Detached newly constructed Accessory Dwelling Units, ADU's							
4.3		cy and Conservation							
		Indoor Water Use: Water closets (1.28 gpf)	4.303.1.1 X		D				
		Indoor Water Use: Urinals (Wall Mounted 0.125 gpf, all others 0.5 gpf)	4.303.1.2 X		O.				
		Indoor Water Use: Single showerhead (1.8 gpm at 80 psi)	4.303.1.3.1 X		D				
		Indoor Water Use: Multiple showerheads serving one shower (1.8 gpm at 80 psi)	4.303.1.3.2 X		0				
or S	Mandatory	Indoor Water Use: Residential lavatory faucets (1.2 gpm at 60 psi)	4.303.1.4.1 X		О				
dat	Mandatory	Indoor Water Use: [MF] Lavatory faucets in common and public use areas (0.5 gpm at 60 psi)	4.303.1.4.2		Ġ.				
lan	Mandatory	Indoor Water Use: Metering faucets (0.2 gallons per cycle)	4.303.1.4.3		<b>a</b>				
-	Mandatory	Indoor Water Use: Kitchen faucets (1.8 gpm at 60 psi)	4.303.1.4.4 X		6				
	Mandatory	Indoor Water Use: Standards for plumbing fixtures and fittings (Meet 2019 Plumbing Code)	4.303.2 X		n				
		Outdoor potable water use in landscape areas (MWELO)	4.304.1 X		n .				+ + + -
	-	Recycled water supply systems [N]	4.305.1 X	(					1
		Recycled water for landscape irrigation [MF only][AA] (when landscape >1,000 sq. ft)	PAMC 16.14.230/ A4.305.3	(	П				+ + + -
		Kitchen faucets (1.5 gpm at 60 psi)	A4.303.1 X						+ + -
		Alternate water sources for nonpotable applications	A4.303.2					$\rightarrow$	+
	Elective	Appliances	A4.303.3 X		U:		<del>-   -  </del>	-+-	+ + -
3		Nonwater supplied urinals and waterless toilets	A4.303.4				$\rightarrow$		+ + -
Se			A4.303.5 X		0		$\longrightarrow$		+
ě		Hot water recirculation systems			D.				+
၂၁		Rainwater catchment systems	A4.304.1		P.		$\longrightarrow$		+-+-
ives		Potable water elimination  Irrigation metering device. (locally amended)	A4.304.2		P		$\longrightarrow$		
ect	Elective	Irrigation metering device (locally amended)  Crowweter (Locally amended Whole boung growster evetem counts as 3 electives)	PAMC 16.14.220/ A4.304.3				$\longrightarrow$		
Ĭ		Graywater (Locally amended, Whole house graywater system counts as 3 electives)	PAMC 16.14.230/ A4.305.1		lo l		$\longrightarrow$		+
		Recycled water piping (Locally amended)	PAMC 16.14.230/ A4.305.2		P		$\longrightarrow$		+
		Recycled water for landscape irrigation (Locally amended)	PAMC 16.14.230/ A4.305.3				$\longrightarrow$		+
		Innovative concepts and local environmental conditions	A4.306.1						
4.4		Provided and Resource Efficiency	DAMO 10 11 CTO 11 CTO 1		Income and the	616601011101 <b>1</b>			
		Recycled content - 15% - Tier 2 requirements	PAMC 16.14.070 / A4.405.3.1 X		<u> </u>		$\longrightarrow$		
>		Rodent proofing fill annular spaces around pipes, cables, conduits or other openings to protect against rodents	4.406.1 X		ļė l		$\longrightarrow$		+
lg.		Enhanced construction waste reduction (80% Diversion w/ job valuation >\$25,000 or meet state standards of 65%)	PAMC 16.14.260/ 4.408.1 X		D.			$\longrightarrow$	
ng		Construction waste management plan in Green Halo	A4.408.2 X		0				
■	•	Waste management company	4.408.3 X		D.				
		Operation and maintenance manual provided to the building owner	4.410.1 X		O.				
<u> </u>		Recycling by occupants (≥ 5 multi-family units)	4.410.2 X		ja .		$\longrightarrow$		
		Reduction in cement use - 25%	PAMC 16.14.250/ A4.403.2 X		o .				
		Efficient framing techniques - Lumber size	A4.404.1		lo I				
		Efficient framing techniques - Dimensions and layouts	A4.404.2		þ.				
		Efficient framing techniques - Building systems	A4.404.3		le l				
4		Efficient framing techniques - Pre-cut materials and details	A4.404.4		o I				
Se	Elective	Prefinished building materials	A4.405.1 X		Ō				
hoc	Elective	Concrete floors	A4.405.2		o				
(C)	Elective	Use of building materials from rapidly renewable sources	A4.405.4		o.				
ives	Elective	Drainage around foundations	A4.407.1		0				
ect	Elective	Roof drainage	A4.407.2 X		e I				
ă	Elective	Flashing details	A4.407.3		le l				
	Elective	Material protection	A4.407.4 X		lo I				
	Elective	Door protection	A4.407.6		lo I				
	Elective	Roof overhangs	A4.407.7						
	Elective	Innovative concepts and local environmental conditions	A4.411.1						
				-					

							Com	oliance F	Path Ver	rification		
					Pla	Chook		gh GB	Ein	nal Inspectio	on IVP # 4	450
				Plan Sheet, Spec or	Plai	Plan Check		Inspection IVR # 152 Par			Part 1 Part 2	
5 Environment	tal Quality	Code Section Y		Attachment Reference	CORF	INITIA	L CORR	INITIAL	CORR	INITIAL	CORR	INITI
Mandatory	Fireplaces shall be direct-vent sealed combustion type (all-electric on of after April 1, 2020)	4.503.1	Х				100					
Mandatory	Covering of duct openings, protection of mechanical equipment during construction	4.504.1 X	(		П							
Mandatory	Adhesives, sealants and caulks - Table 4.504.1 and 4.504.2 for VOC limits	4.504.2.1 X	(		П							
Mandatory	Paints and coatings - Table 4.504.3 for VOC limits	4.504.2.2 X	(		П							
Mandatory	Aerosol paints and coatings	4.504.2.3 X	(		0							
Mandatory	Verification - documentation to verify complaint VOC limit on finish materials	4.504.2.4 X	(									
Mandatory	Carpet systems compliant with VOC limits	4.504.3	Х									
Mandatory	Carpet cushion	4.504.3.1	Х		П							
Mandatory	Carpet systems: Carpet adhesive - Table 4.504.1 for VOC limits	4.504.3.2	Х		o							
Tier 2 Mand	. Resilient flooring systems for 100% - Tier 2 requirements	AMC 16.14.070/ A4.504.2	Х		n							
Mandatory	Composite wood products	4.504.5 X	(		О							
Mandatory	Concrete slab foundations - vapor retarder required	4.505.2 X	(		n							
Mandatory	Capillary break for slab-on-grade foundations	4.505.2.1 X	(		О							
Mandatory	Moisture content of building materials ≤ 19% for wall and floor framing	4.505.3 X	(		п							
	Bathroom exhaust fans (when required) shall be provided with the following:	4.506.1 X	(		Д							
Mandatani	ENERGY STAR fans ducted to outside of building.	X	(									
Mandatory	2. Humidity controlled OR functioning as a component of a whole-house ventilation system	X	(									
	3. Humidity controls with manual or automatic means of adjustment for relative humidity range of ≤ 5	50% to 80% max X	(									
Mandatory	Heating and air conditioning system design	4.507.2 X			Ф							
Mandatory	Indoor Air Quality Management Plan	PAMC 16.14.410 X	(									
Elective	Compliance with formaldehyde limits	AMC 16.14.265/ A4.504.1										
Elective	Thermal insulation P	AMC 16.14.270/ A4.504.3										
Elective	Construction filters [HR]	A4.506.2										
Elective	Direct-vent appliances	A4.506.3 X	(		Д							
	Innovative concepts and local environmental conditions.	A4.509.1										

construction shall meet the following:

2 prerequisite requirements.

1. California Green Building Standards Code Mandatory plus Tier

2. No Planning and Design electives.3. Two (2) Water Efficiency and Conservation electives.

4. Two (2) Material Conservation and Resource Efficiency

Y - Yes; the measure is in the scope of work N - No; the measure is not in the scope of work PAMC - Palo Alto Municipal Code; locally amended [N] - New Construction

MF] - Multi-family dwellings [AA] - Additions and alterations

The <u>Green Building Survey</u> is a required project submittal. The survey can be found at the following <u>link</u>. The online survey shall be completed and a Green Building Survey Report will be sent in an email. Include a copy of the survey report on a separate page in this plan set. Please indicate the reference page here \_\_\_\_\_

#### **Special Inspector Acknowledgement** The project will be verified by a RESIDENTIAL GREEN BUILDING SPECIAL INSPECTOR

I have reviewed the project plans and specifications, and they are in conformance with the CALGreen mandatory and elective measures claimed. I have reviewed and understand the afterconstruction requirements below.

Signature (Green Building Special Inspector)

Print Name Phone or Email

#### Certified Energy Analyst Acknowledgement

#### The project will be verified by a CERTIFIED ENERGY ANALYST REQUIREMENT EFFECTIVE ON APRIL 1, 2020

The Certificate of Compliance shall be prepared and signed by a Certified Energy Analyst and the energy budget for the Proposed Design shall be no greater than the Standard Design Building.

I am a Certified Energy Analyst with the California Association of Building Energy Consultants as of the date of submission of a Certificate of Compliance as required under Section 10-103 of the Building Energy Efficiency Standards for Residential and Non-Residential Buildings.

Signature	(Certified Energy A	nalvst)

Print Name

Phone or Email

## **SECTION TO BE COMPLETED**

After construction is complete submit the following at the City Development Center to schedule your final inspection:

AFTER CONSTRUCTION

Construction debris receipts from an approved facility using Green Halo.

If HERS testing was required per the homes energy report, attach the completed forms. If there were alterations during construction that impacted the energy report (i.e. R values, U factors, Equipment Types) rerun the report and attach it.

I certify that:

Print Name

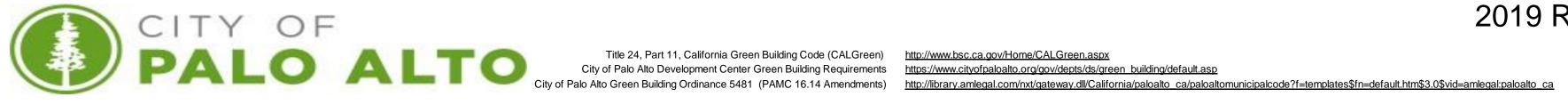
CALGreen inspections were performed throughout

The home has met the CALGreen measures as claimed on this sheet. Those required for landscaping may be excluded from this confirmation if verified within 6 months of final inspection.

Through a combination of onsite inspections and confirmation from the Contractor there have been no alterations that impacted the energy report for the home, unless the new report is provided as an attachment.

Signature (Green Building Special Inspector) Sign only after project is complete

CITY S	TAMPS	ONLY		
				ı



Application: This plan sheet is for residential new construction of any size.

2019 RESIDENTIAL GREEN BUILDING APPLICATION CALGREEN + TIER 2

GREEN BUILDING CHECKLIST

HEATHER YOUNG ARCHITECTS 81 Encina Avenue, Suite 100 Palo Alto, CA 94301

650-459-3200 / hyarchs.com

WAVERLEY

RESIDENCES

160 - 164 WAVERLEY ST

PALO ALTO, CA 94301

REV DATE DESCRIPTION

14 DEC 2020 ARB SUBMITTAL

ISSUANCES



#### ENVIRONMENTAL ASSESSMENT WORKSHEET

## City of Palo Alto Department of Planning & Development Services

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).	Exnec	eted amount of water usage (except for re	sidential developments of fewer than 4 units not
		d in the foothills)	or review than 1 and 100
	Do	omestic 200 gal/day	Peak use 200 gal/day
	Co	ommercial NONE gal/day	Peak use N/A gal/day
. ]	Daily	sewer discharge (over 30 fixtures only)_	N/A
	Expe	cted energy use:	
	Gas_	NONE therms Electric 10000	KWH Peak electric demand 20 kW
	Uses	and equipment sizes	
	A.	Space heating:	
		Gas NONE BTUH_	Solar 8 kW
		Electric Yes KW 10	Heat pump Yes Tons 6
		Other	
	B.	Air conditioning:	
		Number of units 3	Total tonnage 6
	C.	Water heating:	
		Gas NONE BTUH_	Solar 8 kW
		Electric Yes KW 20	Heat Pump Yes Tons 1
			Individual system
		Recirculating Loop? Yes yes	
	D.	Other:	
	٥.		Outdoor lighting Yes KW 1
			Refrigeration Yes Tons or ft 12 ft.
		Cooking Yes KW 30	Remigeration Long or H 1/ II

EXIS	STING SITE:
0 04	

	years THREE DETACHED SINGLE FAMLY RESIDENCES
).	Size of site: Gross 12,500 Net
0.	Site is owned X Rented by applicant. BY OWNER
	Existing use of property: RESIDENTIAL  *Attach photographs of project site, also include an aerial photo of the project site.
12.	Number of existing structures 4 Current Use RESIDENTIAL
13.	Size of existing structures UNKNOWN Condition UNKNOWN
14.	Will any structure be demolished for this project Yes_X No
15.	Total square footage to be demolished UNKNOWN
	Total number of building occupants for existing use UNKNOWN
	Number of parking spaces % compact spaces # Bicycle spaces 0
8.	If current use is residential:
	Number of owner-occupied units  Number of renter-occupied units  3
PR	OPOSED PROJECT:
	Project description REMOVAL OF ALL STRUCTURES ON SITE. 2 NEW 2-STORY

STRUCTURES CONTAINING 3 RESIDENTIAL FLATS, EACH WITH 3 BERDOOM

AND 3-1/2 BATH. AT GRADE GARAGE PARING FOR 6 VEHICLES.

	Commercial / Industrial only: Source	N/A						
	Type							
34.	Noise generation: eg. Generators, chitlers, H' Source CONDENSING UNITS  Please list outside noise sources that etc.	A	mount (	dBa)_ the	48 project:	eg	g. Traffic,	– tra
	Sound proofing/mitigation proposedNOI	NE ARDS,	NOT L	OCA <sup>-</sup>	TED IN S			
	Site drainage provisions SEE GRADING  Amount of proposed grading (cubic yards)  Disposition of excavated material	90	Cut	130			40	
38.	Permits required from other agencies:  Santa Clara Valley Water District  Bay Area Air Quality Management District	N/A						
	Army Corps of Engineers  Other	N/A						
39.	vironmental Setting:  Percent and direction of ground slope at site_  Is this site within a special flood hazard area?	0.6%	TOWA	RDS	STREET			

20.	Future tenant if known_ UNKNOWN RESIDENTIAL TENANTS
21.	Number of structures proposed 2 Size (in square feet) 6,250
22.	Number of floors and building height 2 FLOORS, 27'-6" FAR 0.5
23.	Percentage of site to be covered (including bricks and pavers) 61% (7,610sf)
24.	Estimated number of employees per shift NONE
25.	If the proposed project is residential:
	Total number of units3 Number of units per acre10.3
	Expected sales price or monthly rent per dwelling unit ~ \$ 7,500/month
	List kinds and size of community buildings NONE
	Area of private open space 4,881 SF Area of common open space 527 SF
	Provision of low/moderate income units:
	1) Number of units provided for: Sale NONE Rent NONE
	2) Sale and / or rental priceN/A
26.	Total number of vehicles expected daily for proposed project6
27.	Number of proposed parking spaces 6 Percentage compact spaces 0%
	Number of bicycle spaces 4
28.	Are there any toxic wastes to be discharged? Yes NoX
	(If yes, please complete a Sewer Discharge Questionnaire, which is furnished by the Buildir Department)
29.	Has the facility in the past or will the operation of the proposed facility involve the storage or use of Hazardous materials? Yes NoX

	2) Sale and / or rental price		N1/A				
	2) Sale and / of femal price		N/A				
27.	Total number of vehicles expected dail	ly for pro	oposed projec	t6			-
	Number of proposed parking spaces	6	Percentage				
	Number of bicycle spaces	4					
28.	Are there any toxic wastes to be discha						
	(If yes, please complete a Sewer Department)	Discharge	e Questionnai	re, which is	s furni	ished by the B	uildir
29.	Has the facility in the past or will the of Hazardous materials? Yes				nvolve	e the storage or	use o
	(If yes, please complete a Hazardous Department)	Material	ls Disclosure	checklist, w	hich is	s furnished by t	he Fi
	1 /						
<b>1</b> 1.	Existing site vegetation (please list, ar						
11.	*Also include a tree disclodure state	ment. T	The size and l	ocation of a	-		
<b>l</b> 1.	*Also include a tree disclodure state and heritage trees must be shown. (	ment. T This for	The size and I m can be obt	ocation of a ained at the	Deve	lopment Cente	
<b>l</b> 1.	*Also include a tree disclodure state	ment. T This for	The size and I m can be obt	ocation of a ained at the	Deve	lopment Cente	L
<b>1</b> 1.	*Also include a tree disclodure state and heritage trees must be shown. (	ment. T This for	The size and I m can be obt	ocation of a ained at the	Deve	lopment Cente	L
<b>l</b> 1.	*Also include a tree disclodure state and heritage trees must be shown. (calling (650) 617-314)	ment. T	The size and I m can be obt	ocation of a ained at the	Deve	lopment Cente	L
	*Also include a tree disclodure state and heritage trees must be shown. (calling (650) 617-314)  SMALL FRUIT TREES  SEE SITE PLAN AND ARBORIS	ment. This for	The size and I m can be obt	ocation of a ained at the	Deve	lopment Cente	
	*Also include a tree disclodure state and heritage trees must be shown. (calling (650) 617-314)  SMALL FRUIT TREES	ment. This for	The size and I m can be obt	ocation of a ained at the	Deve	lopment Cente	
12.	*Also include a tree disclodure state and heritage trees must be shown. (calling (650) 617-314)  SMALL FRUIT TREES  SEE SITE PLAN AND ARBORIS	ment. This for	The size and I m can be obt	ocation of a ained at the	Deve	elopment Cente	r or
12.	*Also include a tree disclodure state and heritage trees must be shown. (calling (650) 617-314)	This for ST REPO	The size and I m can be obt	ocation of a ained at the	Deve	elopment Cente	ror
12.	*Also include a tree disclodure state and heritage trees must be shown. (calling (650) 617-314)  SMALL FRUIT TREES  SEE SITE PLAN AND ARBORIS  Existing animal and bird life on site	This for ST REPO	The size and I m can be obt	ocation of a ained at the	Deve	elopment Cente	r or
12.	*Also include a tree disclodure state and heritage trees must be shown. (calling (650) 617-314)  SMALL FRUIT TREES  SEE SITE PLAN AND ARBORIS  Existing animal and bird life on site  Detailed description of conditions and SINGLE FAMILY AND MULTI-FA	NONE I	The size and I m can be obt	erties	Deve	elopment Cente	r or t
<b>1</b> 2.	*Also include a tree disclodure state and heritage trees must be shown. (calling (650) 617-314)	This for ST REPO	The size and I m can be obt	ocation of a ained at the	Deve	elopment Cente	r or l
12.	*Also include a tree disclodure state and heritage trees must be shown. (calling (650) 617-314)	NONE I	The size and I m can be obt	erties	Deve	elopment Cente	r or l

PLEASE RETURN COMPLETED WORKSHEET TO THE DEPARTMENT OF PLANNING

& DEVELOPMENT SERVICES, DEVELOPMENT CENTER, 285 HAMILTON AVENUE, 1<sup>ST</sup> FLOOR.

(650) 329-2442 if you have any questions.

REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTA

HEATHER YOUNG ARCHITECTS
81 Encina Avenue, Suite 100

Palo Alto, CA 94301 650-459-3200 / hyarchs.com

WAVERLEY

160 - 164 WAVERLEY ST

ENVIRONMENTAL ASSESSMENT WORKSHEET

# City of Palo Alto Tree Protection - It's Part of the Plan!

Make sure your crews and subs do the job right!

Fenced enclosures around trees are essential to protect them by keeping the foliage canopy and branching structure clear from contact by equipment, materials and activities, preserving roots and soil conditions in an intact and non-compacted state, and identifying the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved. An approved tree protection report must be added to this sheet when project activity occurs within the TPZ of a regulated tree.

For detailed information on Palo Alto's regulated trees and protection during development, review the City Tree Technical Manual (TTM) found at www.cityofpaloalto.org/trees/.

Ray Morneau, Arborist

Isa Certif. #WE-0132A 650.964.7664

Tree Disclosure Statement (next/final page)

For written specifications associated with illustration Detailed specifications are found in the Palo Alto Tree Restricted activity area -- see Tree Technical Manual Sec 2

Restricted trenching area -- see Tree Technical Manual Sec within TPZ of a protected tree requires approval from Publications associated with illustration Detailed specifications are found in the Palo Alto Tree

Tree Protection Zone (TPZ) shown in gray (radius of Restricted activity area -- see Tree Technical Manual Sec 2

Restricted trenching area -- see Tree Technical Manual Sec 2

Restricted trenching area -- see Tree Technical Manual Sec 2

Restricted trenching area -- see Tree Technical Manual Sec 2

Restricted trenching area -- see Tree Technical Manual Sec 2

Restricted trenching area -- see Tree Technical Manual Sec 2

Restricted trenching area -- see Tree Technical Manual Sec 2

Restricted activity area -- see Tree Technical Manual Sec 2

Restricted activity area -- see Tree Technical Manual Sec 2

Restricted activity area -- see Tree Technical Manual Sec 2

Restricted activity area -- see Tree Technical Manual Sec 2

Restricted activity area -- see Tree Technical Manual Sec 2

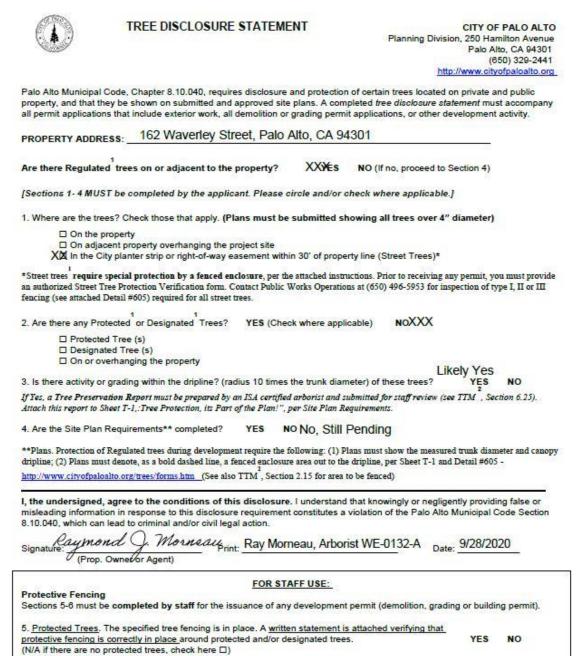
Restricted activity area -- see Tree Technical Manual Sec 2

Restricted activity area -- see Tree Technical Manual Sec 2

Restricted activity area -- see Tree Technical Manual Sec 2

Restricted activity area -- see Tree Technical Manual Sec 2

Restricted activity area -- see Tree Technical Manual Sec 2



September 28, 2020 Arborist's Inventory & Report (TPR): Zach: 162 Waverley St., PA. 94301 Page #17 of 17.

Regulated Trees - a) Street trees - trees on public property; b) Protected trees - Coast Live Oaks or Valley Oaks which are 11.5" in diameter or larger, Coast Redwoods which are 18" in diameter or larger, when measured 54" above natural grade; and Heritage trees are trees designated by City Council; and c)

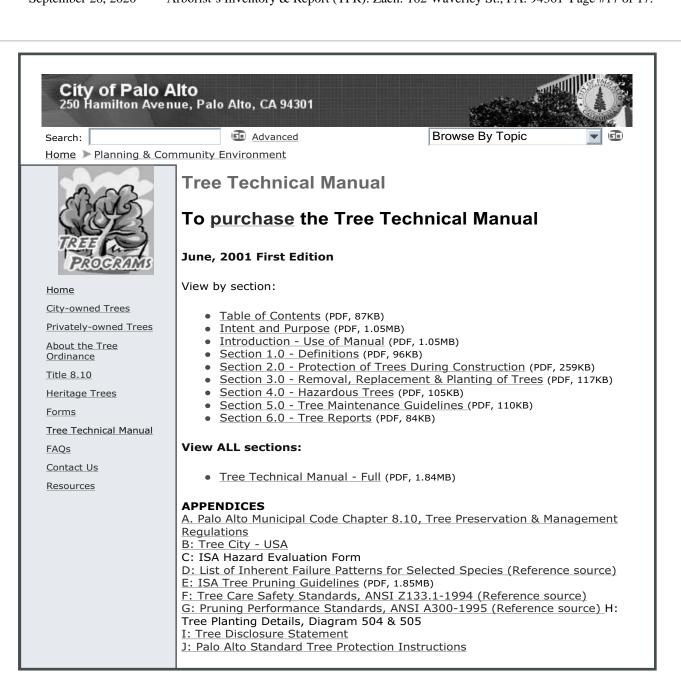
Palo Alto Tree Technical Manual (TTM) contains instructions for all requirements on this form, available at www.cityofpaloalto.org/trees/technical-manual htm

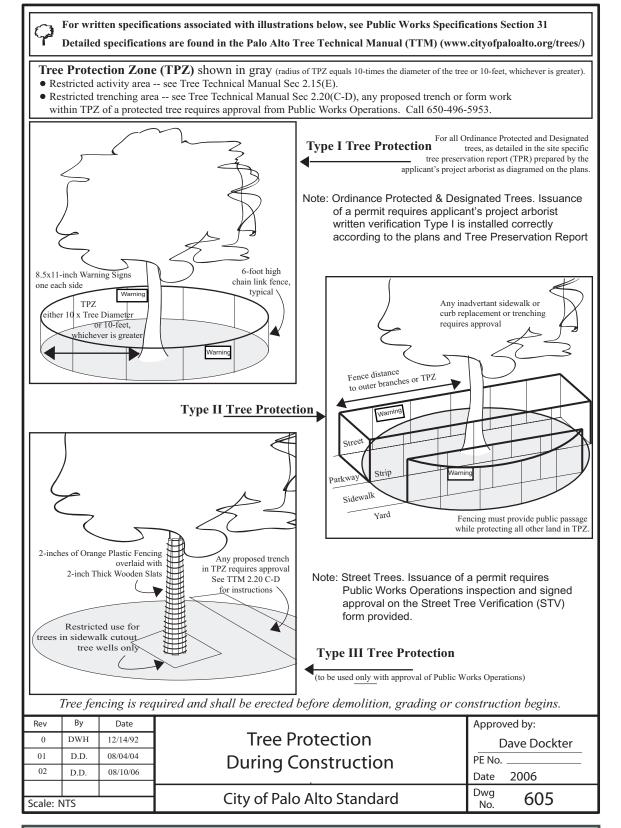
3. Street Trees. A signed Public Works Street Tree Protection Verification form is attached.

esignated Trees – commercial or non-residential property trees, which are part of an approved landscape plan.

S:PLAN/PLADIVAdvance Planning/Arborist/Tree Program Information/Tree Disclosure Statement/TDS//Tree Disclosure Statement/Final\_3107.doc

(N/A if there are no street trees, check here □)





**	A PORTE	APPENDIX J PALO ALTO STREET TREE PROTECTION INSTRUCTIONSSECTION 31
31-1	Genera	
	a.	<b>Tree protection has three primary functions</b> , 1) to keep the foliage canopy and branching structure clea from contact by equipment, materials and activities; 2) to preserve roots and soil conditions in an intact and non-compacted state and 3) to identify the Tree Protection Zone (TPZ) in which no soil disturbance is permitted and activities are restricted, unless otherwise approved.
	b.	The Tree Protection Zone (TPZ) is a restricted area around the base of the tree with a radius of ten-times the diameter of the tree's trunk or ten feet; whichever is greater, enclosed by fencing.
31-2	Referen	ce Documents
	a.	<b>Detail 605</b> – Illustration of situations described below.
	b.	Tree Technical Manual (TTM) Forms (http://www.cityofpaloalto.org/trees/)
		<ol> <li>Trenching Restriction Zones (<u>TTM</u>, <u>Section 2.20(C)</u>)</li> <li>Arborist Reporting Protocol (<u>TTM</u>, <u>Section 6.30</u>)</li> </ol>
		3. Site Plan Requirements (TTM, Section 6.35)
		4. Tree Disclosure Statement ( <u>TTM</u> , <u>Appendix J</u> )
	c.	Street Tree Verification (STV) Form ( <a href="http://www.cityofpaloalto.org/trees/forms">http://www.cityofpaloalto.org/trees/forms</a> )
31-3	Executi	
	a.	<b>Type I Tree Protection:</b> The fence shall enclose the entire TPZ of the tree(s) to be protected throughout the life of the construction project. In some parking areas, if fencing is located on paving or concrete that will no be demolished, then the posts may be supported by an appropriate grade level concrete base, if approved by Public Works Operations.
	b.	<b>Type II Tree Protection:</b> For trees situated within a planting strip, only the planting strip and yard side of the TPZ shall be enclosed with the required chain link protective fencing in order to keep the sidewalk and street open for public use.
	c.	Type III Tree Protection: To be used <u>only</u> with approval of Public Works Operations. Trees situated in a tree well or sidewalk planter pit, shall be wrapped with 2-inches of orange plastic fencing from the ground to the first branch and overlaid with 2-inch thick wooden slats bound securely (slats shall not be allowed to dig into the bark). During installation of the plastic fencing, caution shall be used to avoid damaging any branches. Major limbs may also require plastic fencing as directed by the City Arborist.
	d.	Size, type and area to be fenced. All trees to be preserved shall be protected with six (6') foot high chain link fences. Fences are to be mounted on two-inch diameter galvanized iron posts, driven into the ground to a depth of at least 2-feet at no more than 10-foot spacing. Fencing shall extend to the outer branching, unless specifically approved on the STV Form.
	e.	<b>'Warning' signs.</b> A warning sign shall be weather proof and prominently displayed on each fence at 20-foo intervals. The sign shall be minimum 8.5-inches x 11-inches and clearly state in half inch tall letters: "WARNING - Tree Protection Zone - This fence shall not be removed and is subject to a fine according to PAMC Section 8.10.110."
	f.	<b>Duration</b> . Tree fencing shall be erected before demolition; grading or construction begins and remain in place until final inspection of the project, except for work specifically allowed in the TPZ. Work or soil disturbance in the TPZ requires approval by the project arborist or City Arborist (in the case of work around Street Trees). Excavations within the public right of way require a Street Work Permit from Public Works.
	g.	During construction
		<ol> <li>All neighbors' trees that overhang the project site shall be protected from impact of any kind.</li> <li>The applicant shall be responsible for the repair or replacement plus penalty of any publicly owned trees that are damaged during the course of construction, pursuant to Section 8.04.070 of the Palo Alto Municipal Code.</li> </ol>
		<ul> <li>3. The following tree preservation measures apply to all trees to be retained:</li> <li>a. No storage of material, topsoil, vehicles or equipment shall be permitted within the TPZ.</li> <li>b. The ground under and around the tree canopy area shall not be altered.</li> <li>c. Trees to be retained shall be irrigated, aerated and maintained as necessary to ensure survival.</li> </ul>
		END OF SECTION

Table 2-2	Palo Alto Tree Technical Manual
	CONTRACTOR & ARBORIST INSPECTION SCHEDULE
Refer	rence: the Palo Alto Tree Technical Manual is available at www.cityofpaloalto.org/environment/
ALL CHECKE	D ITEMS APPLY TO THIS PROJECT:
signe Monti inspec design	ction of Protective Tree Fencing. For Public Trees, the Street Tree Verification Form shall to by the City Arborist. For Protected Trees, the project site arborist shall provide an initial bily Tree Activity Report form with a photograph verifying that he has conducted a field croin of the trees and that the correct type of protective fencing is in place around the nated tree protection zone (TPZ) prior to issuance of a demolition, grading, or building permit TTM, Verification of Tree Protection, Section 1.39).
condu gradii	onstruction Meeting. Prior to commencement of construction, the applicant or contractor shared a pre-construction meeting to discuss tree protection with the job site superintendent, ag operators, project site arborist, City Arborist, and, if a city maintained irrigation system is red, the Parks Manager (Contact 650-496-6962).
perfor TPZ t requir	ction of Rough Grading or Trenching. Contractor shall ensure the project site arborist ms an inspection during the course of rough grading or trenching adjacent to or within the o ensure trees will not be injured by compaction, cut or fill, drainage and trenching, and if red, inspect aeration systems, tree wells, drains and special paving. The contractor shall provide oject arborist at least 24 hours advance notice of such activity.
montl imme Techr landse	hly Tree Activity Report Inspections. The project site arborist shall perform a minimum ally activity inspection to monitor and advise on conditions, tree health and retention or, diately if there are any revisions to the approved plans or protection measures. The Tree nical Manual Monthly Tree Activity Report format shall be used and sent to the Planning Dep cape review staff no later than 14 days after issuance of building permit date. Fax to (650) 329 (See TTM, Monthly Tree Activity Inspection Report, Addendum 11 & section 1.17).
requir	al activity within the Tree Protection Zone. Work in the TPZ area (see also #7 below) res the direct onsite supervision of the project arborist (see TTM, Trenching, Excavation & ment, Section 2.20 C).
final on sit Quali consti verifi	scape Architect Inspection. For discretionary development projects, prior to temporary or occupancy the applicant or contractor shall arrange for the Landscape Architect to perform an e inspection of all plant stock, quality of the materials and planting (see TTM, Planting ty, Section 5.20.1 A) and that the irrigation is functioning consistent with the approved function plans. The Planning Dept. landscape review staff shall be in receipt of written cation of Landscape Architect approval prior to scheduling the final inspection, unless wise approved.
7. List (	Other (please describe as called out in the site Tree Preservation Report, Sheet T-1, T-2, etc.)
*	

FOR	City of Palo Al Tree Department Public Works Operations PO Box 10250 Palo Alto, CA 650/496-5953 FAX: 650/852 treeprotection@CityofPaloAl	. 94303 2-9289		rification of Tree Protection
	tions: Complete upper port ment to Public Works Dept.			form along with signed Tree pect and notify applicant.
APPLICATION	DATE:			
ADDRESS/LOG TREES TO BE	CATION OF STREET PROTECTED:			
APPLICANT'S	NAME:			
APPLICANT'S	ADDRESS:			
APPLICANT'S & FAX NUMBE				
This section to	be filled out by City Tree Sta	aff		
address(es	Trees at the above ) are adequately The type of protection		YES ☐	NO* □ go to #2 below
Inspected by	<i>r</i> :			
Date of Inspe	ection:			
address are protected. I modification	Trees at the above POT adequately The following Ins are required:  We the required Ins were communicated cant.			
Subsequent Ins	pection			
Street trees at a to be adequated	above address were found y protected:	*	YES  If NO, indicate in "Notes	NO*   " below the disposition of case.
Inpsected by:				
Date of Inspec	tion:			
site, condition a installed. Also	y street trees by species, nd type of tree protection note if pictures were k of sheet if necessary.			
Return approv	ed sheet to Applicant for o	demolition	or building permit is	ssuance

				Contact Cell
N	Nonthly Tree A	ctivity Repo	ort- Construction	Site
Inspection Date: Inspection #	Site address: Palo Alto, CA	Contractor- Main Site Contact Information	#1: Job site superintende Company: Email: Job site Office: Cell: Mail:	ent
		Also present:	:	
Distribution:	City of Palo Alto     Others	Attn: Dave Dockter	Dave.dockter@cityofpaloa 650-329-2440	alto.orq
a. Pre-cc b. Inspec c. Deten 2. Field Obser a. Tree F	t Activity (Demolition/gronstruction meeting requient to verify that tree protemine if field adjustments relations (general site-wide Protection Fences (TPF) ahing has/will occur	rement with sub-co ection measures are , watering or plan re le and list by indivi-	in place evisions may be needed	risits)
a. Pre-co b. Inspec c. Detern  2. Field Obser a. Tree I b. Trenc a. Tree I b. Root 2	construction meeting required to verify that tree protes in in if field adjustments, revations (general site-wide protection Fences (TPF) a hing has/will occur as (list site-wide, by tree Protection Fence (TPF) in zone buffer material (world like sewer trench, foundation	rement with sub-co- ction measures are watering or plan ro- le and list by indivi- are number and date to eeds adjusting (tree od chips) can be ins	in place evisions may be needed dual tree number) be satisfied) and Date Due	risits)
a. Pre-co b. Inspec c. Detern c. Detern c. Field Obser a. Tree I b. Trenc d. Tree I b. Root a c. Sched d. Photograph f. Tree Locati	construction meeting required to verify that tree protes in in if field adjustments, revations (general site-wide protection Fences (TPF) a hing has/will occur as (list site-wide, by tree Protection Fence (TPF) in zone buffer material (world like sewer trench, foundations (use often)	rement with sub-co- ction measures are watering or plan re le and list by indivi- are  number and date to eeds adjusting (tree od chips) can be ins- tion dig with	in place evisions may be needed dual tree number) be satisfied) and Date Due # x, x, x) talled next	risits)
a. Pre-co b. Inspec c. Detern c. Detern c. Detern c. Tree I b. Trenc d. Tree I b. Root a c. Sched d. Photograph f. Tree Locati f. Recommen	onstruction meeting requict to verify that tree protes in in each of field adjustments, evations (general site-wide protection Fences (TPF) a hing has/will occur as (list site-wide, by tree exprotection Fence (TPF) in zone buffer material (world like sewer trench, foundations (use often)	rement with sub-co- ction measures are watering or plan re le and list by indivi- are  number and date to eeds adjusting (tree od chips) can be ins- tion dig with  x 11 sheet)	in place evisions may be needed dual tree number)  be satisfied) and Date Due # x, x, x) talled next	risits)

# ---WARNING--Tree Protection Zone

This fencing shall not be removed without City Arborist approval (650-496-5953)

## Removal without permission is subject to a \$500 fine per day\*

\*Palo Alto Municipal Code Section 8.10.110

City of Palo Alto Tree Protection Instructions are located at <a href="http://www.city.palo-alto.ca.us/trees/technical-manual.html">http://www.city.palo-alto.ca.us/trees/technical-manual.html</a>

SPECIAL INSPECTIONS	PLANNING DEPARTMENT
TREE PROTECTION INSPEC	CTIONS MANDATORY
PAMC 8.10 PROTECTED TREES. CONTRACTOR SHALL ENS REQUIRED TREE INSPECTION AND SITE MONITORING. PR REPORTS TO THE PLANNING DEPARTMENT LANDSCAPE F BUILDING PERMIT ISSUANCE.	OVIDE WRITTEN MONTHLY TREE ACTIVITY
BUILDING PERMIT DATE:	
DATE OF 1 <sup>ST</sup> TREE ACTIVITY REPORT:	
CITY STAFF:	
REPORTING DETAILS OF THE MONTHLY TREE ACTIVITY FOR VERIFY THAT ALL TREE PROTECTION MEASURES ARE IMPROVED THAT ALL TREE PROTECTION MEASURES ARE IMPROVED TO WINSCHEDULED, WITHIN A TREE SUBJECT TO VIOLATION OF PAMC 8.10.080. REFERENCE SECTION 2.00 AND ADDENDUM 11.	PLIMENTED AND WILL INCLUDE ALL CONTRACTOR EE PROTECTION ROOT ZONE. NON-COMPLIANCE

Apply Tree Protection Report on sheet(s) T-2

Use addtional "T" sheets as needed



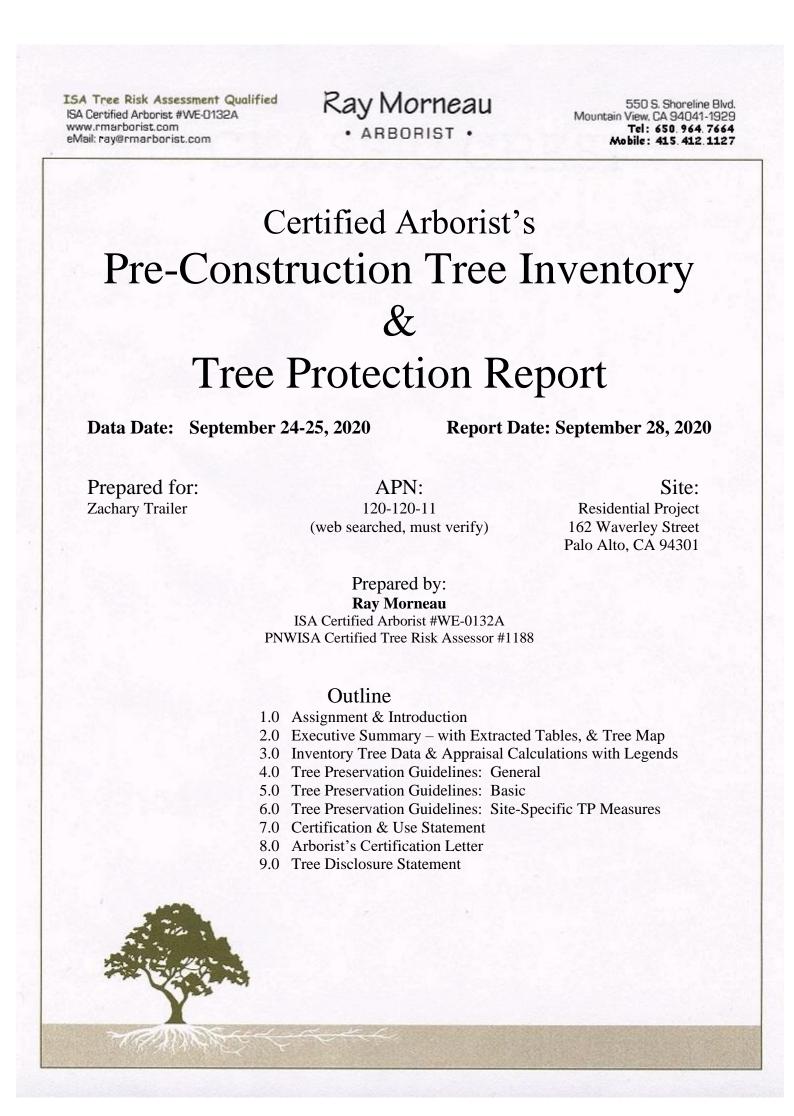
WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

ISSUA	NCES	
REV	DATE	DESCRIPTION
	14 DEC 2020	ARB SUBMITTA
	1	

TREE PROTECTION

**A**-**Z** 



Ray Morneau, Arborist

ISA Certif. #WE-0132A 650.964.7664

1.0 Assignment & Introduction

**Assignment**: I have been retained by Zachary Trailer to provide a pre-construction tree inventory and Arborist's Report for his project at 162 Waverley Street in Palo Alto.

**Introduction**: I am an ISA Certified Arborist with experience providing construction consultations, arborist's reports, and site monitoring in the City of Palo Alto. I have worked smoothly with this City's current Planning Division, as well as those from other jurisdictions.

I visited the site to measure and tag the trees (data date September 24-25, 2020). For a tree map for this report, I include a marked-up scan of a borrowed Google Maps image capture of the site, adding my tree numbers near their locations.

No Topo or Site Plan has been available yet, but can be incorporated by reference memo when the engineers and/or design professionals can provide such sheets to me.

The City of Palo Alto Planning Department continues to rely heavily on the 2016 edition (sixth printing!!) of their *Tree Technical Manual – Standards and Specifications* (TTM) digitally available with all current appendices at: <a href="https://www.cityofpaloalto.org/civicax/filebank/documents/51800">https://www.cityofpaloalto.org/civicax/filebank/documents/51800</a>

2.0 Executive Summary – with Extracted Tables, & Tree Map I inspected the nine (9) trees associated with this site and present their data in my spreadsheets

This project will remove the three existing houses and carport to replace them with new housing. This may require removing all but the three municipal street trees (keeping #1, #8, and #9).

Care must be taken to retain as much of those three trees' root zones, trunk/branch structure, and foliage canopies by using tree-friendly techniques to avoid tree damage.

Similar requirements would be prompted for any of the other six trees here which the owners/designers/planners decide to also preserve. Layout of foundations, surface grading, and routing of utilities commonly raise conflict issues.

Care will be required for root zones over the entire lot since, as charted below, the Tree Technical Manual defines the "Tree Protection Zones (TPZs) as covering most of this property.

The project Landscape Architect can provide a thoughtfully, well-designed landscape plan.

#### **Summary Charts**

September 28, 2020 Arborist's Inventory & Report (TPR): Zach: 162 Waverley St., PA. 94301 Page #2 of 17.

Ray Morneau, Arborist

Total

On Parcel

1 Sw eetgum

2 Silverthorn

3 Douglas-fir

4 Lemon

6 Avocado

7 Orange

Persea americana

Ficus caria

Celtis sinensis

Citrus sinensis

Eleagnus species

Liquidambar styraciflua

Pseudotsuga menziezii

8 Hackberry

1% to 25%

26% to 49%

50 % to 70%

71% to 90%

91% to 100%

Tree Summary Chart 162 Waverley, Palo Alto

Hackberry, Oriental

Silverthorn

Sw eetgum

Name, Common Diam. Condition Comments

**Sorted Alphabetically by Common Name** 

Overall Tree Frequency Chart

City of Palo Alto Regulated Trees = 3 Not Reg- Total All

a. Street b1. Protected: 311.5" b2. Protected: 318" c. Designated ulated Trees

26.4" 75% Good Muni street tree in front planting strip with utilities.

50% Poor In back against side fence of #160.

77% Good In back, side law n of #164.

77% Good Existing foundation at 1'.

12.2" 25% V. Pr. Betw een existing drivew ay & fence; poor structure.

25% V. Pr. {Betw een existing drivew ay & fence; poor structure.

40% Poor Declining between existing drivew ay and fence.

70% Good | Municipal street tree within 30'; typ.; minor stresses.

55% Fair | Municipal street tree within 30'; typ.; minor stresses.

Citrus limon

icus caria

Citrus sinensis

leagnus species

Persea americana

iquidambar styraciflua

Pseudotsuga menziezii

**Overall Condition Chart** 

Percentage Range | Text Description | Quantity

**Overall Condition Chart** 

Very Poor

Good

Excellent

ISA Certif. #WE-0132A 650.964.7664

6 9

Protected?

Yes - ST

No

Yes - ST

Hackberry, Oriental

Orange

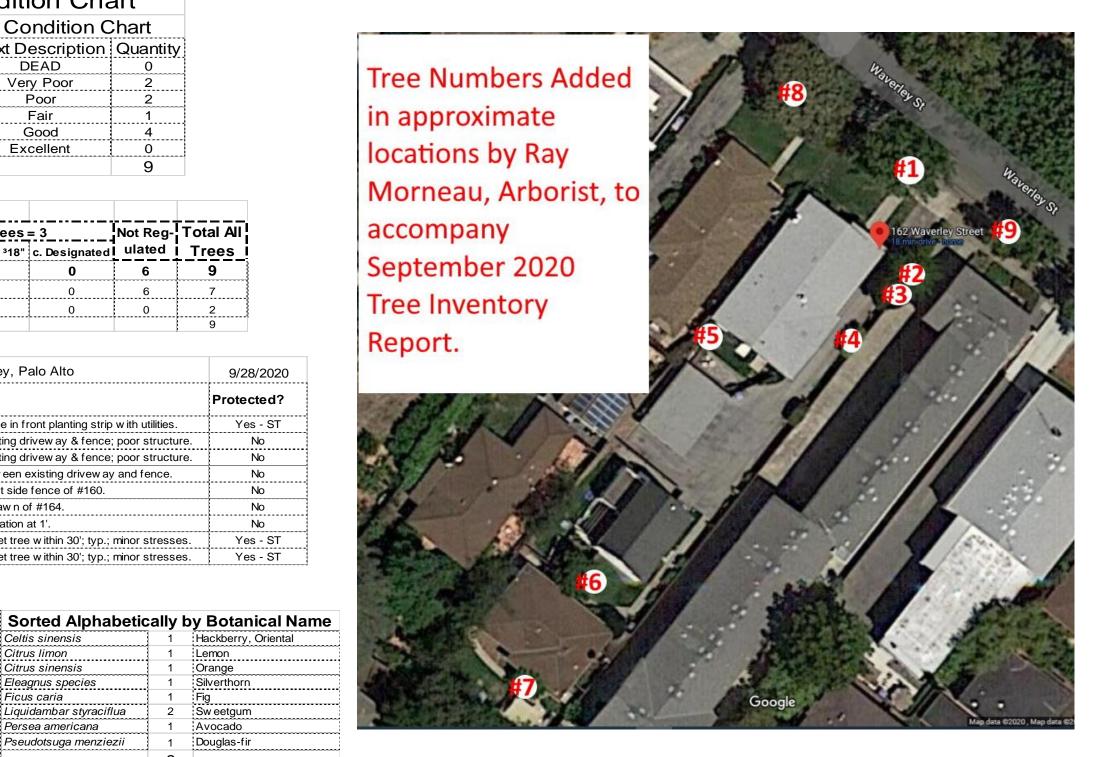
Sw eetgum

Avocado

Douglas-fir

Ray Morneau, Arborist

ISA Certif. #WE-0132A 650.964.7664



81 Encina Avenue, Suite 100 Palo Alto, CA 94301 650-459-3200 / hyarchs.com

HEATHER YOUNG ARCHITECTS

WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

DESCRIPTION

14 DEC 2020 ARB SUBMITTAL

ISSUANCES

REV DATE

Ray Morneau, Arborist



ISA Certif. #WE-0132A 650.964.7664

3.0a Tree Inventory Data

Tree Inventory Data: 160, 162, 164 Waverley Street, PA

										Data date: September 24	, 2020
Tree #	Botanical Name / Name, Common	qpp	Crown Radius	Height	% Vigor	% Structure	% Overall	Species Aptitude	Age / Longevity	Additional Comments	Protected≥11.5", or ≥18", or Street Tree
1	Liquidambar styraciflua / Sw eetgum	26.4"	25'		65%	85%	75% Good	Mod.	Mature	Street tree in front planting strip betw een sidew alk and curb. Water meters in ground at 8' (+ a sew er cleanout); 11' to existing drivew ay apron; Moderate foliage branch endw eights and some decline.	ST
2	Elaeagnus species / Silverthorn	12.2" @ 1'	16'	20'	60%	10%	25% V. Pr.	Low	Over- mature	Betw een side fence and existing asphalt drivew ay. Severely multi-stemmed throughouit; side-pruned for clearance. THORNS!!!	No
3	Pseudotsuga menziesii / Douglas-fir	13.9"	12'	22'	55%	10%	25% V. Pr.	Low	Over- mature	Betw een side fence and existing asphalt drivew ay. Multi-stemmed at 10'; side-pruned for clearance. Not sufficient room here for such a huge tree to mature!!!	No
4	Citrus limon / Lemon	6.6" @ 0'	5'	12'	40%	40%	40% Poor	Mod.	Over- mature	Declining screen tree alongside drivew ay; severely pruned; misshapen; 3-trunked from ground level; copious twiggy deadwood.	No
5	Ficus carica / Fig, Common	9.8" @ 0'	9'	10'	60%	40%	50% Poor	High	Semi- mature	In backyard of #160; against w est side fence; vigorous; w ith surface roots; multi-stemmed from ground level (2", 3", 5" diameters).	No
6	Persea americana / Avocado	8.8" @ 4'	18'	28'	80%	75%	77% Good	Low	Mature	In back/side law n of #164.	No
7	Citrus sinensis / Orange	4.9" @ 1'	6'	12'	85%	70%	77% Good	Mod.	Semi- mature	At back of house; 1' to foundation (#162). Multi- stemmed at 2' above ground.	No
8	Celtis sinensis / Hackberry, Oriental	21.2"	23'	42'	70%	70%	70% Good	Mod.	Mature	Neighbor's street tree in municipal planting strip betw een curb & sidew alk, 23' w est of property line. Minor deadw ood to 4" diameter. Foliage tips hang dow n to 5' over neighbor's law n.	ST
9	Liquidambar styraciflua / Sw eetgum	18.9"	10'	38'	60%	50%	55% Fair	Mod.	Mature	Neighbor's street tree in municipal planting strip betw een curb & sidew alk, 22' east of property line. Severely prunied by City; declinig.	No
	9			_	celler		0				
					"Goo	d" =	4				
						ir" =	1				
					"Poc		2				
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					TOTA	۱L =	9				

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3.0b Tree Inventory Legend: Headers



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Observations were made and data gathered during my on-site inspection (Sept. 24-25, 2020). 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 ≥4inch) 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:	I sequentially assigned tree numbers from 1 to 9. A 1"x3" aluminum tag is stapled to each tree at about eye level. I add a prefix "20" to identify each as linked with this inventory, thu differentiating it from any other numbering system.
Names:	We employ the initial common names from McMinn, if listed, otherwise from Sunset. Scientific/botanical names are included to minimize confusion. As applicable, we used McMinn's key and/or Sunset's descriptions.
DBH:	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.
	DBH = Diameter at Breast Height: 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:	The averaged radii's measurement is shown in feet.
Canopy Cover:	Estimated averaged radii of foliage canopy cover (crown's shadow at noon on the ground below).
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 or bud size and color, twig growth (elongation), accumulation of deadwood, cavities, woundwood development, trunk expansion (growth "cracks"), etc.

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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,

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Condition:	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.)
	It combines foliage, branches, limbs, 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 Palo Alto.
Species Aptitude:	Considers the species' tolerance to construction impacts and the tree's condition (vigor & structure), longevity/age, adaptability, and aesthetics
	This rating takes into account any announced intentions of changes in area/lot use. Degrees: High, Moderate, Low, 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 &/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.
Protected ≥11.5", or ≥18";	Notation of tree's status as a "Regulated Tree" per the Palo Alto Tree Technical Manual (pp. xiii, xiv). Some Palo Alto trees are "Protected": oaks 11.5-inch diameter or greater ("311.5"") and redwoods 18-inch diameter or greater ("318"").
Designated:	Others may be "Designated" ("D") for regulation by the City, including any tree that is part of a project on a modern discretionary development review site, likely only after these were developed.
	A third type of regulated tree would be "Street Trees" (ST) on many projects.
	(NB: as needed on non-Palo Alto sites, various "Heritage" or "Protected" or otherwise regulated trees can be defined to be recorded - and this column might be re-named appropriately.)
Age /	

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

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

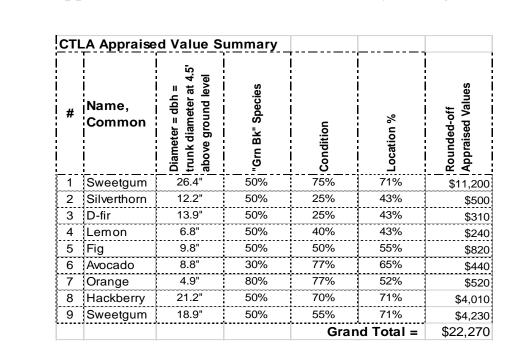
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3.0c Tree Appraisal Calculations – with Summary & Legend



pendix B: Appraised Value -- Data Sheet 1 of 1. Waverley 160, 162, 164: Sep. 24, 2020 Ln 2 Ln 3 Ln 4 ...... Location.... Ln 5 Ln 6 Ln 7 Ln 8 Ln 9 Ln 10 Ln 11 Ln 11.1 Ln 11.2 Line 12 Line 13 Line 14 Line 15 2 25% 12.2 43% 50% 50% 30% 2 50% 2.24 \$172.73 \$172.73 \$345.46 \$77.04 116.84 116.84 n/a 114.60 \$ 9,174.24 \$ 496.94 29 | 25% | 13.9 | 43% | 50% | 50% | 30% | 4 | 50% | 4.75 | \$172.73 | \$172.73 | \$345.46 | \$36.36 | 151.67 | 151.67 | n/a | 146.92 | \$ 5,687.47 | \$ 308.07 | 29 | 25% | 13.9 | 4.3% | 50% | 50% | 50% | 30% | 2 | 50% | 2.24 | \$172.73 | \$172.73 | \$345.46 | \$77.04 | 34.19 | 34.19 | n/a | 31.95 | \$2,806.89 | \$243.26 | 15 | 50% | 9.8 | 55% | 50% | 60% | 55% | 2 | 50% | 2.24 | \$172.73 | \$172.73 | \$345.46 | \$77.04 | 75.39 | 75.39 | n/a | 73.15 | \$5,980.94 | \$822.38 | 23 | 77% | 8.8 | 65% | 50% | 75% | 70% | 3 | 30% | 3.8 | \$172.73 | \$172.73 | \$345.46 | \$45.46 | \$60.79 | 60.79 | n/a | 56.99 | \$2,936.23 | \$440.87 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$172.73 | \$ 10 77% 4.9 52% 50% 70% 35% 2 80% 2.24 \$172.73 \$172.73 \$345.46 \$77.04 118.85 18.85 n/a 16.61 \$ 1,625.09 \$ 517.21 \$520 | 10 | 77% | 4.9 | 32% | 30% | 70% | 30.8 | 2 | 30% | 20 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 | Grand Total = \$22,270

ARBORIST REPORT

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and/or branches, decay and cavities, anchorage (roots), etc.

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, codominant trunks

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Note: The 10th. edition of 'The Guide" is copyrighted June 2019 ... but shrouded in controversy ... so the 9th. Edition is still widely used. Ln # = Line number on worksheet published in The Guide

Tree # = per Tree Chart & Tree Map in this report. "Green Book" = colloquial name for the Species Classification & Group Assignment (with a green cover); refers to standard publication required for local reference, published by WC-ISA Condition = from Tree Chart in this report. Diameter = from Tree Chart in this report.

Location = guided by the Guide, derived by averaging the ratings for Site, Contribution, and Placement. "Green Bk" Group = Group assigned by the committee/authors of "Green Book". "Green Bk" Species = Species classification assigned by the committee/authors of "Green Book"

"Green Bk" TA, = Replacement tree trunk area specified for the group assigned by the committee/authors of "Green Book" "Green Book" Replacement Cost = Cost to acquire largest "commonly available" (48"-box) at local nursery, averaged out by "Green Book" committee. "Green Book" Installation Cost = Cost, averaged out by "Green Book" committee, to transport from nursery to site, prep hole & plant, stake, water, overhead, profit, etc. Installed Tree Cost = Sum of two previous lines (replacement + installation)

Unit Tree Cost = Calculated for each "Group" by "Green Book" committee. (A)TA<sub>a</sub> = (Adjusted) Trunk Area of the Appraised tree. Could be from a chart in the Guide. Or, as here, is more accurately calculated by one of the two following formulae. TA<sub>a</sub> = Trunk Area of the Appraised tree. Calculated directly from the trunk diameter (hence trunk formula method) by the formula: d<sup>2</sup> X 0.785.

ATA<sub>a</sub> = Adjusted Trunk Area of Appraised tree, if over 30" dbh, adjusted by CTLA formula to compensate for the "rate-of-tree-value increase of a large tree being less than its rate of in TAiner = Trunk Area Increase. Arithmetic difference between the Trunk Area of the Appraised tree and the Replacement tree (Line 11 minus Line 6). Note: If calculation for "Trunk Area Increase" yields a negative number (due to small tree size), then next column, "Basic Tree Cost", uses cost to acquire & plant a smaller specimen from a Basic Tree Cost = Sum of the Installed Tree Cost plus the quotient derived from multiplying the Unit Tree Cost times the Trunk Area Increase (Ln 12 X Ln 10 + Ln 9). Appraised Value = Calculated by reducing the Basic Tree Cost by the Species, Condition, and Location factors (Ln 13 X Ln 5 X Ln 2 X Ln 4)

Rounded-off Appraised Value = Appraised Value rounded to nearest \$10, if less than \$5000. Else rounding to nearest \$100, if equal to or more than \$5000 Note = for existing trees which are still smaller than the typical nursery's 24-inch-box specimen, the smaller nursery specimen's cost has been substituted into the "Basic Tree Cost" cell. Not applicable - not a "tree" = for trees smaller than Ordinance-size.

#### 4.0 Tree Preservation Guidelines: General

As development of this property goes forward, the June 2001 publication (6<sup>th</sup> printing, revised 2016) of the City of Palo Alto Tree Technical Manual -- Standards and Specifications provides extensive detail that continues to govern trees on construction projects in Palo Alto. By municipal ordinance, this book is now the local tree law or "tree bible". Many construction situations involving trees are addressed. It is available from the Municipal Development Center, 285 Hamilton Avenue, Palo Alto, CA 94301 or on-line at:

http://www.cityofpaloalto.org/civicax/filebank/documents/51800 (last accessed 09/09/2020).

To a large extent, this *Manual* provides Developers, Designers, Owners, Project Managers, and all on-site personnel with the information they need to develop, design, and work near trees. For the Project Arborist, it is a framework from which tree issues can be raised and clarified as necessary.

At the risk of duplicating material in the *Manual*, I have set out some particular Tree Preservation Guidelines in §6 and §7 below. Neither the *Manual* nor my report is intended to be all-inclusive. Clarification and/or more specific measures can be provided as needed.

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#### \* \* \* \* **Important Note:**

In the City of Palo Alto, the TPZ (Tree Protection Zone) for each and every tree to remain is ten times the particular tree's diameter (10 X DBH).

When the entire TPZ cannot be fenced, special work procedures MUST be followed Per Tree Protection Measures in Sections 5 and 6, below.

\* \* \* \*

#### 5.0 Tree Preservation Guidelines: Basic

5.1 These Tree Preservation Guidelines in §4, §5 and §6 contain practical tree information, which helps project team members to know what to expect regarding site trees. They help everyone coordinate between various sub-projects within the whole. They help minimize construction impacts and stresses on the trees.

These need to be included as part of the construction documents so that everyone who has a set of drawings also knows what tree protection measures they are required to follow here. Including them as a sheet in the blueline drawings is a typical and straightforward way to accomplish this. The Palo Alto standard uses its published "Tsheets" – downloadable: <a href="https://www.cityofpaloalto.org/civicax/filebank/documents/31783">https://www.cityofpaloalto.org/civicax/filebank/documents/31783</a> (last accessed 12/15/2019) for both T-1 and T-2.

5.2 Usually a plan to provide supplemental watering is required. Root zone moisture under the mulch can be monitored and a deep-soaking can be applied if the upper three inches

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.

5.3 If pruning is needed, ANSI A-300 standards apply. The general contractor and the tree care contractor both need to be communicating with the Project Arborist as to the pruning specifications.

No pruning is absolutely needed at this time, however, generally pruning to reduce deadwood and foliage branch endweights could make for much better structured trees. That said, deadwood removal and endweight reduction is commonly performed to improve existing site and neighboring trees.

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 ANSI A-300 Standards

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- 5.4 All project tree work performed before, during, or after construction is to be done by a qualified tree care contractor with a current, active C61/D49 license issued by the California State Contractors' Licensing Board. This especially includes all pruning, removals (including stump removals) within driplines of trees to be preserved, root
- pruning, and repair or remedial measures. That company must have experience on similar projects. The crew must include WCISA Certified Tree Workers who can perform the work under the supervision of an ISA Certified Arborist (or equivalents, if they possess sufficient skill for approval by Project Arborist).
- 5.5 The Tree Technical Manual, Section 2.30, requires the following Project Arborist site monitoring inspections, with summary monthly reports submitted to City of Palo Alto Planning Department (typically, e-mailed to Planning Division Arborist, Dave Dockter). • Tree Protection Fence. Inspect placement of TPFs and other pre-construction protections (e.g. mulch, signs) before start of project.
  - Pre-construction meeting. Before commencement of construction, the applicant or contractor shall arrange site meeting attended by, job site superintendent, grading equipment operators, subcontractors, Project Arborist, and City Arborist.

reports submitted to City of Palo Alto Planning Department (typically, faxed to

- Inspection of Rough Grading. Project Arborist needs a minimum of 48-hours notice to inspect rough grading issues in or adjacent to TPZs. Not applicable in this case. • Project Arborist monthly site monitoring inspections are, with summary monthly
- Planning Division Arborist, Dave Dockter). • Special Activity within any Tree Protection Zone. Work in the TPZ requires direct on-site supervisory monitoring by the Project Arborist (48-hours minimum prior
- Landscape Architect Inspection. Depending on the level of landscape architect involvement, his final inspection may be required. This will not be needed for this project – but Project Arborist can provide one last inspection at the time of contractor's need to remove tree protection fence.

#### 6.0 Tree Preservation Guidelines:

notice required).

Site-Specific Tree Protection Measures (162 Waverley Street, PA)

This report can only provide a general tree preservation-protection protocol at this time. By their very nature, construction projects develop along a continuum with degrees of detail continually changing, being updated, sometimes right down to the final punchlist and

This report is merely a dot on the project timeline. As details change and plans develop and more information becomes available, changes can be addressed by memo until it makes more sense to issue an entirely revised report.

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- Every person on the project is responsible for promoting reduced project impacts to trees
- that are to remain after the last truck drives away from a completed job. The next two text boxes are basic reminders.

➤ Building projects in Palo Alto are required to preserve trees.

#### Ray Morneau's Construction Crew Notes [summarized-to-one-page]]

CCN-1.0 Preserve the tree(s) ... not just firewood – Whole Trees ...

- Tops (foliage crowns / branches)
- Roots / root zones.

Trunks

CCN-2.0 Must get permission before moving any Tree Protection Fencing (TPFs).

CCN-3.0 Stop excavator or tractor digging when roots 1-inch diameter are encountered . hand-tool digging only after that ... upon encountering roots 2-inch diameter or larger call in Project Arborist.

CCN-4.0 Keep roots 2-inch diameter and larger intact / uncut ... probably can sever 2to 4-inch diameter roots once Project Arborist sees them.

CCN-5.0 Any roots to be severed 2-inch diameter or larger must be carefully hand dug around and severed with hand tools or Sawz-All®.

CCN-6.0 Keep roots moist – but not flooded.

CCN-7.0 Keep root zone buffers intact and in place – arborist wood chipper-chips, plywood, trench plates, Ground Protection Mats,....

CCN-8.0 No wash-out, cleaning tools, storage of tools, materials, equipment, supplies beneath tree canopies.

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ISSUANCES

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n/a\* = Palm tree values are calculated differently in our area [see next]



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TPZ = Tree Protection Zone ... a radius distance measured from the outside of the largest area of the trunk ... likely contains many of the tree's roots, but by no means all, which the tree needs for biological and structural support.

Root Zone Work - - Key Table of Definitions & Distances

- Activity within any TPZ or inside of any TPF (Tree Protective Fencing) must follow the work plan agreed to by the Project Arborist, which may include monitoring by the Project Arborist. TPZ is calculated as ten times the trunk diameter (10 X DBH / 12)
- PMD = Potential Minimum Distance ... a radius distance measured from the outside of the largest area of the trunk ... likely contains a substantial portion of the tree's roots, but by no means all, which the tree needs for biological and structural support ;... "Potential", if agreed upon by the Project Arborist and/or City Arborist.
- Activity within any PMD must follow the work plan agreed to by the Project Arborist, which may include monitoring by the Project Arborist. PMD is calculated as five times the trunk diameter (5 X DBH / 12) for a cut on only one side
- of a tree keeping the remainder of the roots undisturbed, uncut. All activity within a PMD must be monitored by the Project Arborist when encountering roots equal to or greater than 3-inch diameter (≥3").
- CRZ = Critical Root Zone ... a radius distance measured from the outside of the largest area of the trunk ... likely contains most of the tree's supporting roots, physically holding it up. CRZ is calculated as three times the trunk diameter (3 X DBH / 12) for one cut along one side of the tree.
- Activity within any CRZ must be monitored by the Project Arborist.

one side of the tree ... round up to next larger whole number.

- AMD = Absolute Minimum Distance = the not-to-exceed distance for a cut on one side ... if necessary to cut on more than one side, then that distance must be marked-out aggressively on a case-by-case basis, as determined by the Project Arborist. AMD is calculated as once and a half the trunk diameter (1.5 X DBH / 12) for one cut along
- All activity at AMD must be monitored by the Project Arborist. Measurements are all from outside of the largest area on the trunk, which means usually outside of the RF (Root Flare) - - NOT from the center of the trunk.

#	Name, Common	Diam.	TPZ radius	PMD one side cut in feet	CRZ one side cut in feet	AMD: one side cut in feet
1	Sw eetgum	26.4"	22'	11'	6'	3.5'
2	Silverthorn	12.2"	10'	5'	3'	2'
3	Douglas-fir	13.9"	11'	6'	4'	2'
4	Lemon	6.6"	5.5'	3'	2'	1'
5	Fig	9.8"	8'	4'	3'	2'
6	Avocado	8.8"	7.5'	4'	3'	2'
7	Orange	4.9"	4'	2'	2'	2'
8	Hackberry	21.2"	17.5'	9'	5.5'	3'
9	Sw eetgum	18.9"	16'	8'	5'	3'

September 28, 2020 Arborist's Inventory & Report (TPR): Zach: 162 Waverley St., PA. 94301 Page #13 of 17.

#### Ray Morneau, Arborist



ISA Certif. #WE-0132A 650.964.7664

- Fence locations, modifications, adjustments, and stagings must be discussed at the preconstruction meeting called out in Section 5.5, above. Other/additional root zone protection may be needed for this project, such as mulch or other root preservation materials (plywood, trench plates, geogrid, other?) and shall be discussed at that pre-construction meeting, too.
- **DEPENDING** on project plans submitted to and ultimately approved by the Palo Alto Planning Department, these Tree Preservation Measures may be "adjusted" by a Planning Arborist and/or Project Arborist.
- \* \* \* For Example: Existing asphalt-concrete (driveways/drive-aisles, sidewalk) will be kept in place "as-is" and will provide some root zone protection for trees. \* \* \*
- 6.1 Fencing [TPF]
- 6.1.1 Before any equipment arrives or project site work commences, root zone
- protection must be in place.
- 6.1.2 Tree Protection Fence [TPF] locations for this project can/will be further identified as additional information is made available. Fence placement preference would be a Type-I, of course – but it is impracticable here to fence these trees at
- their driplines (branch tips). So, mostly Type-II will be used due to the close proximity of necessary work. However, if either the Planning or Public Works Department requires the street trees (#1 and #9 Sweetgums and/or #8 Hackberry) to be retained/preserved here, they might allow for trunk wraps with wattle and/or orange plastic fencing held in
- place with 2x4 slats. The city Arborist or Project Arborist must be contacted to advise re-positioning of TPF, if relocation becomes necessary.
- 6.1.3 Palo Alto typically requires fence material to be 6' high chain link. At the contractor's option, depending on site conditions, driven posts shall be preferred. Alternatively, pipe or concrete base supports may be set on top of the ground with sufficient anchorage to prevent moving the fencing.
- TPF locations are to be sketched on the Site Plans. Palo Alto requires signs on the fences, warning of penalties in the event fencing is moved or removed prematurely. Language available per *Tree Technical Manual* – or per City standard T-1 Sheet referred to above – or "Protected tree – before working in this area, contact the Project Arborist at \_\_\_\_\_ or City Arborist at (650) 496-5953. Noncompliance is subject to \$500 fine per day".
- 6.1.4 All root zone protection shall remain in-place and effective until Project Arborist's final inspection.
- 6.2 Fencing is often the first noted tree protection measure [TPM]. However, arborist wood chip mulch (chipper chips) is a common root zone buffer (often in combination with other materials – such as plywood, trench plates, geogrid, other?) and is required here, 4to 6-inches deep over unprotected root zones. Further, other TPMs are noted throughout

September 28, 2020 Arborist's Inventory & Report (TPR): Zach: 162 Waverley St., PA. 94301 Page #14 of 17.

#### Ray Morneau, Arborist



ISA Certif. #WE-0132A 650.964.7664

- 6.3 Prohibited Acts & Requirements
- 6.3.1 No parking or vehicle traffic may travel over any root zones, unless using buffers approved by Project Arborist. 6.3.2 Have a certified arborist repair any tree damage promptly. And promptly notify
- 6.3.3 No pouring or storage of fuel, oil, chemicals, or hazardous materials under these
- foliage canopies. 6.3.4 Any temporary construction site utilities shall be placed so as not to affect foliage crowns or root zones. This includes electric, water, communication, portable toilets,
- etc. Infringement on any tree's space requires Project Arborist consultation. 6.3.5 No storage of construction materials or equipment under any foliage canopy without prior Project Arborist approval.
- 6.3.6 No trenching within any tree protection zone without Planning or Project Arborist review. Consult Project Arborist before any trenching or root cutting beneath any tree's foliage canopy.
- 6.3.7 Any work inside of Tree Protection Fences and/or encountering roots of 1-inchor-greater diameter requires the notice to the Project Arborist to arrange for on-site monitoring. Typically, 48-hours prior notice is acceptable.
- 6.3.8 No clean out of trucks, tools, or other equipment over any root zone. Keep this debris outside of any existing or future root zone.
- 6.3.9 No attachment of signs or other construction apparatus to these trees.

#### 7.0 Certification & Use Statement

The instant report is applicable to this project at 162 Waverley Street and may not be adopted without site-specific updates/revisions/adaptations by this Project Arborist.

The City of Palo Alto Planning Department requires the two documents included as the finalfollowing two pages of this report Their "Tree Disclosure Statement" can stand alone, as I have signed it, and it can be added to the T-1 Sheet by the architect, owner, or whoever prepares the T-Sheets. Their "Project Arborist Certification Letter" on the next page becomes valid for use when the owner complies with those City requirements, countersigns it, and returns a signed copy to me.

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. This report is valid for submittal and use upon my receipt of valid payment.

Respectfully submitted,

Raymond L. Manson Raymond J. Morneau ISA Certified Arborist #WE-0132A

ISA Tree Risk Assessment Qualified

PNW-ISA Certified Tree Risk Assessor #1188

September 28, 2020 Arborist's Inventory & Report (TPR): Zach: 162 Waverley St., PA. 94301 Page #15 of 17.

Sign Envelope ID: 0FB46594-FD24-4A63-B573-D9E7E47313FE

Ray Morneau, Arborist

ISA Certif. #WE-0132A 650.964.7664 8.0 Project Arborist's Certification Letter (next/final-minus-1 page) Project Arborist Certification Letter.pdf ... a PDF file often attached to City Planners' comment letter . here captured and modified by Ray Morneau, Arborist to provide a completion signature line



#### for the project's responsible party to show they are in concurrence. Project Arborist Certification Letter

PALO ALTO

Prior to demolition, building, or grading permit issuance, the project arborist must sign this certification letter. By signing, the arborist certifies that the following terms have been

- o Reviewed the entire building permit plan set submittal, and all updated Tree Protection Report (TPR) measures and changes are incorporated in the plan set.
- o Affirms that the T-1 (Tree Protection it's Part of the Plan!) is included in the plan set with the Tree Disclosure Statement complete/signed by the Property Owner or Agent.
- o Reviewed the Urban Forestry Conditions of Approval, and required items (e.g. specific plan notes and standard drawings) have been included in all relevant permit sheets. o Confirms that ongoing Contractor/Project Arborist site monitoring inspections and reporting
- have been arranged with the contractor or owner. o If protected oaks, redwoods, or designated trees are located on or next to the property, an itemized list of any activity impacts has been quantified and mitigated in the Tree Protection
- Zone for each tree. o Confirms that changes to plans before or during construction shall be reviewed by the project arborist and responded to with a written letter of acceptance before submitting the revision to the Building Department for review by Planning, Public Works, or Urban Forestry.

Project Address: <u>162Waverley Street, Palo Alto, CA 94301</u>

Public Works Urban Forestry Operations Phone: (650) 496-5953

Each Trailer

We, <u>Zachary Trailer and Ray Morneau</u>, certify that the items listed have been addressed and are in accordance with City of Palo Alto standards and Building Permit stipulations.

12/10/2020

650-906-8008

Version received 4/19/2017

Date	Contact Number
September 28, 2020	WE-0132A
Date	Certification Number
_	<u>September 28, 2020</u>

September 28, 2020 Arborist's Inventory & Report (TPR): Zach: 162 Waverley St., PA. 94301 Page #16 of 17.

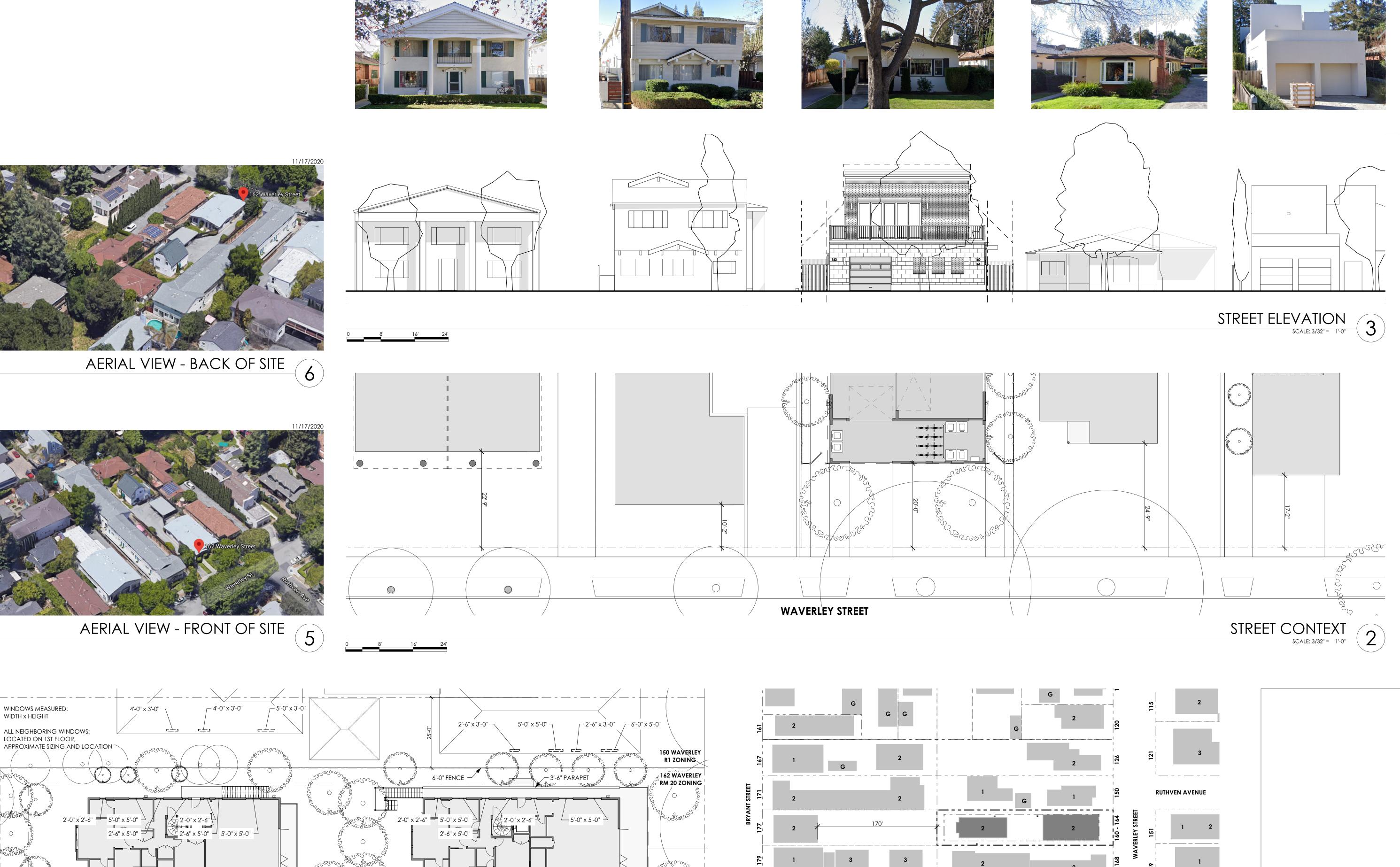
HEATHER YOUNG ARCHITECTS 81 Encina Avenue, Suite 100 Palo Alto, CA 94301 650-459-3200 / hyarchs.com

**WAVERLEY** 

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

REV DATE DESCRIPTION 14 DEC 2020 ARB SUBMITTAL

ARBORIST REPORT



PRIVACY DIAGRAM

 $\frac{AGKAW}{\text{SCALE: 1/16"}= 1'-0"} \left(4\right)$ 

1 - SINGLE STORY RESIDENCE 2 - TWO STORY RESIDENCE G - GARAGE

**168 WAVERLEY STREET** 

170 WAVERLEY STREET

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**126 WAVERLEY STREET** 

**150 WAVERLEY STREET** 

NEIGHBORHOOD CONTEXT

SCALE: 1/64" = 1'-0"

160 - 164 WAVERLEY STREET

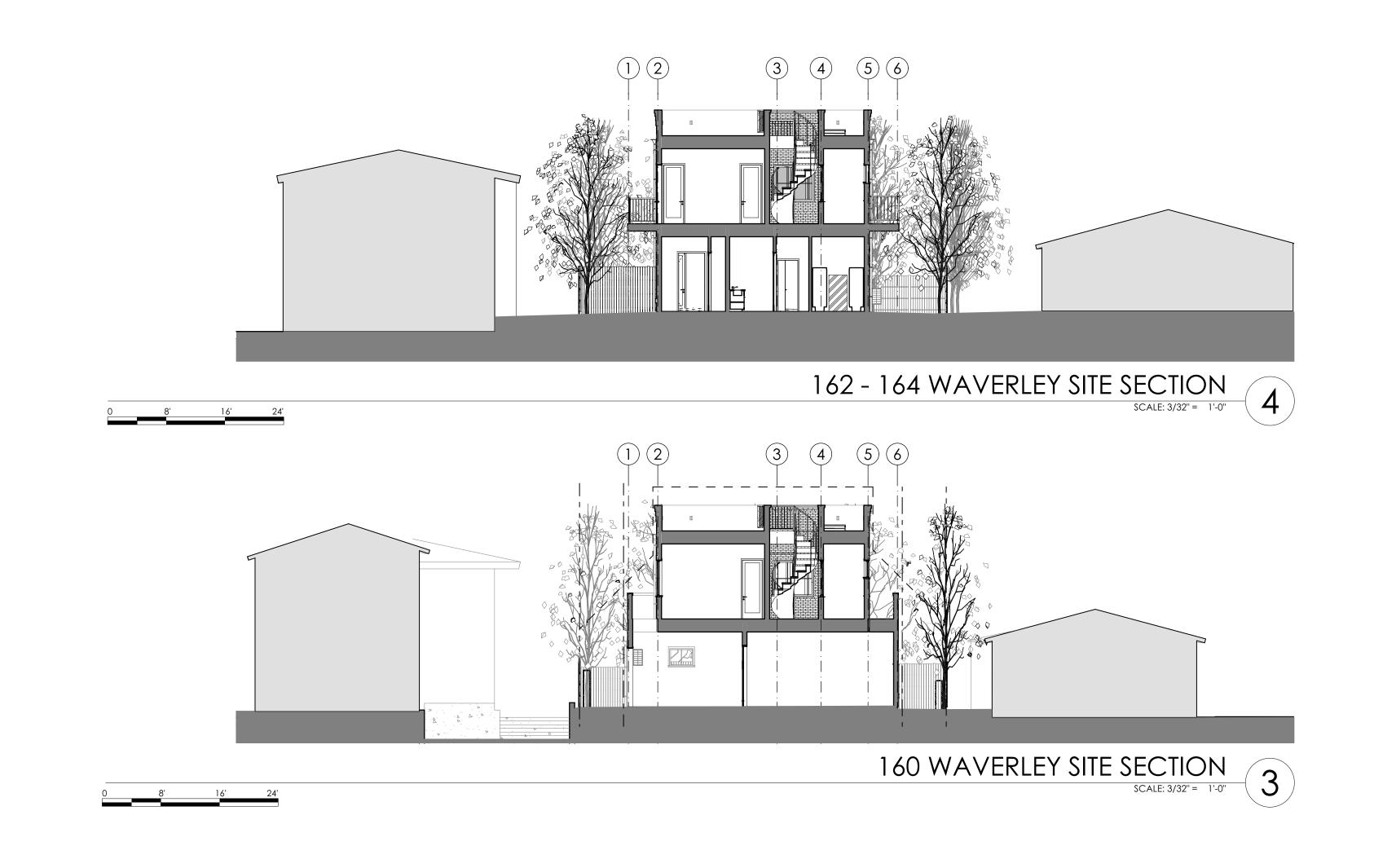
WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

REV DATE DESCRIPTION

14 DEC 2020 ARB SUBMITTAL

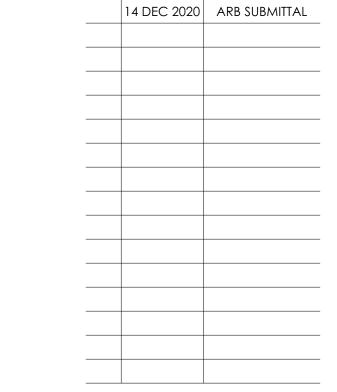
NEIGHBORHOOD CONTEXT





160 - 164 WAVERLEY ST PALO ALTO, CA 94301

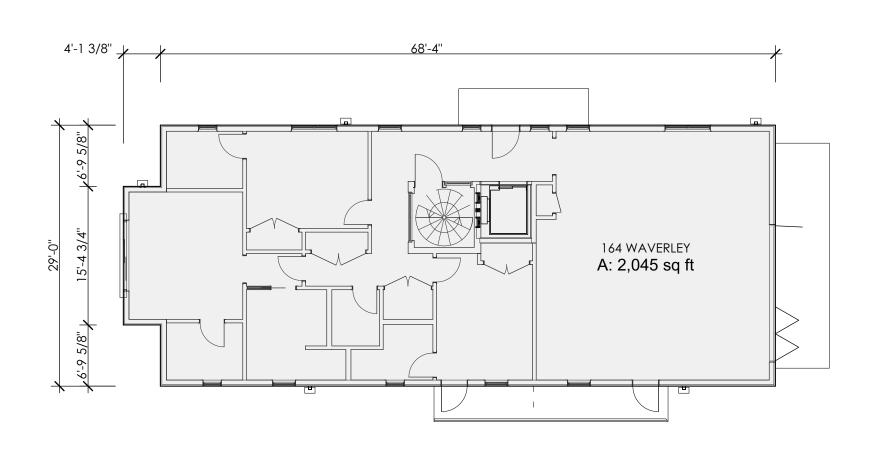
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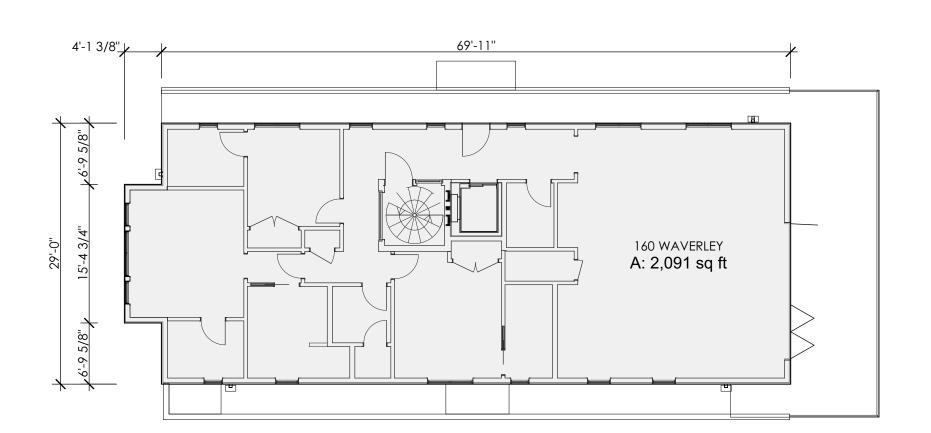


160 - 164 WAVERLEY EAST / WEST SECTION
SCALE: 3/32" = 1'-0" OVERALL SITE SECTIONS 2 A-8

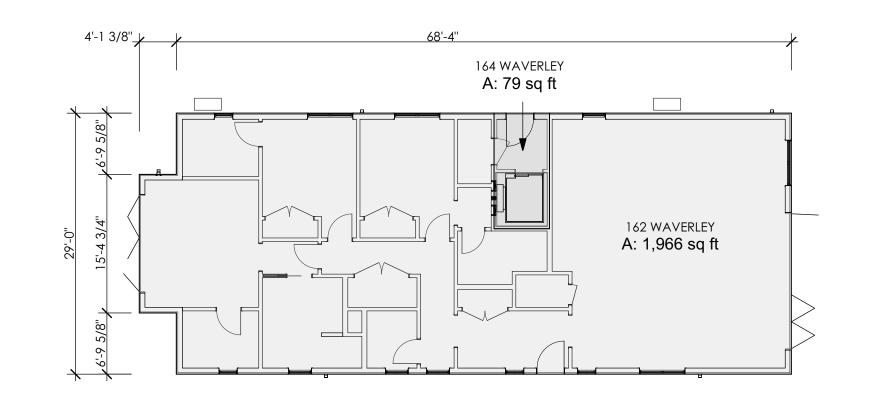
SITE PLAN - KEY A-8

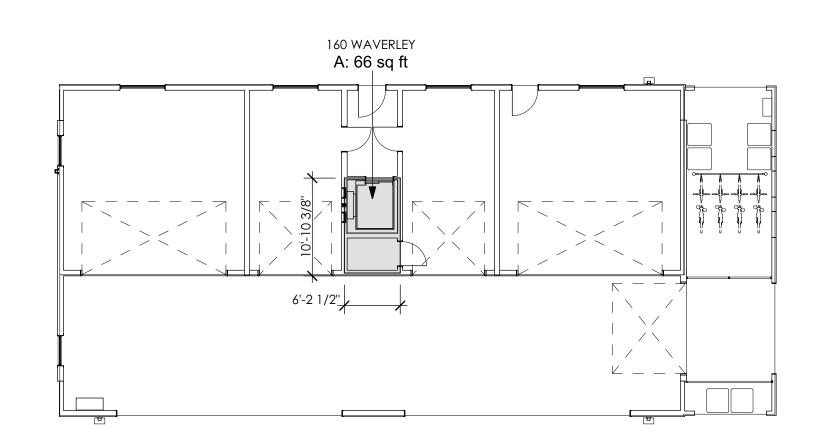
160 - 164 WAVERLEY SITE ELEVATION
SCALE: 3/32" = 1'-0"



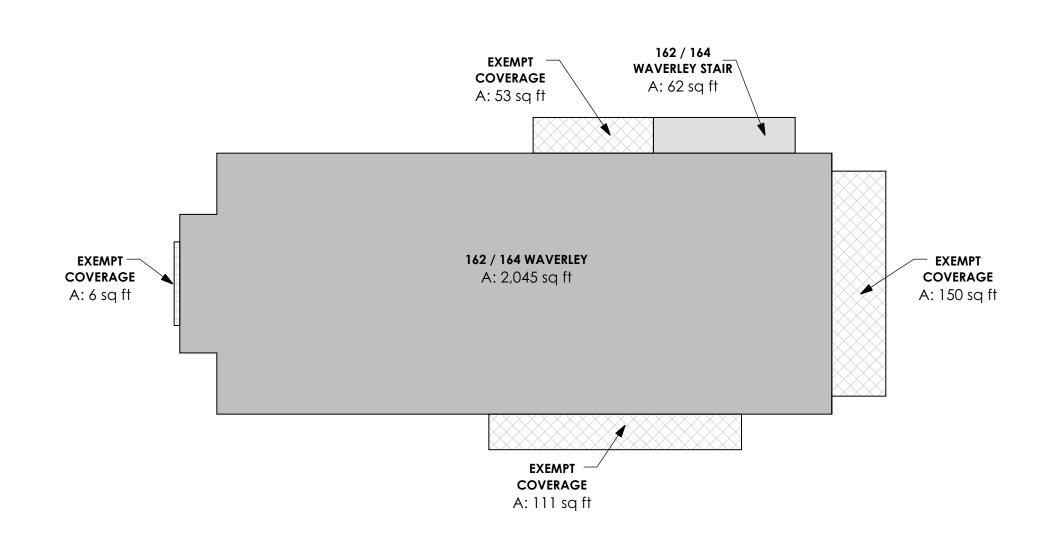


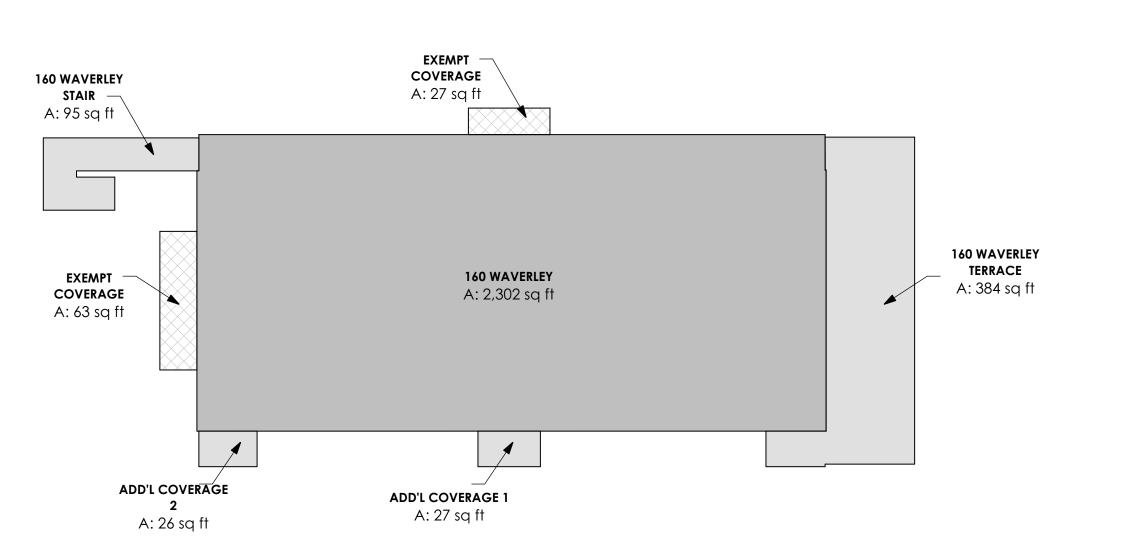
## SECOND FLOOR - FAR SCALE: 3/32" = 1'-0" 3





## GROUND FLOOR - FAR SCALE: 3/32" = 1'-0"





SITE COVERAGE

SCALE: 3/32" = 1'-0"

## FLOOR AREA NOTES

- 1) REFER TO ZONING COMPLIANCE TABLE ON SHEET A0.1 FOR OVERALL ZONING COMPLIANCE.
- 2) BASIS FOR FAR AREA CALCULATIONS: BASED ON "GROSS FLOOR AREA" WHICH IS THE TOTAL AREA OF ALL FLOORS OF A BUILDING MEASURED TO THE OUTSIDE SURFACES OF EXTERIOR WALLS. INCLUDING:
- HALLS • STAIRWAYS, ELEVATORS (EACH FLOOR) • SERVICE/MECHANICAL ROOMS USABLE BASEMENTS OR ATTICS OPEN COURTS ABOVE THE GROUND FLOOR
- **USED FOR ACCESS** 3) MULTIFAMILY FLOOR AREA EXCLUSIONS: ACCESSORY PARKING FACILITIES ROOFED ARCADES NOT SUBSTAINTIALLY
- 4) ALLOWABLE SQUARE FOOTAGES SITE AREA = 12,500 SQ FT FAR = 0.5:1 = 6,250 SF SITE COVERAGE = 35% = 4,375 SF ADD'L COVERAGE = 5% = 625 SF

ENCLOSED BY WALLS



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WAVERLEY

RESIDENCES

## CALCULATIONS

LOCATION	AREA	
160 WAVERLE	Y	
	GROUND FLOOR	66
	SECOND FLOOR	2,091
		2,157 sq ft
62 WAVERLE	Υ	
	GROUND FLOOR	1,966
		1,966 sq ft
64 WAVERLE	Υ	
	GROUND FLOOR	79
	SECOND FLOOR	2,045

2,124 sq ft

PROPOSED = 6,247 sq ftALLOWED = 6,250 sq ft

ALLOWED = 625 sq ft

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

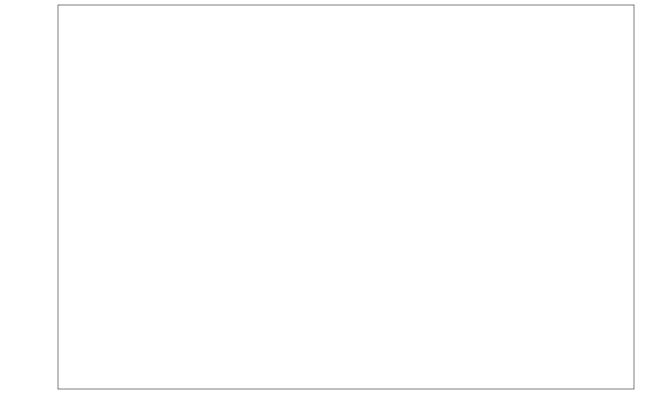
ISSUANCES

SITE COVERAGE		
LOCATIO	N	AREA
160 WAVERLEY		2,302
162 / 164 WAVERLEY		2,045
	PROPOSED =	4,347 sq ft
	ALLOWED =	= 4.375 sa ft

ADDITIONAL LOT COVERAGE					
LOCATION	ARE.				
160 WAVERLEY STAIR	95				
160 WAVERLEY TERRACE	384				
162 / 164 WAVERLEY STAIR	62				
ADD'L COVERAGE 1	27				
ADD'L COVERAGE 2	26				
PROPOSED =	594 sq ft				

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REV DATE DESCRIPTION



## KEY - SITE COVERAGE

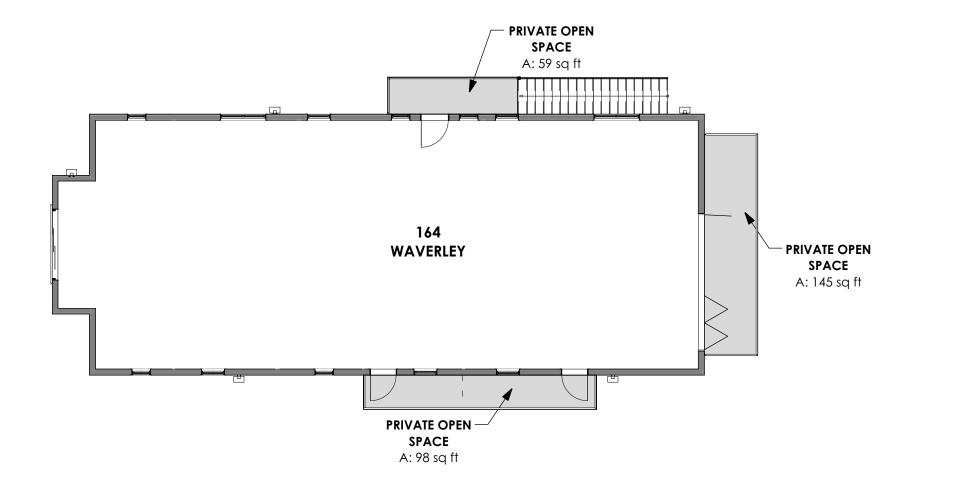
FLOOR AREA CALCULATIONS

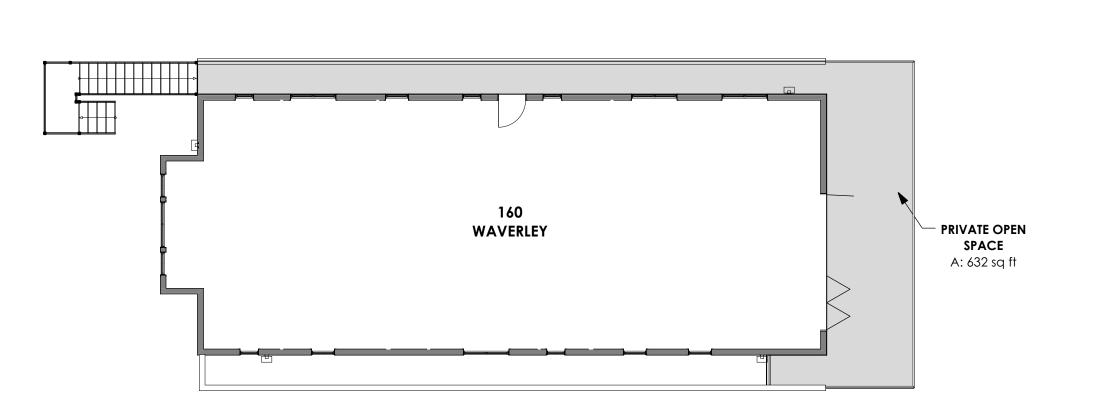




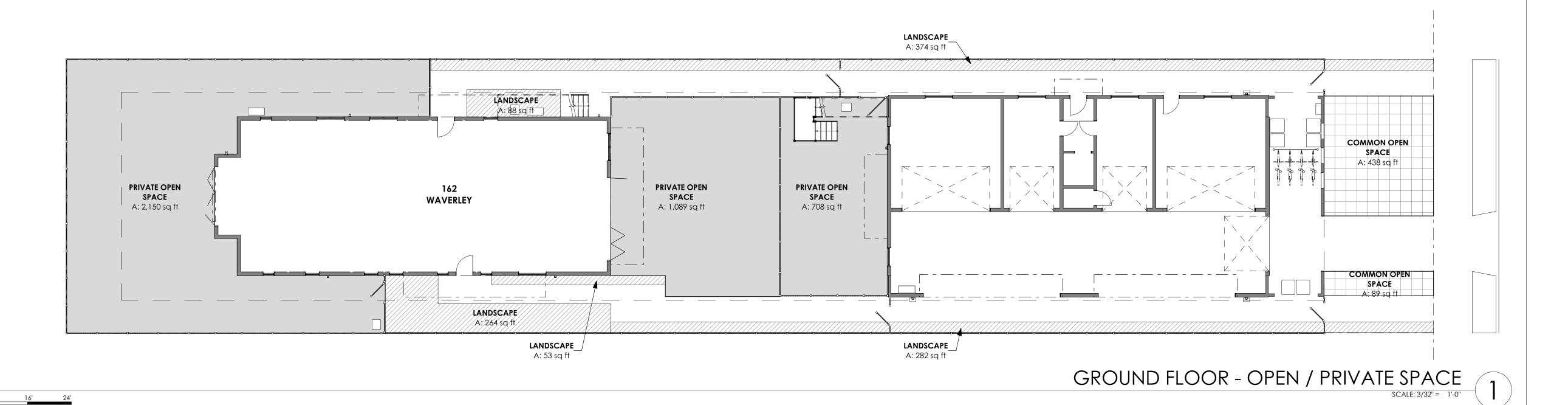
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EXEMPT COVERAGE





SECOND FLOOR - OPEN / PRIVATE SPACE
SCALE: 3/32" = 1'-0"



AREA NOTES

#### MINIMUM OPEN SPACE REQUIREMENTS SITE AREA = 12,500 SQ FT

- 1) SITE OPEN SPACE MINIMUM = 35% / 4,375 SQ FT
- 2) SITE USABLE OPEN SPACE MINIMUM
  (INCLUDES COMMON + PRIVATE OPEN SPACE) =
  150 SQ FT PER UNIT
- 3) COMMON OPEN SPACE MINIMUM = 75 SQ FT PER UNIT
- 4) PRIVATE OPEN SPACE MINIMUM = 50 SQ FT PER UNIT



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## CALCULATIONS

SITE USABLE SPACE

FLOOR TYPE AREA

GROUND FLOOR

COMMON OPEN SPACE 527

SECOND FLOOR

PRIVATE OPEN SPACE 934

PROPOSED = 5,408 sq ft

PRIVATE OPEN SPACE 3,947

REQUIRED = 450 sq ft

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

WAVERLEY

RESIDENCES

FLOOR TYPE AREA

GROUND FLOOR

COMMON OPEN SPACE 527

LANDSCAPE 1,061

PRIVATE OPEN SPACE 3,947

SECOND FLOOR

SITE OPEN SPACE

PROPOSED = 934

PROPOSED = 6,469 sq ft

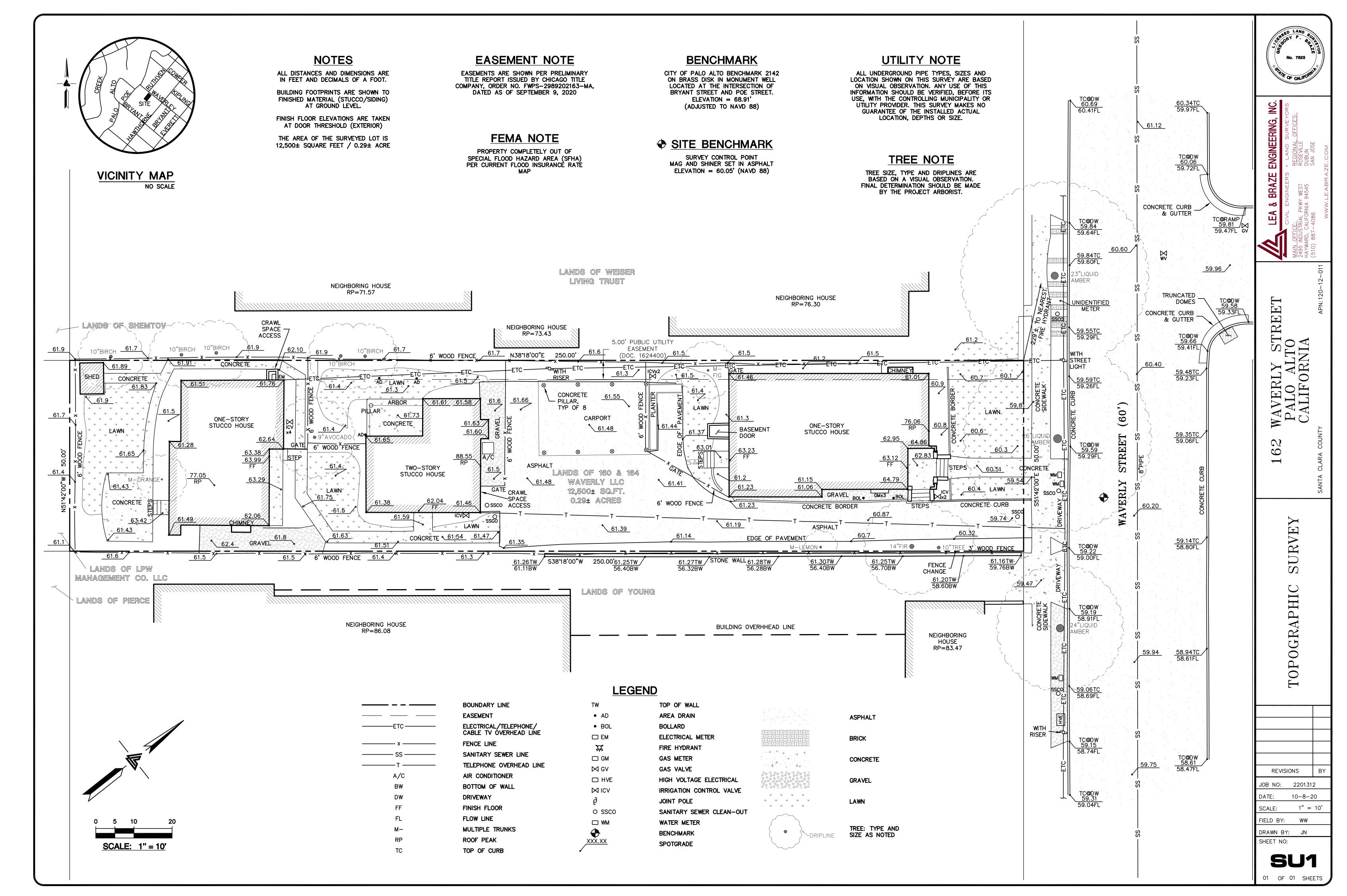
REQUIRED = 35% / 4,375 sq ft

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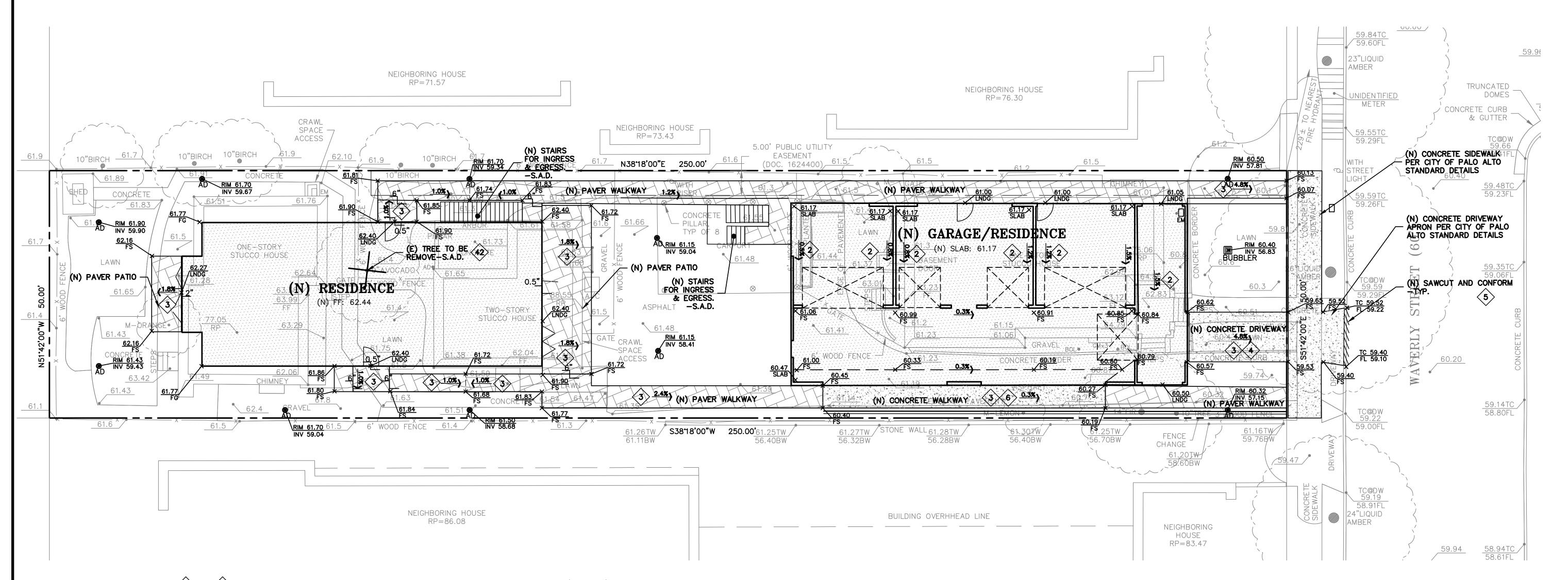
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OPEN SPACE



WAVERLEY RESIDENCES: 12/14/2020 3:03 PM



FLATWORK KEYNOTES (1) TO (6) FINISHED GRADES AT BUILDING PERIMETER SHALL BE SLOPED AT A MINIMUM OF 5% FOR THE FIRST 10' AWAY FROM THE BUILDING PER CBC 1804.4 OR TO AN APPROVED DRAINAGE SWALE OR STRUCTURE. GRADES SHALL CONTINUE TO SLOPE TOWARDS POSITIVE DRAINAGE AND A POSITIVE OUTFALL. MAINTAIN 8" CLEARANCE BETWEEN FINISH EARTHEN GRADE AND BOTTOM OF MUD SILL AT ALL TIMES PER CBC 2304.12.1.2 UNLESS STRUCTURAL DETAILING ALLOWS LESS. REFER TO STRUCTURAL PLANS FOR FOUNDATION DESIGN AND DETAILS.

- SLOPE GARAGE SLAB 1% MINIMUM (1/8" PER FOOT) FROM BACK TO FRONT TO ALLOW FOR ADEQUATE DRAINAGE. MAINTAIN 1/2" TO 1" LIP BETWEEN GARAGE SLAB AND DRIVEWAY. SEE PLANS FOR SPECIFIC DROP
- PROVIDE 2% (0.5% MIN) SLOPE ACROSS FLAT WORK AND/OR PAVING PER CBC 1804.4. SLOPE TOWARDS POSITIVE DRAINAGE AS SHOWN ON PLAN.
- (N) CONCRETE DRIVEWAY.
- GRIND AC TO TIE (N) AC INTO (E) AC PAVING.
- (N) CONCRETE PATIOS/WALKWAYS.

DEMOLITION KEYNOTES 41 TO 42

- DEMOLISH (E) IMPROVEMENTS AS NECESSARY TO ACCOMMODATE (N) CONSTRUCTION. NO DEMOLITION SHALL COMMENCE WITHOUT REQUIRED DEMOLITION PERMITS.
- REMOVE (E) TREE. CONTRACTOR SHALL OBTAIN THE PROPER TREE REMOVAL PERMITS AS REQUIRED.

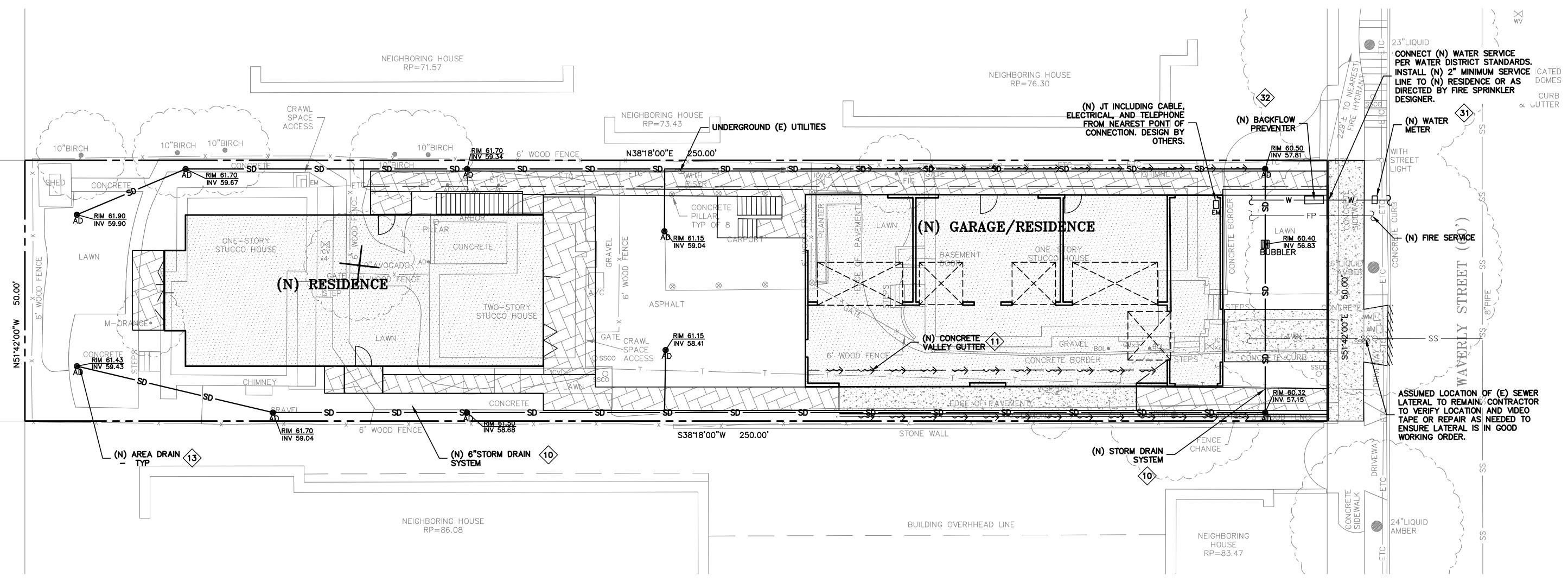
FOR CONSTRUCTION STAKING SCHEDULING OR QUOTATIONS PLEASE CONTACT ALEX ABAYA AT LEA & BRAZE ENGINEERING (510)887-4086 EXT 116. aabaya@leabraze.com

\* BUILDING PAD NOTE: ADJUST PAD LEVEL AS REQUIRED. REFER TO STRUCTURAL PLANS FOR SLAB SECTION OR CRAWL SPACE DEPTH TO ESTABLISH PAD LEVEL.

DESIGN BY: JO DRAWN BY: VA

SHEET NO:

**C-2.0** 02 OF 05 SHEETS



STORM DRAIN KEYNOTES (10) TO (13)

INSTALL (N) ON-SITE STORM DRAIN SYSTEM. USE MINIMUM 6" PVC (SDR 35) OR HDPE (ADS N-12 W/ SMOOTH INTERIOR WALLS). MAINTAIN 24" MINIMUM COVER AND SLOPED AT 1% MINIMUM AT ALL TIMES UNLESS OTHERWISE NOTED. PROVIDE CLEANOUT TO GRADE AT MAJOR CHANGES IN DIRECTION. AVOID USING 90' BENDS AND INSTEAD USE (2) 45' BENDS AND WYE CONNECTIONS.

- CONSTRUCT (N) SWALE SLOPED AT 1% MINIMUM TOWARDS POSITIVE OUTFALL.
- DIRECT DOWNSPOUTS TO 24" LONG PRECAST CONCRETE SPLASHBLOCKS OR OTHER HARD SURFACE. DIRECT AWAY FROM ANY STRUCTURE AND TOWARDS POSITIVE DRAINAGE.
- install (n) "Christy F08" area drains. Connect to on-site storm drain system.

UTILITIES KEYNOTES 31 TO 32

CONNECT (N) WATER SERVICE PER WATER DISTRICT STANDARDS. UPGRADE

- (E) WATER METER PER WATER DISTRICT STANDARDS. UPGRALE

  (E) WATER METER PER WATER DISTRICT STANDARDS AS APPLICABLE.

  INSTALL (N) 2" MINIMUM SERVICE LINE TO (N) RESIDENCE OR AS DIRECTED BY FIRE SPRINKLER DESIGNER.
- INSTALL (N) JOINT TRENCH FOR SERVICES INCLUDING CATV & ELECTRIC FROM NEAREST POINT OF CONNECTION. DESIGN BY OTHERS.

NOTE:
FOR CONSTRUCTION STAKING
SCHEDULING OR QUOTATIONS
PLEASE CONTACT ALEX ABAYA
AT LEA & BRAZE ENGINEERING
(510)887-4086 EXT 116.
aabaya@leabraze.com

\* BUILDING PAD NOTE:
ADJUST PAD LEVEL AS
REQUIRED. REFER TO
STRUCTURAL PLANS
FOR SLAB SECTION OR
CRAWL SPACE DEPTH
TO ESTABLISH PAD
LEVEL.

PRELIMINARY UTILITY PLAN

ALIFORNIA

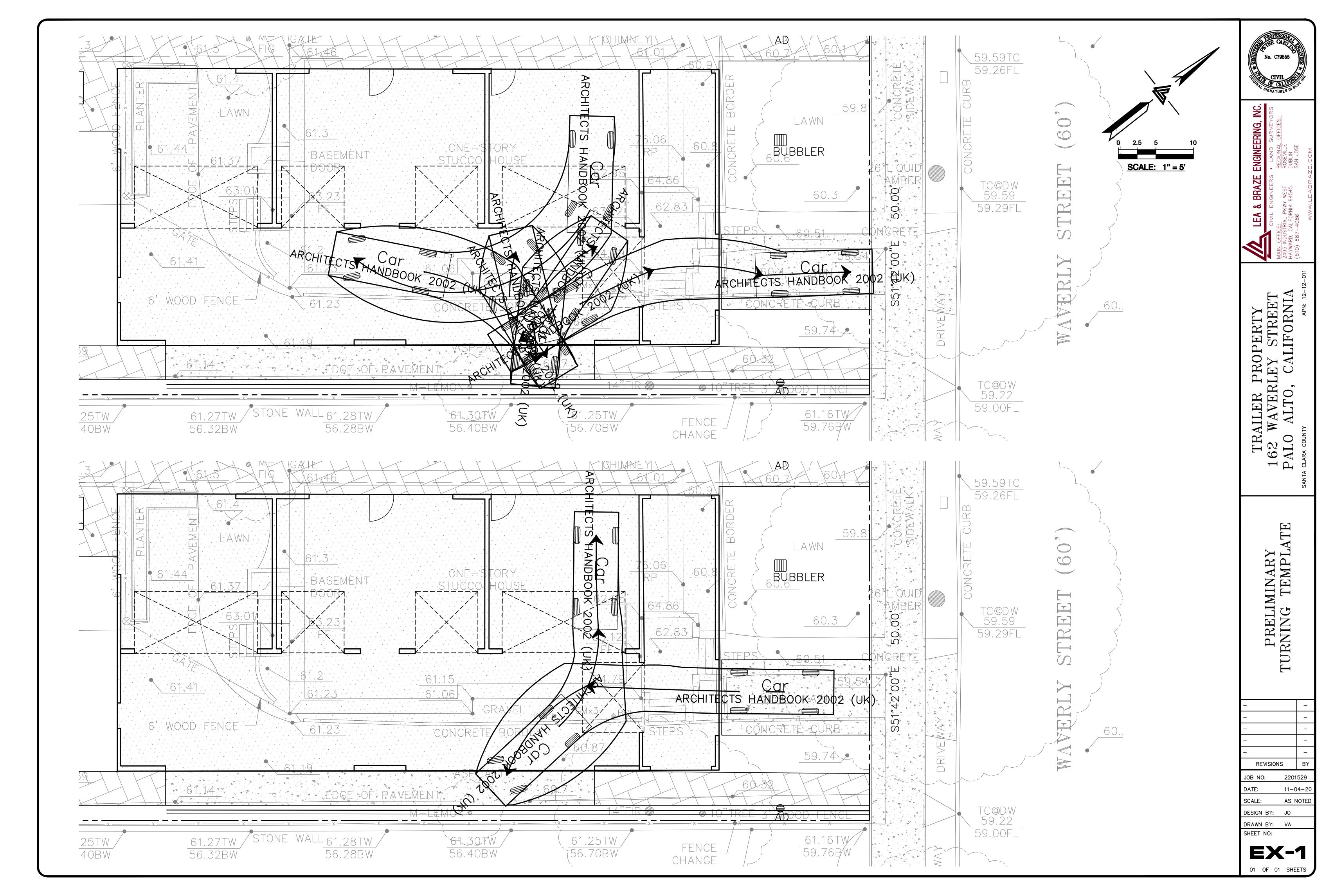
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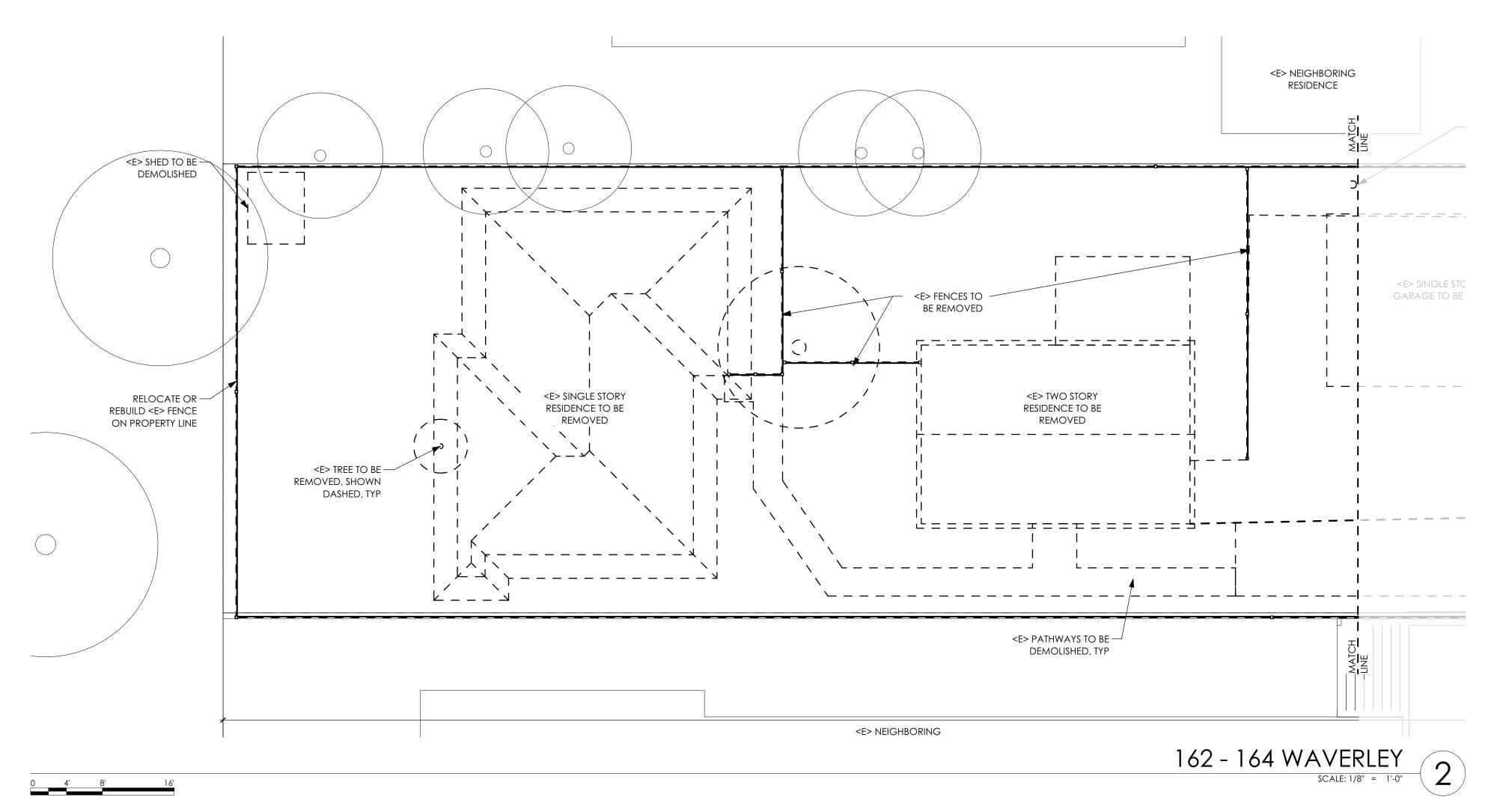
C-3.0

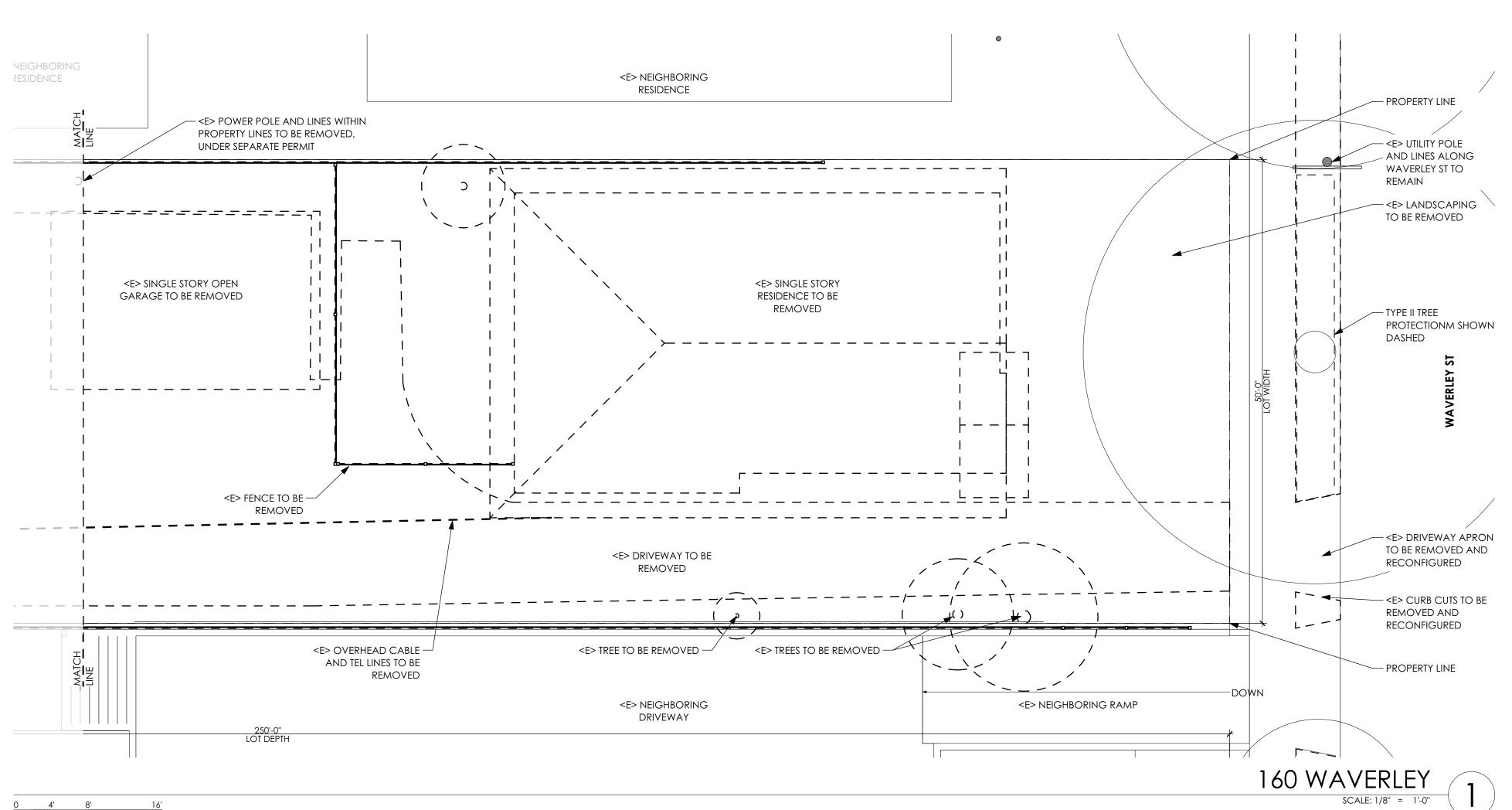
03 OF 05 SHEETS

DESIGN BY: JO

DRAWN BY: VA







## DEMO NOTES

- 1) PRIOR TO ANY SITE DEMOLITION ALL TREE PROTECTION MUST BE IN PLACE. REFER TO ARBORIST REPORT ON SHEET T-2 FOR REQUIRED TREE PRESERVATION MEASURES.
- 2) ALL UTILITIES (WATER, ELECTRIC AND GAS) TO BE SHUT OFF THROUGH CITY OF PALO ALTO PRIOR TO DEMOLITION.
- 3) REMOVE ALL STRUCTURES, HARDSCAPE, VEGETATION AND FENCING WHICH IS NOT ON PROPERTY LINES, UON.
- 4) PROVIDE A MEANS ON THE SITE FOR CONTROL OF DUST DURING DEMOLITION AND CONSTRUCTION WORK.

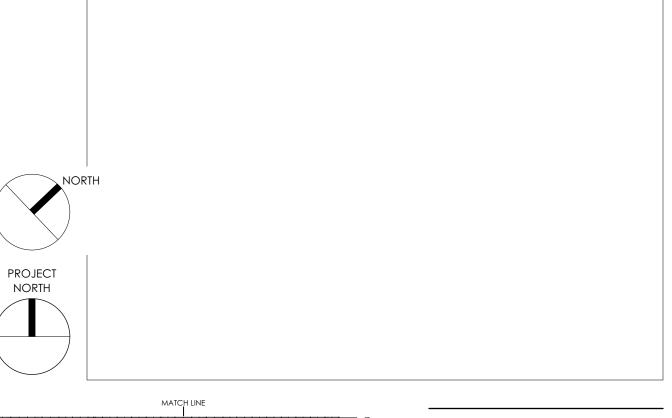


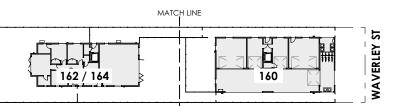
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## WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

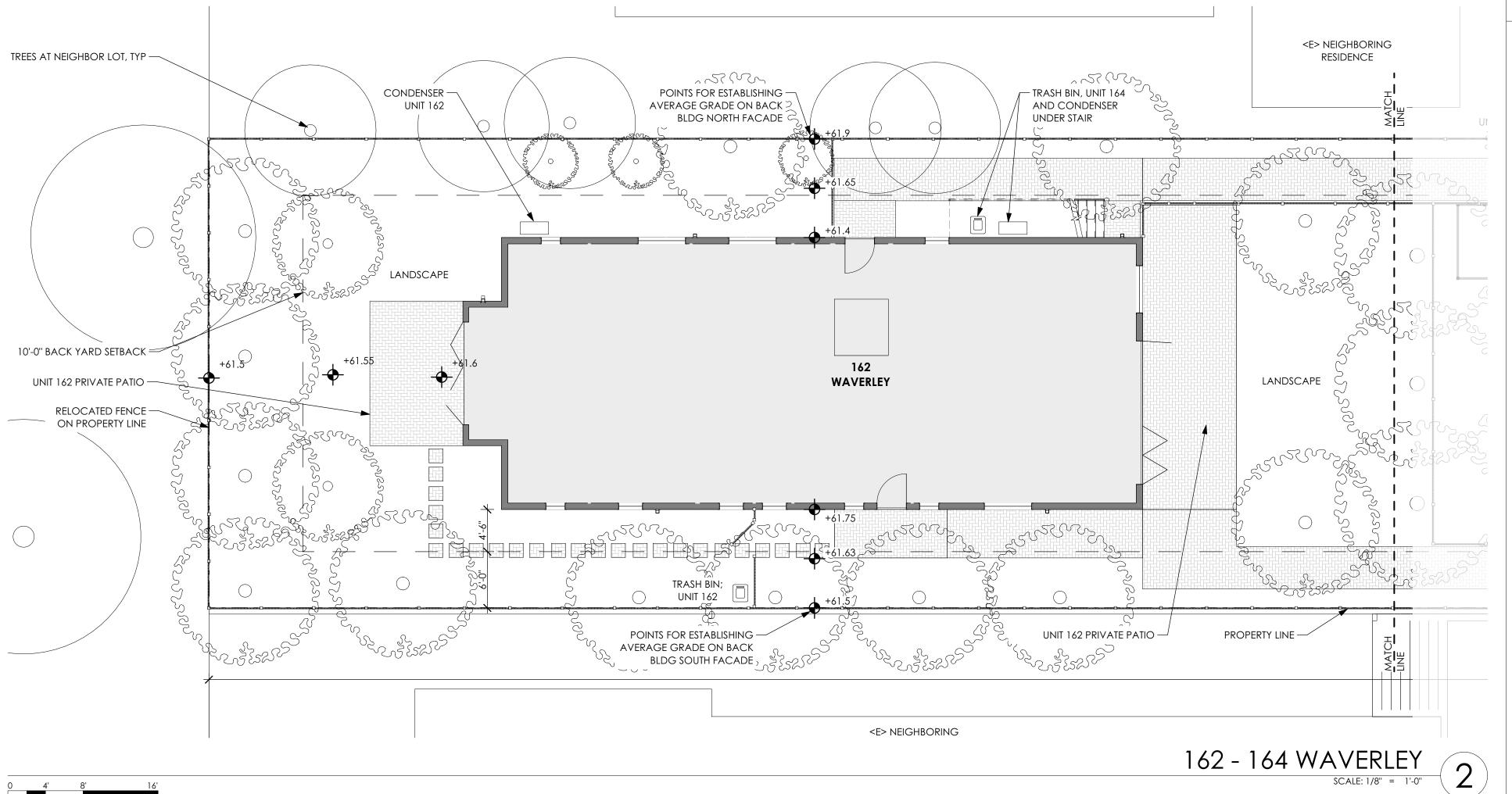
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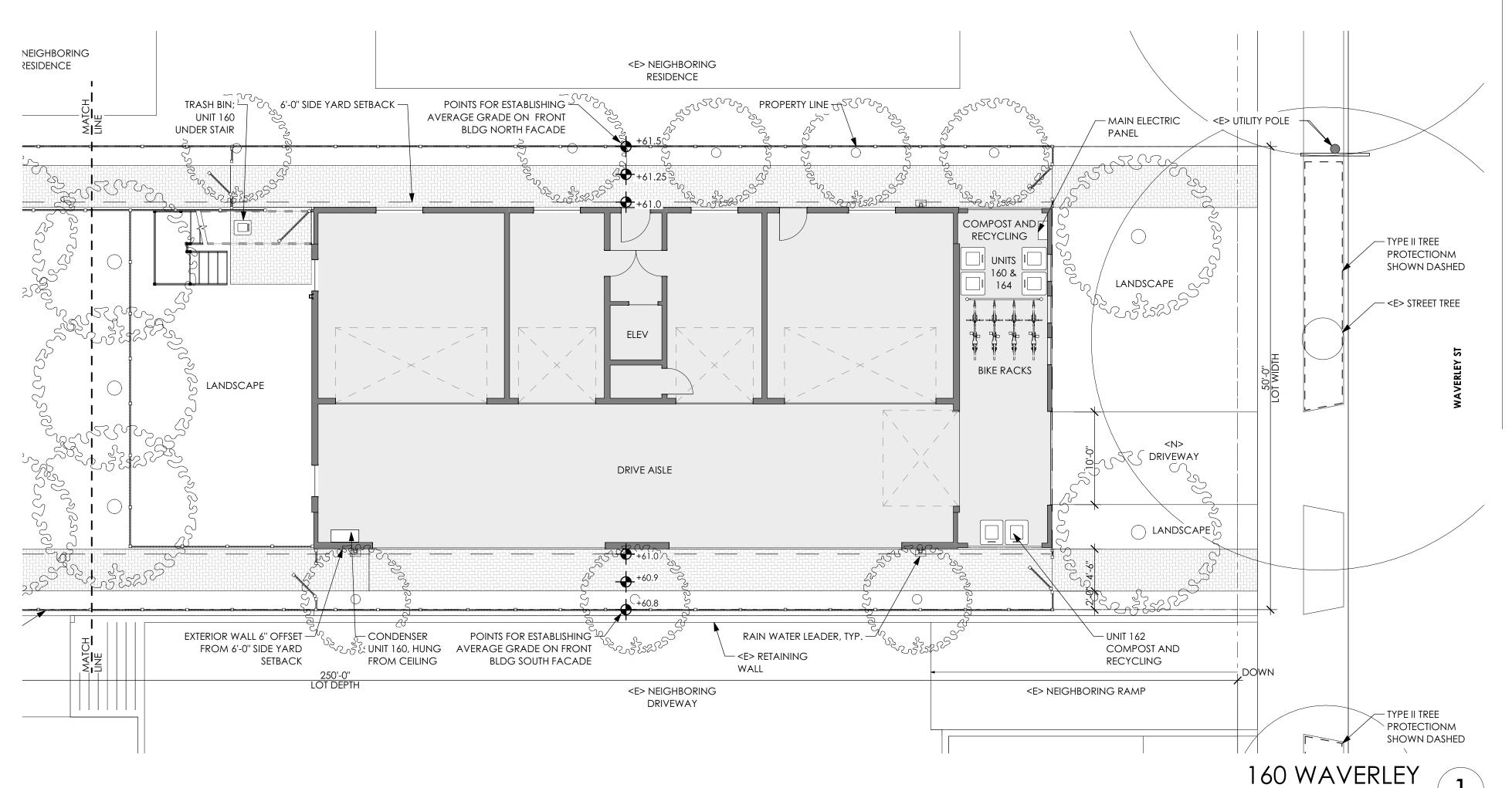




DEMOLITION PLAN

SITE PLAN - KEY





### SITE PLAN NOTES

- 1) TREE PROTECTION ON REGULATED TREES SHALL IN IN PLACE FO RTHE DURATION OF THE PROJECT.
- 2) NO INDIVIDUAL PIECE OF EQUIPMENT SHALL PRODUCE A NOISE LEVEL EXCEEDING 110 dBA AT A DISTANCE OF 25 FT [9.10.060 (1)]
- 3) THE NOISE LEVEL AT ANY POINT OUTSIDE OF THE PROPERTY PLANE OF THE PROJECT SHALL NOT EXCEED 110 dBA [9.10.060 (2)]
- 4) RIGHT OF WAY WORK: ANY CONSTRUCTION WITHIN THE CITY RIGHT OF WAY MUST HAVE AN APPROVED "PERMIT FOR CONSTRUCTION IN THE PUBLIC STREET" PRIOR TO COMMENCEMENT OF THIS WORK. THE PERFORMANCE OF THE WORK IS NOT AUTHORIZED BY THE BUILDING PERMIT ISSUANCE BUT IS SHOWN ON THE BUILDING PERMIT FOR INFORMATION ONLY
- 5) GENERAL CONTRACTOR SHALL OBTAIN A STREET IMPROVEMENT PERMIT FROM THE PUBLIC WORKS DEPARTMENT PRIOR TO STARTING ANY WORK OUTSIDE OF THE PROPERTY LINES
- 6) IF POSSIBLE USE EXISTING DRIVEWAY FOR THE CONSTRUCTION ENTRANCE AND MAINTAIN BY SWEEPING AS REQUIRED
- 7) UNDERGROUND UTILITY LINES TO BE DIRECTED AWAY FROM THE STREET TREES BY A MINIMUM OF
- 8) FOR SITE GRADING AND DRAINAGE PATTERN COORDINATE WITH CIVIL ENGINEERING. VERIFY ALL GRADES IN FIELD TO COORDINATE WITH NEW FOUNDATION WORK.
- 9) CONSTRUCTION SIGNAGE IS LIMITED TO 9 SF
- 10) A FOUNDATION SURVEY WILL BE REQUIRED BY A PROFESSIONAL ENGINEER OR OTHER AUTHORIZED PERSON WITH THE REPORT BEING AVAILABLE TO THE BUILDING INSPECTOR AT THE TIME OF THE FOUNDATION INSPECTION.
- 11) CONTRACTOR SHALL NOT STAGE, STORE, OR STOCKPILE ANY MATERIAL OR EQUIPMENT WITHIN THE PUBLIC ROAD RIGHT-OF-WAY.

#### SITE PREPARATION:

1) SITE GRADING; REFER TO GEOTECHNICAL ENGINEERS RECOMMENDATIONS FOR REMOVAL OF ALL DELETERIOUS MATERIAL, EXCAVATION SPECIFICATIONS, AND COMPACTED FILL RECOMMENDATIONS.

#### ARBORIST NOTES:

- 1) REGULATED TREES: BEFORE ANY EQUIPMENT IS DELIVERED OR ANY SITE WORK COMMENCES, CONTACT THE PROJECT SITE ARBORIST, RAY MORNEAU, AT (650) 964-7664.
- 2) ALL TREE PROTECTION AND INSPECTION SCHEDULE MEASURES, DESIGN RECOMMENDATIONS, WATERING AND OTHER REQUIRED MEASURES SHALL BE IMPLEMENTED IN FULL BY OWNER AND CONTRACTOR, AS STATED ON SHEET T-2, IN THE TREE PROTECTION REPORT AND THE APPROVED PLANS.
- 3) NO PRUNING OR CLEARANCE CUTTING OF BRANCHES IS PERMITTED ON CITY TREES.

#### **UTILITY NOTES**

- 1) NO GAS SERVICE WILL BE PROVIDED. REMOVE EXISTING GAS METER AND GAS LATERAL, CAP AT GAS MAIN.
- 2) NEW ELECTRIC METER WITH NEW UNDERGROUND SERVICE FROM POWER POLE. ONE POWER POLE ON THE NORTHWEST PROPERTYLINE IS PROPOSED TO BE REMOVED, SEE DEMO PLAN FOR LOCATION. THE POLE PROVIDES OVERHEAD POWER TO THE EXISTING REAR BUILDING ON THE SITE AS WELL AS CABLE TV TO THE NEIGHBORING BUILDING CURRENTLY.
- 3) EXISTING WATER METERS TO REMAIN
- 4) NEW SEWER LATERAL
- 5) ALL RAINWATER TO FLOW FROM ROOF THROUGH SCUPPERS, COLLECTORS AND RAINWATERLEADERS AND CONNECT TO SUBGRADE SYSTEM OF PERFEORATED PIPES CONNECTING LANDSCAPE AREA DRAINS TO BUBBLER IN FRONT YARD. ALL WATER WILL SHEET FLOW ACROSS SITE AND NOT BE DIRECTED INTO NEIGHBORING PROPERTIES.



HEATHER YOUNG ARCHITECTS 81 Encina Avenue, Suite 100 Palo Alto, CA 94301

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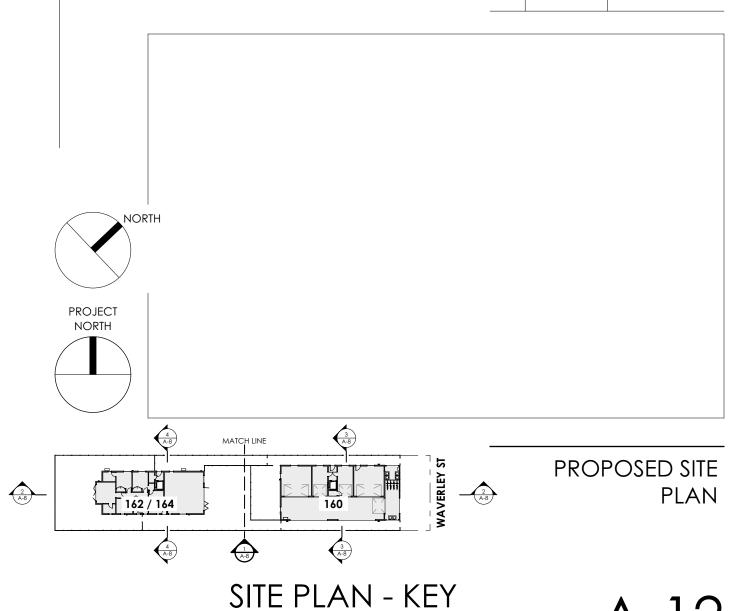
WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

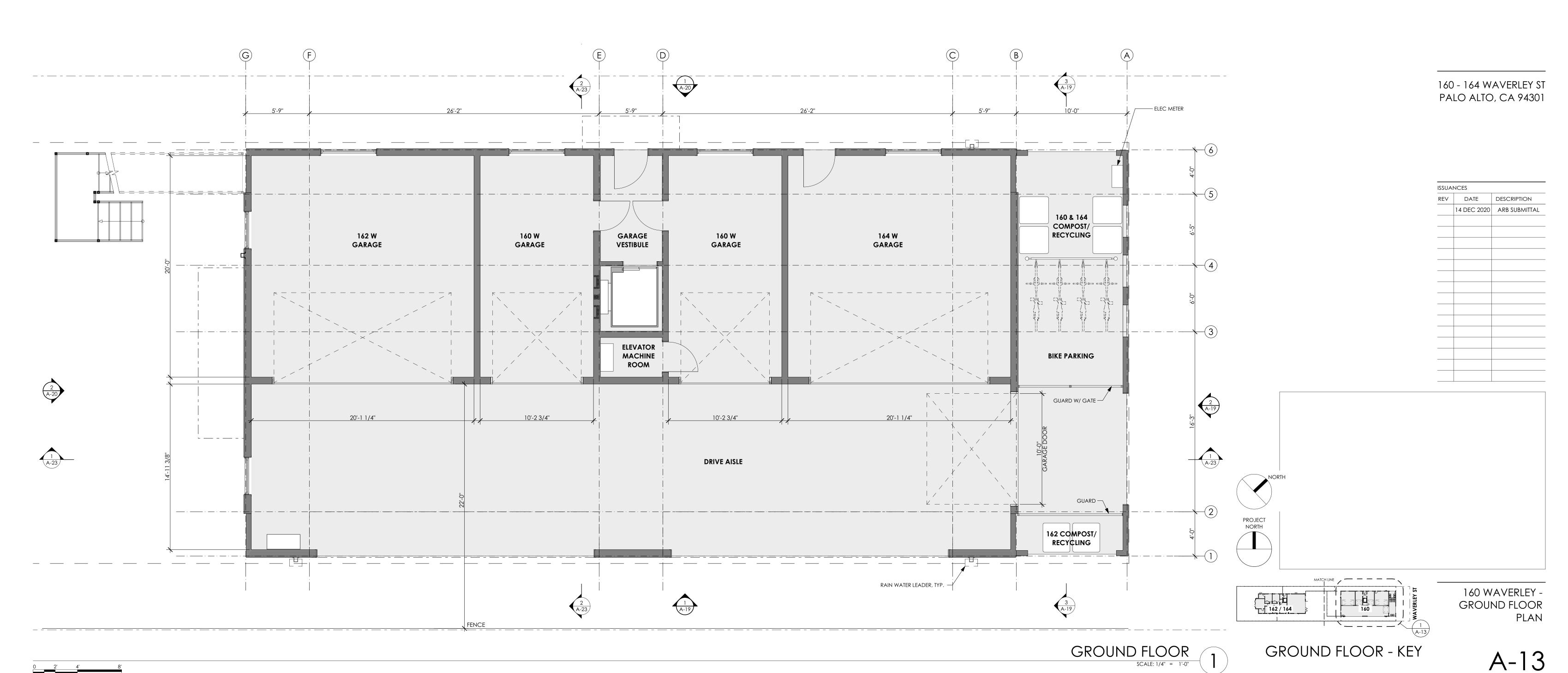
## CALGREEN NOTES

1) A4.106.2.3 TOPSOIL PROTECTION: DISPLACED TOPSOIL SHALL BE STOCKPILED FOR REUSE IN A DESIGNATED AREA AND COVERED OR PROTECTED FROM EROSION. NOTE: PROTECTION FROM EROSION INCLUDES COVERING WITH TARPS, STRAW, MULCH, CHIPPED WOOD, VEGETATIVE COVER, OR OTHER MEANS ACCEPTABLE TO THE ENFORCING AGENCY TO PROTECT THE TOPSOIL FOR LATER USE. THE CONSTRUCTION AREA SHALL BE IDENTIFIED AND DELINEATED BY FENCING OR FLAGGING TO LIMIT CONSTRUCTION ACTIVITY TO THE CONSTRUCTION AREA. HEAVY EQUIPMENT OR VEHICLE TRAFFIC AND MATERIAL STORAGE OUTSIDE THE CONSTRUCTION AREA SHALL BE LIMITED TO AREAS THAT ARE PLANNED TO BE PAVED.

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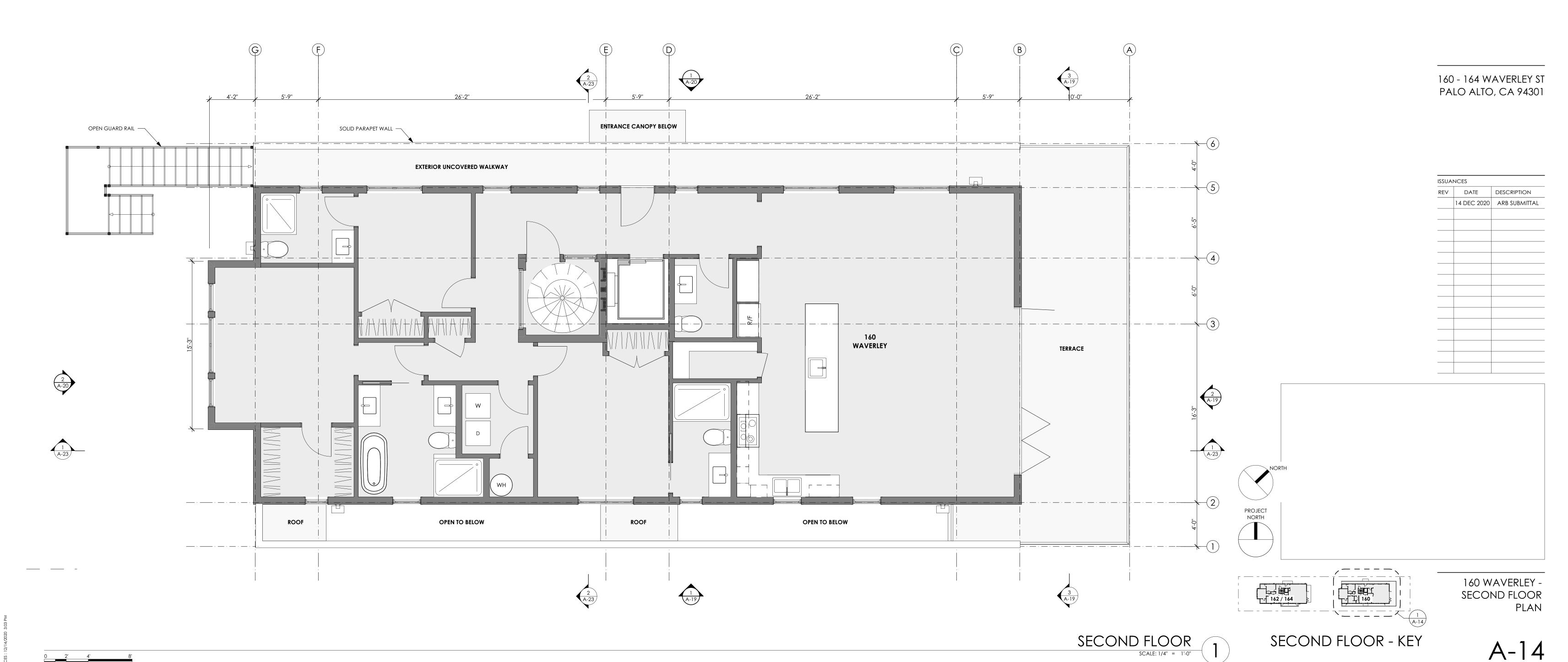






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## ROOF PLAN NOTES

- 1) PHOTOVOLTAIC REQUIREMENT: full working system required for this PROJECT. LOCATIONS AND SIZES ARE APPROXIMATE. A SOLAR SUB CONTRACTOR SHOULD DESIGN THE SYSTEM AND CONSULT WITH ARCHITECT ON CONFIGURATION.
- 2) ROOF COVERING TO BE DURA-LAST 60-MIL MEMBRANE MEETING COOL ROOF REQUIREMENTS.
- 3) PEDESTAL SYSTEM TO BE BISONIP WITH STONE PAVERS IN SANDSTONE PORCELIN COLOR.
- 4) ALL ROOF PENETRATION TO BE FLASHED ACCORDING TO CURRENT SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) GUIDELINES. PAINT EXPOSED VENT STACKS TO MATCH ROOF FINISH COLOR. GANG VENTS WHERE POSSIBLE AND COORDINATE WITH ARCHITECT ON LOCATIONS PRIOR TO INSTALLING.



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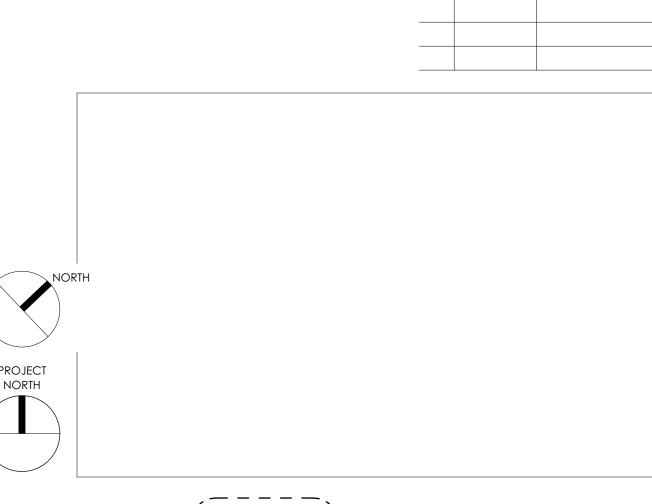
## CALGREEN NOTES

1) A4.106.5 COOL ROOF: LOW-SLOPE ROOFS SHALL HAVE A MINIMUM REFLECTANCE OF 0.65 AND A MINIMUM EMITTANCE OF 0.85. STEEP SLOPE ROOFS SHALL HAVE A MINIMUM REFLECTANCE OF 0.23 AND EMITTANCE OF 0.85.

WAVERLEY RESIDENCES

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160 WAVERLEY -ROOF PLAN

ROOF - KEY

162 / 164

A-15

SOLAR PANEL LOCATION  $\neg$ 

42" HIGH

PARAPET HEIGHT, —/ MIN 42" HIGH TYP

**OPEN TO BELOW** 

ACTUAL SIZE AND CONFIGURATION TBD

PARAPET HEIGHT, —

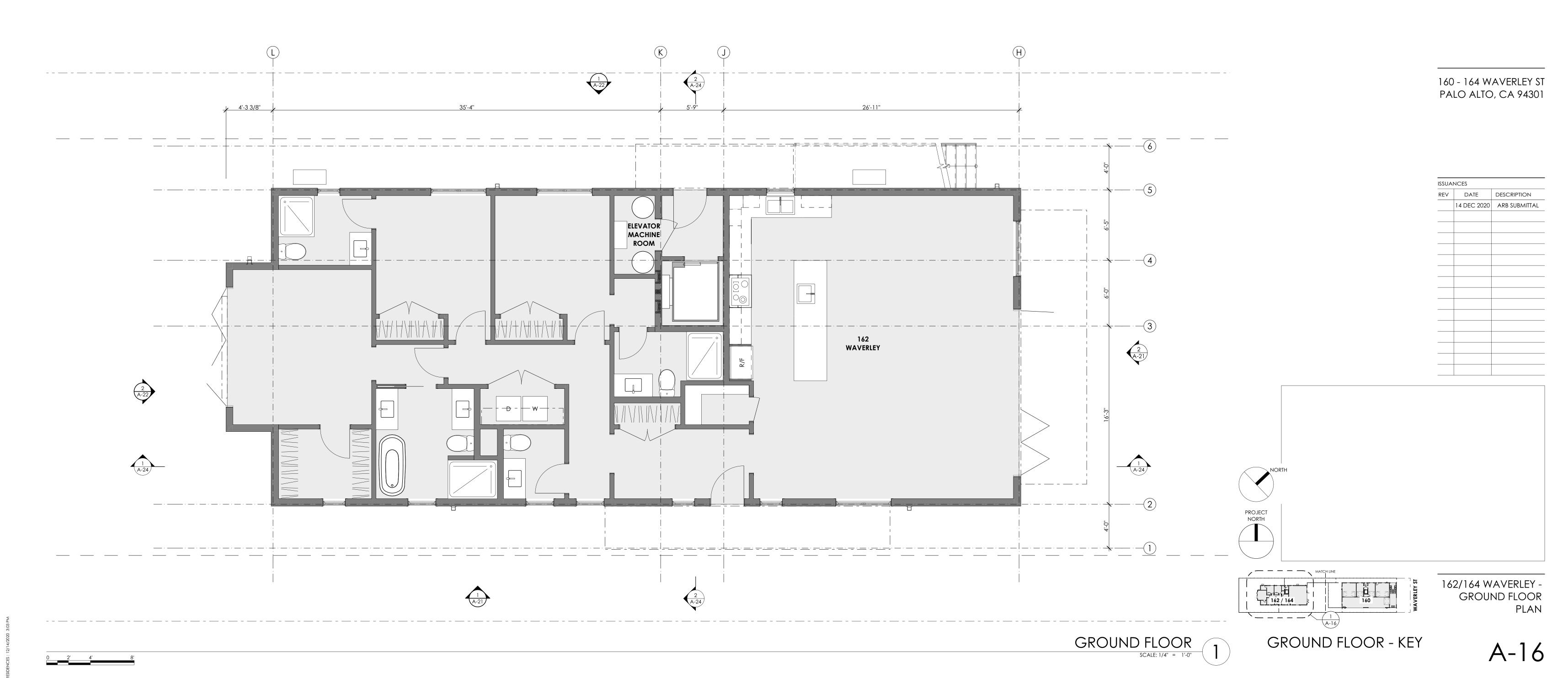
MIN 42" HIGH TYP

PRIVATE TERRACE

FOR 160 WAVERLEY

**OPEN TO BELOW** 





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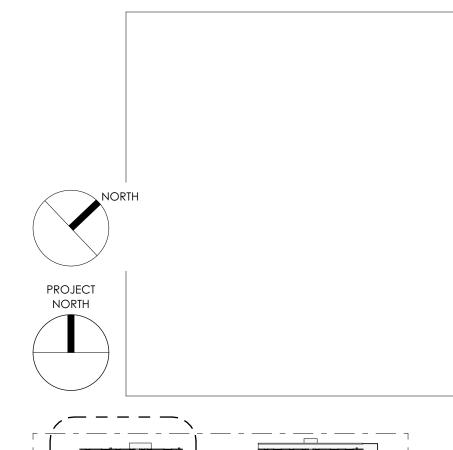
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160 - 164 WAVERLEY ST

PALO ALTO, CA 94301

REV DATE DESCRIPTION

14 DEC 2020 ARB SUBMITTAL

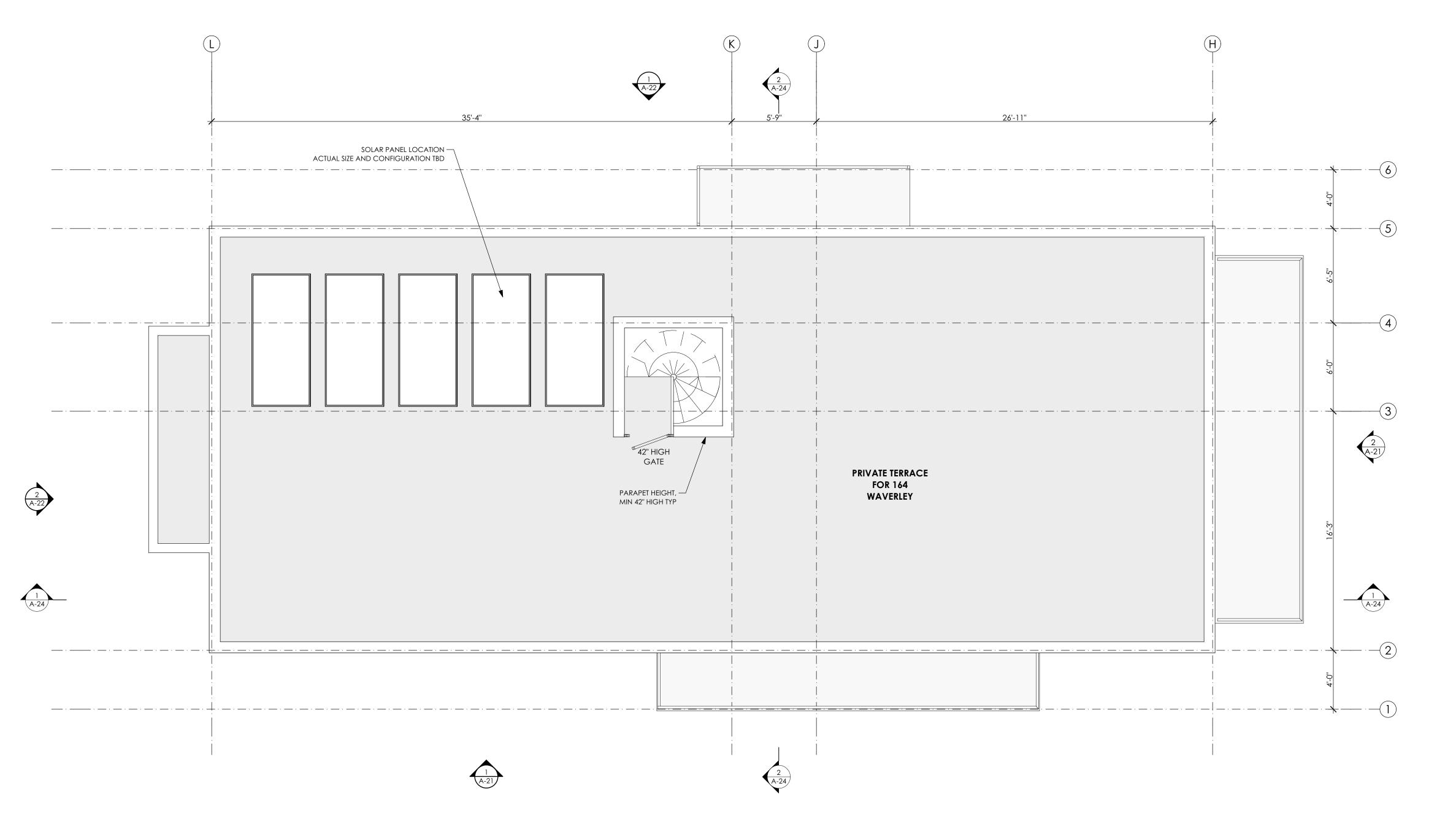


162/164 WAVERLEY -SECOND FLOOR PLAN

SECOND FLOOR

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

SECOND FLOOR - KEY



## ROOF PLAN NOTES

- 1) PHOTOVOLTAIC REQUIREMENT:
  FULL WORKING SYSTEM REQUIRED FOR THIS
  PROJECT. LOCATIONS AND SIZES ARE
  APPROXIMATE. A SOLAR SUB CONTRACTOR
  SHOULD DESIGN THE SYSTEM AND CONSULT WITH
  ARCHITECT ON CONFIGURATION.
- 2) ROOF COVERING TO BE DURA-LAST 60-MIL MEMBRANE MEETING COOL ROOF REQUIREMENTS.
- 3) PEDESTAL SYSTEM TO BE BISONIP WITH STONE PAVERS IN SANDSTONE PORCELIN COLOR.
- 4) ALL ROOF PENETRATION TO BE FLASHED ACCORDING TO CURRENT SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) GUIDELINES. PAINT EXPOSED VENT STACKS TO MATCH ROOF FINISH COLOR. GANG VENTS WHERE POSSIBLE AND COORDINATE WITH ARCHITECT ON LOCATIONS PRIOR TO INSTALLING.



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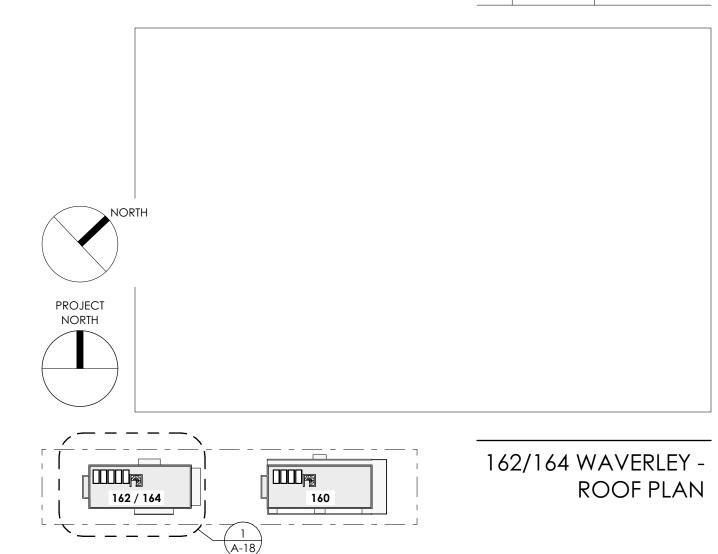
## CALGREEN NOTES

1) A4.106.5 COOL ROOF: LOW-SLOPE ROOFS
SHALL HAVE A MINIMUM REFLECTANCE OF 0.65
AND A MINIMUM EMITTANCE OF 0.85. STEEP
SLOPE ROOFS SHALL HAVE A MINIMUM
REFLECTANCE OF 0.23 AND EMITTANCE OF 0.85.

WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

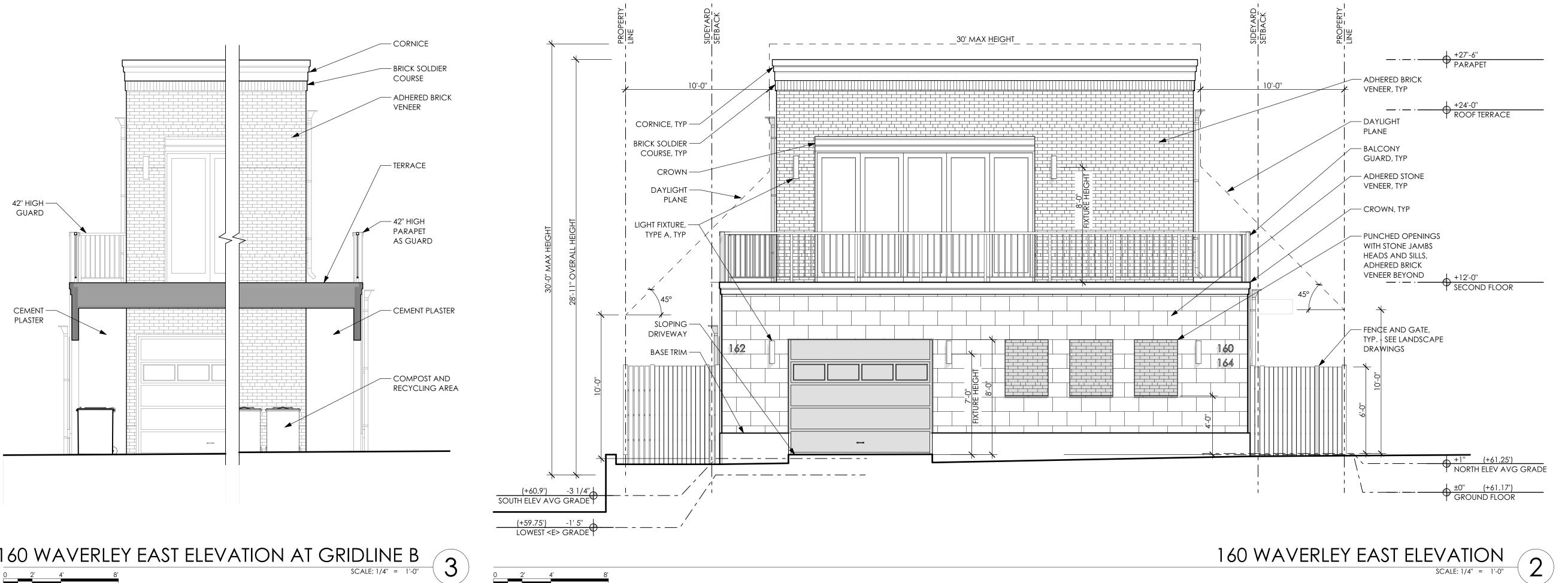
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	14 DEC 2020	ARB SUBMITTAL



ROOF PLAN

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

ROOF - KEY



160 WAVERLEY EAST ELEVATION AT GRIDLINE B

Output

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

3

CORNICE -

COURSE

BRICK SOLDIER -

CEMENT PLASTER -

GARAGE DOOR -

LIGHT FIXTURE, — TYPE B, TYP.

FENCE AND GATE -

BEYOND

MATERIALS & FINISHES

- 1) ADHERED MANUFACTURED STONE VENEER:
- ELDORADO STONE MARQUEE 24 SERIES COLOR: DOVETAIL • SIZE: 12" x 24" x 1" THICK
- INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS & CRC TABLE R703.4
- 2) **CEMENT PLASTER:**  PAINTED; WARM WHITE • 7/8" THICK 3-COAT SAND FINISH
- 3) ADHERED BRICK VENEER: MANUFACTURER: GENERAL SHALE
- SERIES: IRONWORKS STANDARD THIN BRICK FLATS AND
- CORNERS • SIZE: 7 5/8" x 2 1/4" x 1/2"
- RUNNING BOND PATTERN W/ FLEMISH BOND EVERY 13 COURSES
- 3/8" GROUT CONCAVE JOINTS ADHERED MASONRY VENEER SHALL BE • INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION
- 4) BALCONY GUARD:

INSTRUCTIONS.

- 42" HIGH WITH VERTICAL PICKETS ANODIZED ALUMINUM COLOR DARK GREY
- 5) **CORNICE AND CROWN**: GFRC OR SMOOTH CEMENT PLASTER COVERED PROFILE • COLOR: WARM WHITE
- 6) RAINWATER LEADERS AND CONDUCTORS: BONDERIZED PAINTED METAL
- SIZE: 3" x 4" RECTANGULAR COLOR: DARK GREY
- 7) WINDOWS: ALUMINUM CLAD WOOD CASEMENT JELD-WEN, SIGHTLINE SERIES DARK GREY FRAMES AND SASHES
- 8) **FOLDING DOORS**:
- ALUMINUM, NARROW STILE FLEETWOOD • DARK GREY FRAMES AND SASHES

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WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

ISSUANCES REV DATE DESCRIPTION 14 DEC 2020 ARB SUBMITTAL

160 WAVERLEY -ELEVATIONS

160 WAVERLEY SOUTH ELEVATION

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

- RAIN WATER LEADER +27'-6"
PARAPET

+24'-0"
ROOF
TERRACE

AND CONDUCTOR HEAD, TYP.

- CEMENT PLASTER

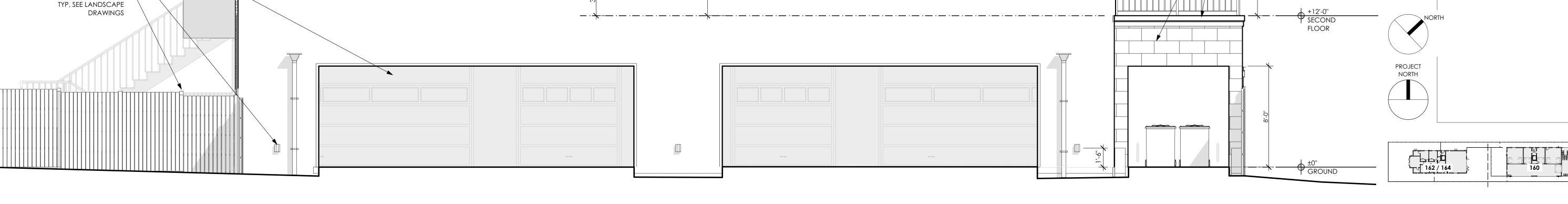
— BALCONY GUARD

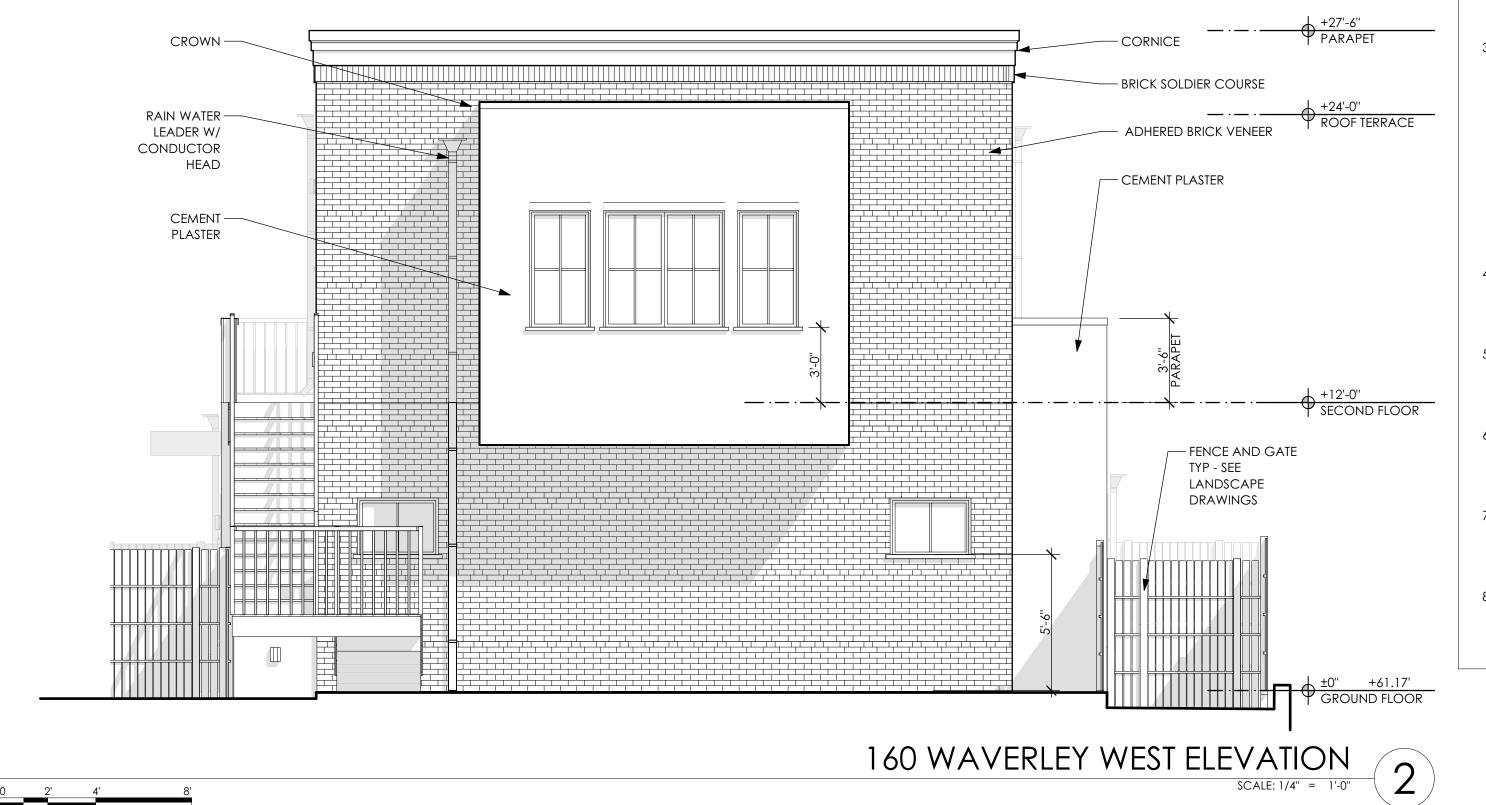
— ADHERED STONE VENEER

SITE PLAN - KEY

A-19

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### MATERIALS & FINISHES

- 1) ADHERED MANUFACTURED STONE VENEER:
- ELDORADO STONE MARQUEE 24 SERIES COLOR: DOVETAIL • SIZE: 12" x 24" x 1" THICK • INSTALLED IN ACCORDANCE WITH
- MANUFACTURER'S INSTALLATION INSTRUCTIONS & CRC TABLE R703.4
- 2) **CEMENT PLASTER:**  PAINTED; WARM WHITE 7/8" THICK 3-COAT SAND FINISH
- 3) ADHERED BRICK VENEER: MANUFACTURER: GENERAL SHALE
- SERIES: IRONWORKS • STANDARD THIN BRICK FLATS AND CORNERS
- SIZE: 7 5/8" x 2 1/4" x 1/2" RUNNING BOND PATTERN W/ FLEMISH
- BOND EVERY 13 COURSES • 3/8" GROUT - CONCAVE JOINTS
- ADHERED MASONRY VENEER SHALL BE • INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 4) BALCONY GUARD: 42" HIGH WITH VERTICAL PICKETS
- ANODIZED ALUMINUM COLOR DARK GREY
- 5) **CORNICE AND CROWN**: GFRC OR SMOOTH CEMENT PLASTER COVERED PROFILE COLOR: WARM WHITE
- 6) RAINWATER LEADERS AND CONDUCTORS: BONDERIZED PAINTED METAL • SIZE: 3" x 4" RECTANGULAR
- 7) WINDOWS: ALUMINUM CLAD WOOD CASEMENT

COLOR: DARK GREY

- JELD-WEN, SIGHTLINE SERIES DARK GREY FRAMES AND SASHES
- 8) **FOLDING DOORS**: ALUMINUM, NARROW STILE FLEETWOOD • DARK GREY FRAMES AND SASHES

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> WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

ISSUANCES

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160 WAVERLEY -ELEVATIONS

160 WAVERLEY NORTH ELEVATION

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

— BRICK SOLDIER COURSE

— CEMENT PLASTER

— FENCE AND GATE TYP - SEE LANDSCAPE DRAWINGS

— STAIR GUARD

SITE PLAN - KEY

A-20

BALCONY GUARD -

ADHERED STONE VENEER —

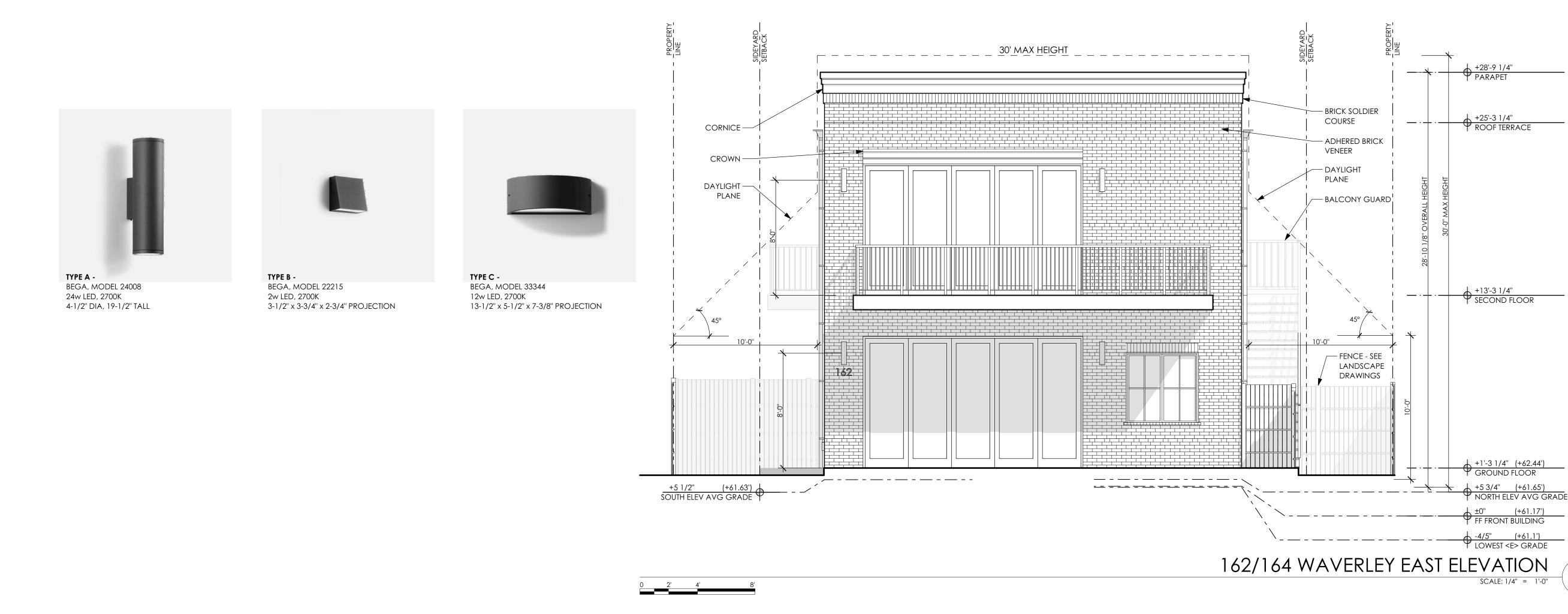
MAIN ELECTRIC PANEL —

COMPOST

AREA

AND RECYCLING

LIGHT FIXTURE, —



MATERIALS & FINISHES

- 1) ADHERED MANUFACTURED STONE VENEER:
- ELDORADO STONE MARQUEE 24 SERIES COLOR: DOVETAIL • SIZE: 12" x 24" x 1" THICK INSTALLED IN ACCORDANCE WITH
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- 2) **CEMENT PLASTER:**  PAINTED; WARM WHITE • 7/8" THICK 3-COAT SAND FINISH
- 3) ADHERED BRICK VENEER: MANUFACTURER: GENERAL SHALE
- SERIES: IRONWORKS STANDARD THIN BRICK FLATS AND CORNERS
- SIZE: 7 5/8" x 2 1/4" x 1/2" • RUNNING BOND PATTERN W/ FLEMISH
- BOND EVERY 13 COURSES • 3/8" GROUT - CONCAVE JOINTS
- ADHERED MASONRY VENEER SHALL BE • INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 4) BALCONY GUARD:
- 42" HIGH WITH VERTICAL PICKETS ANODIZED ALUMINUM COLOR DARK GREY
- 5) **CORNICE AND CROWN**: GFRC OR SMOOTH CEMENT PLASTER COVERED PROFILE COLOR: WARM WHITE
- 6) RAINWATER LEADERS AND CONDUCTORS: BONDERIZED PAINTED METAL
- SIZE: 3" x 4" RECTANGULAR COLOR: DARK GREY
- 7) WINDOWS: ALUMINUM CLAD WOOD CASEMENT JELD-WEN, SIGHTLINE SERIES DARK GREY FRAMES AND SASHES

• DARK GREY FRAMES AND SASHES

8) **FOLDING DOORS**: ALUMINUM, NARROW STILE

FLEETWOOD

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

ISSUANCES

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WAVERLEY

RESIDENCES

PROJECT NORTH

+13'-3 1/4"
SECOND FLOOR +1'-3 1/4" (+62.44')
GROUND FLOOR
±0" (+61.17')
FF FRONT BUILDING 162/164 WAVERLEY -ELEVATIONS — LIGHT FIXTURE, TYPE C TYPE B 162/164 WAVERLEY SOUTH ELEVATION
SCALE: 1/4" = 1'-0" SITE PLAN - KEY

— ADHERED BRICK

VENEER

\_ 30' MAX HEIGHT\_

A-21

(+61.55') +4 1/2" WEST ELEV AVG GRADE

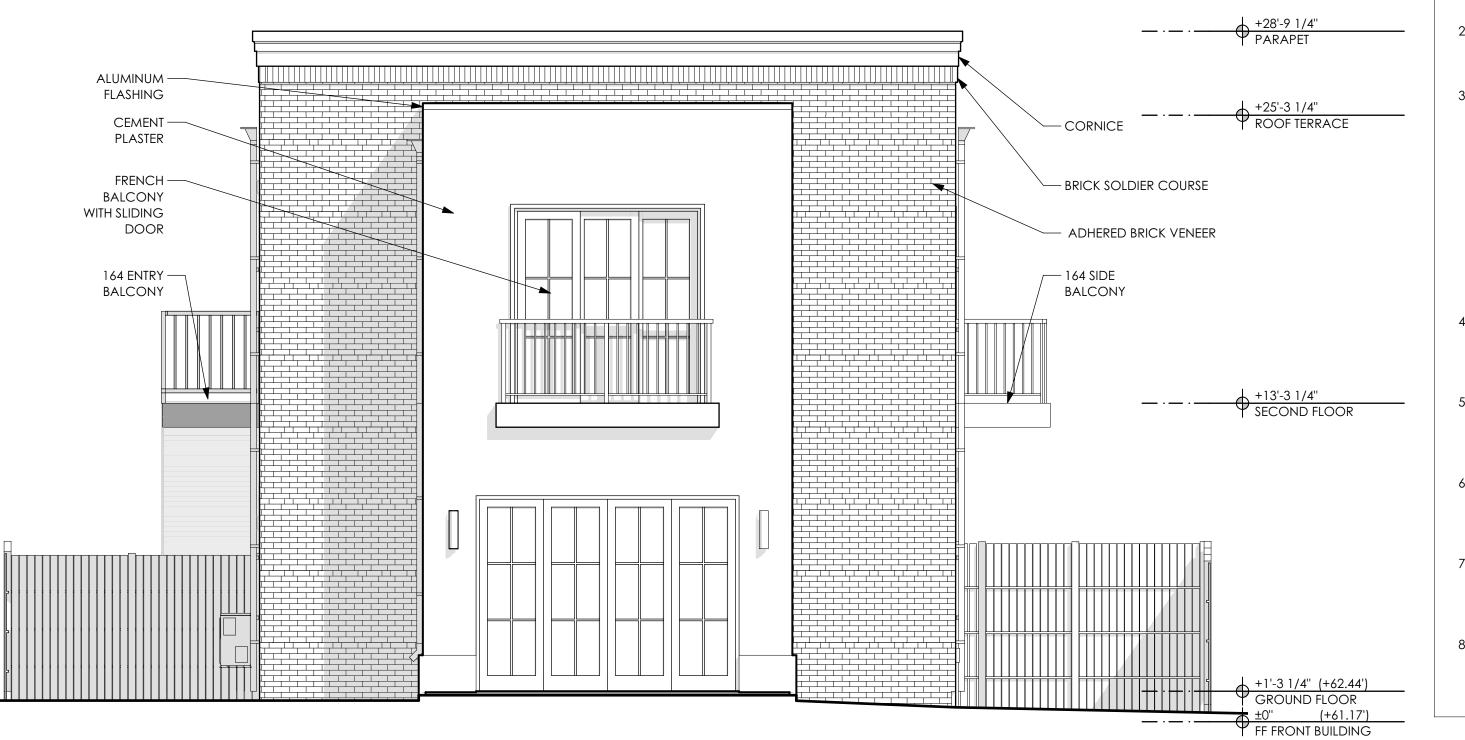
(+61.1') -4/5" LOWEST <E> GRADE (BACK BLDG)

CORNICE —

BRICK SOLDIER COURSE

CEMENT PLASTER -

ALUMINUM -FLASHING



### MATERIALS & FINISHES

- 1) ADHERED MANUFACTURED STONE VENEER:
- ELDORADO STONEMARQUEE 24 SERIESCOLOR: DOVETAIL
- COLOR: DOVETAIL
  SIZE: 12" x 24" x 1" THICK
  INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS & CRC TABLE R703.4
- 2) CEMENT PLASTER:
   PAINTED; WARM WHITE
- 7/8" THICK 3-COAT SAND FINISH
- 3) ADHERED BRICK VENEER:MANUFACTURER: GENERAL SHALE
- SERIES: IRONWORKSSTANDARD THIN BRICK FLATS AND
- CORNERS
   SIZE: 7 5/8" x 2 1/4" x 1/2"
- RUNNING BOND PATTERN W/ FLEMISH BOND EVERY 13 COURSES
- 3/8" GROUT CONCAVE JOINTS
  ADHERED MASONRY VENEER SHALL BE
  INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION
- 4) BALCONY GUARD:
   42" HIGH WITH VERTICAL PICKETS

INSTRUCTIONS.

- ANODIZED ALUMINUMCOLOR DARK GREY
- 5) CORNICE AND CROWN:
   GFRC OR SMOOTH CEMENT PLASTER COVERED PROFILE
   • COLOR: WARM WHITE
- 6) RAINWATER LEADERS AND CONDUCTORS:
   BONDERIZED PAINTED METAL
   SIZE: 3" x 4" RECTANGULAR
- COLOR: DARK GREY
- 7) WINDOWS:
   ALUMINUM CLAD WOOD CASEMENT
   JELD-WEN, SIGHTLINE SERIES
   DARK GREY FRAMES AND SASHES

• DARK GREY FRAMES AND SASHES

8) **FOLDING DOORS:**• ALUMINUM, NARROW STILE

FLEETWOOD

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

ISSUANCES

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WAVERLEY

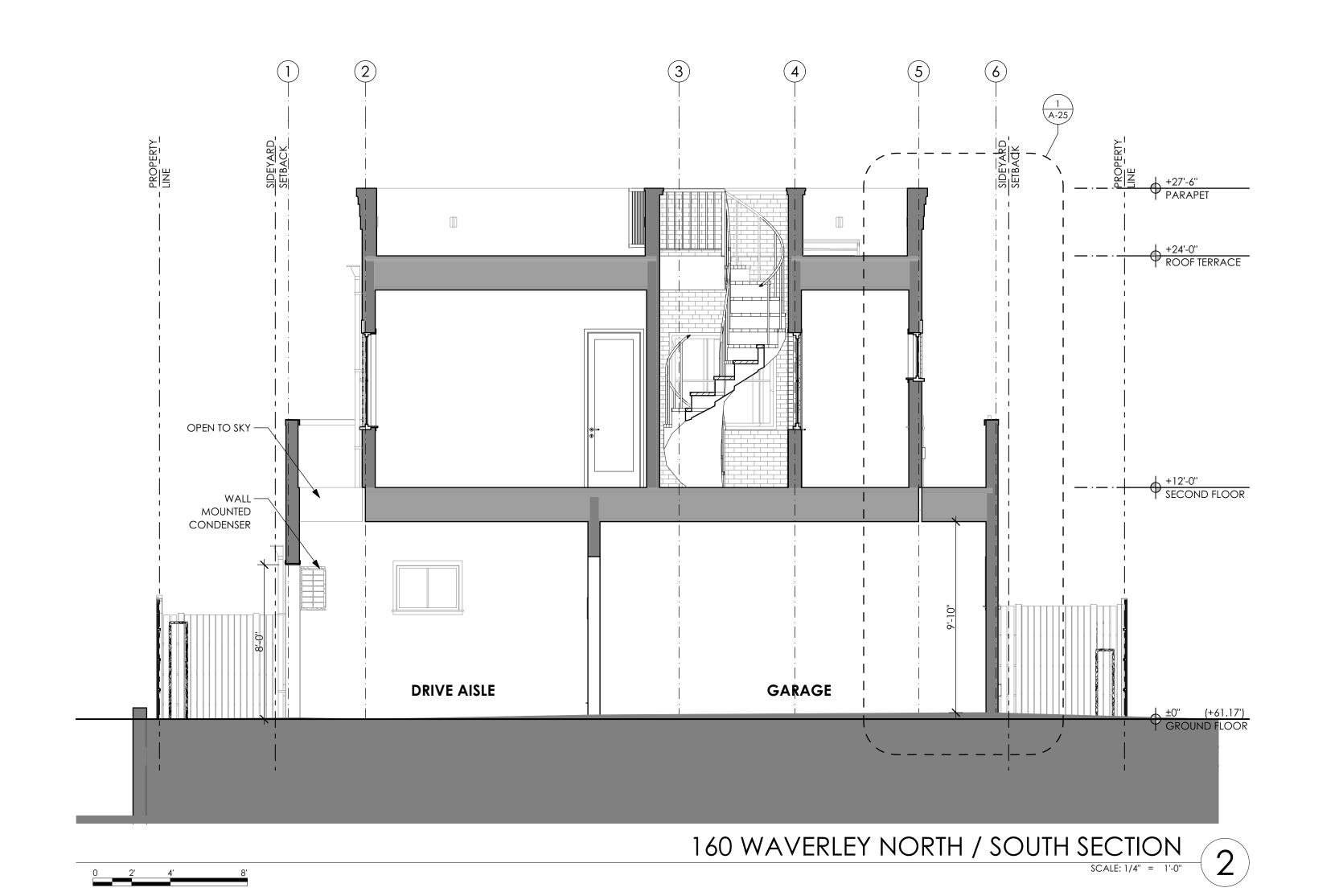
RESIDENCES

164 WAVERLEY WEST ELEVATION
SCALE: 1/4" = 1'-0"

TOTAL STATE OF THE PROPERTY OF

164 WAVERLEY NORTH ELEVATION
SCALE: 1/4" = 1'-0"

SITE PLAN - KEY



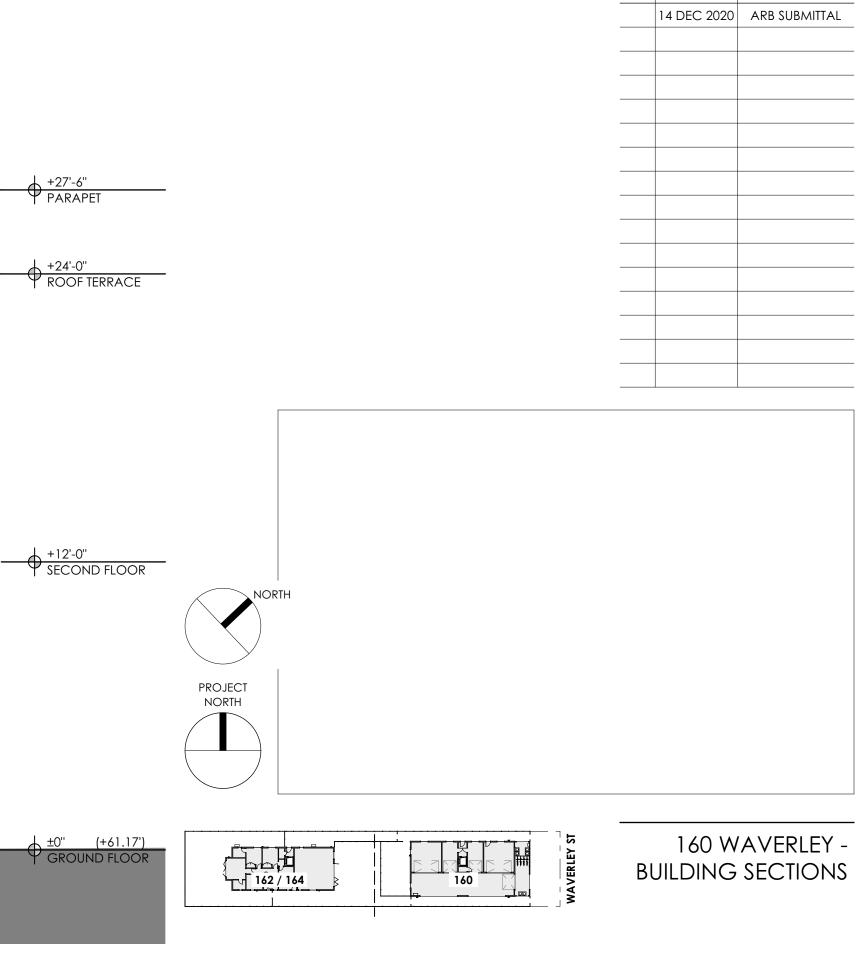
— RECESSED WALL LIGHT FIXTURES, TYP



WAVERLEY RESIDENCES

160 - 164 WAVERLEY ST PALO ALTO, CA 94301

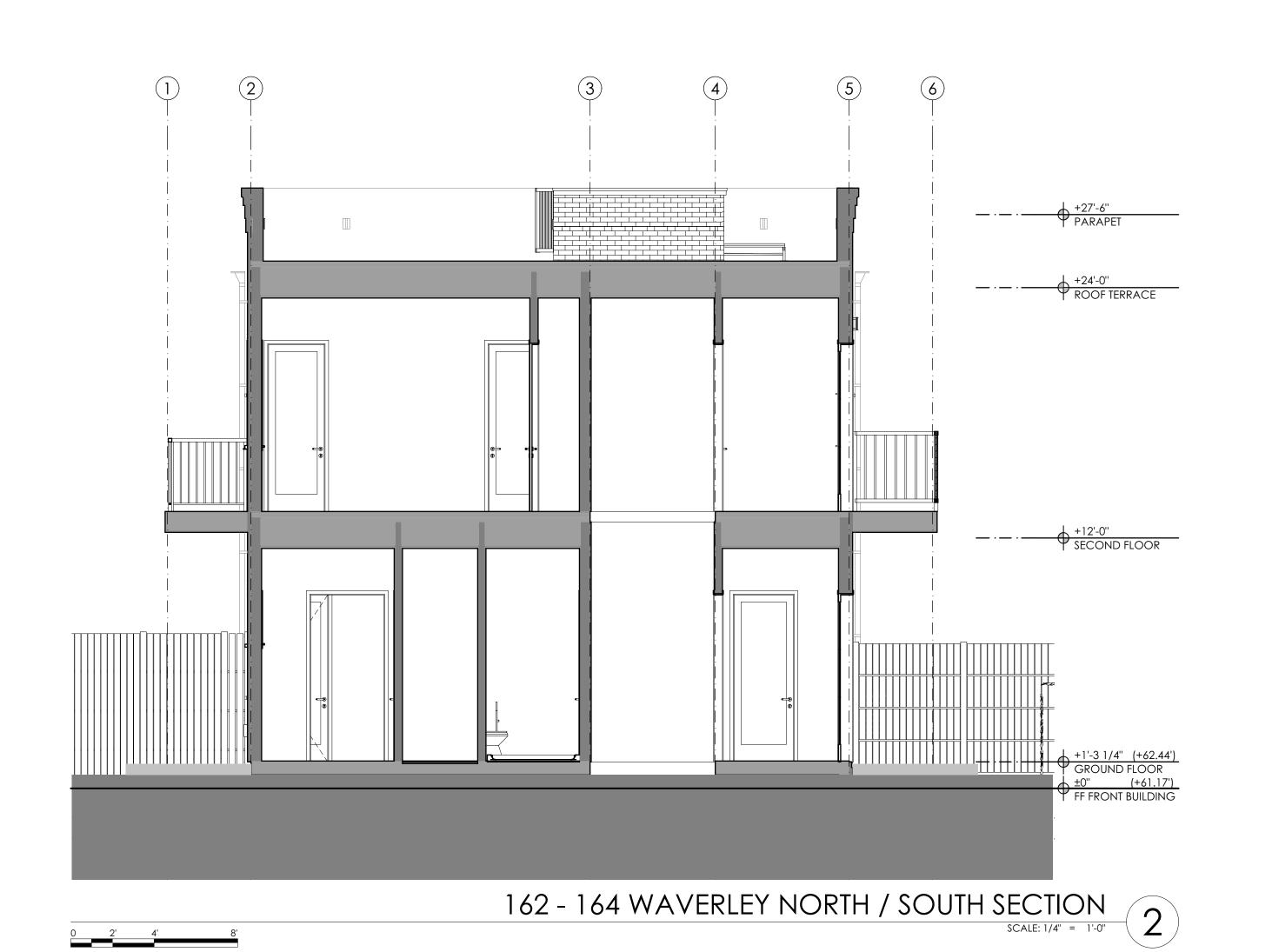
ISSUANCES



160 WAVERLEY EAST / WEST SECTION
SCALE: 1/4" = 1'-0"

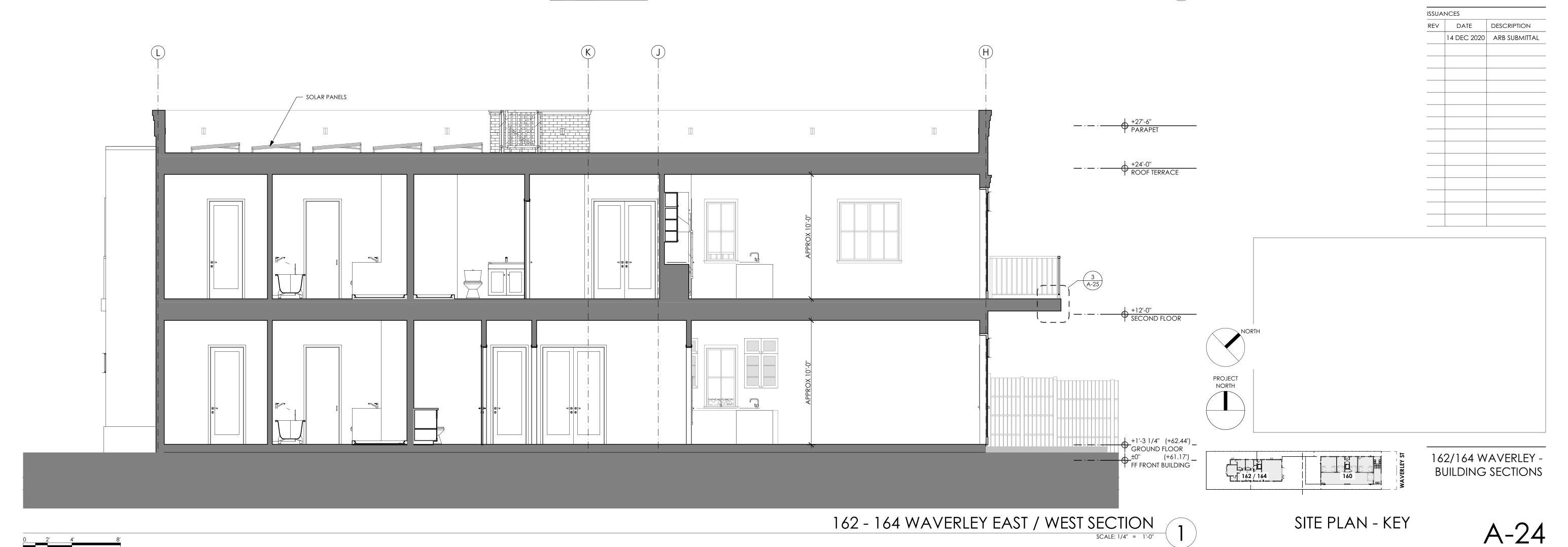
+27'-6" PARAPET

SITE PLAN - KEY



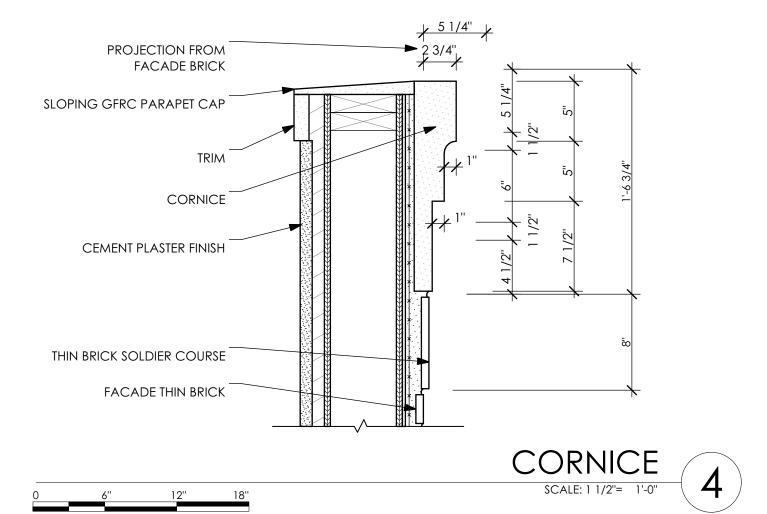


160 - 164 WAVERLEY ST PALO ALTO, CA 94301

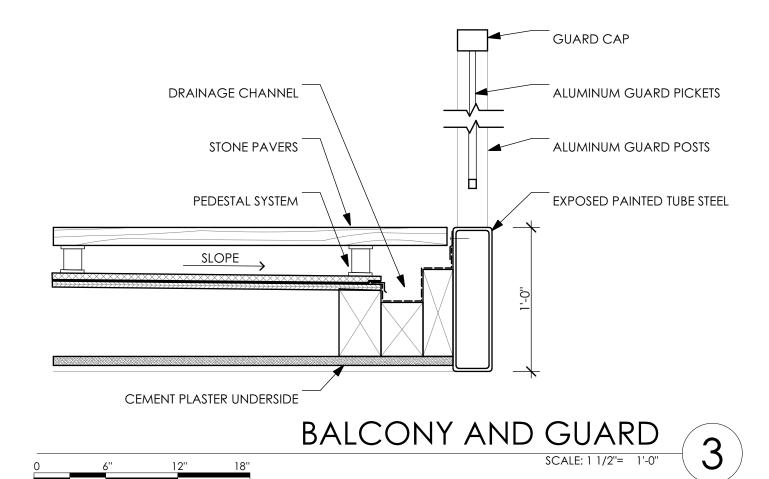


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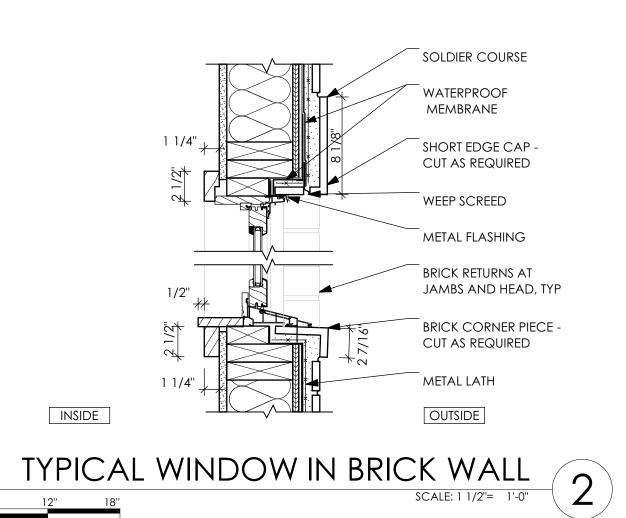


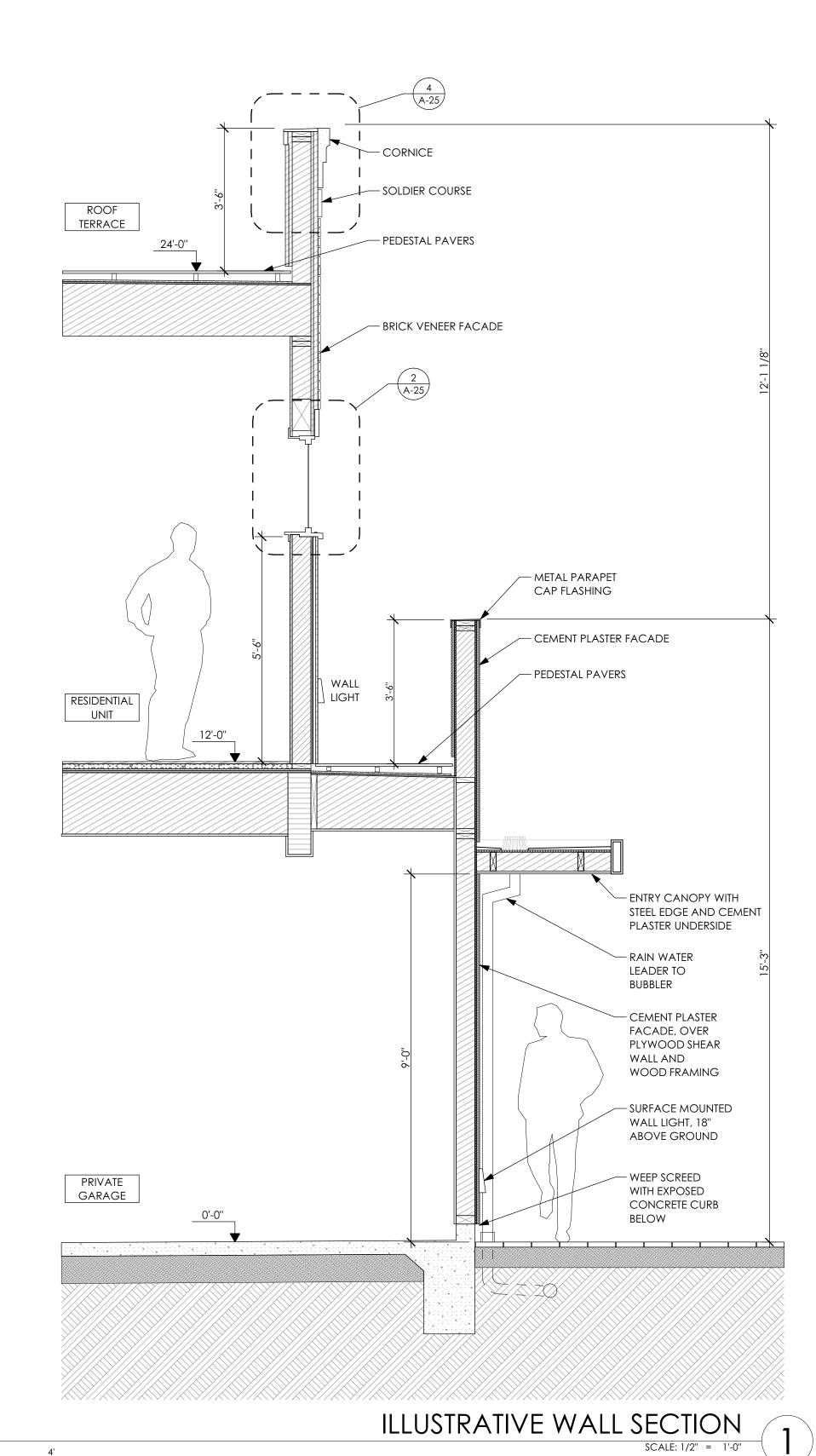












### ASSEMBLIES

#### 1) STONE VENEER WALL ASSEMBLY:

 STONE VENEER • 3/4" 2 COAT CEMENT PLASTER WEATHER BARRIER PLYWOOD SHEATHING WOOD STUDS W/ BATT INSULATION GYPSUM BOARD TYP, SEE WALL TYPE LOCATIONS OF INTERIOR CEMENT PLASTER



#### 7/8" 3 COAT CEMENT PLASTER WEATHER BARRIER

 PLYWOOD SHEATHING WOOD STUDS W/ BATT INSULATION • GYPSUM BOARD TYP, SEE WALL TYPES FOR LOCATIONS OF INTERIOR CEMENT PLASTER

#### 3) BRICK VENEER WALL ASSEMBLY:

 BRICK VENEER • 3/4" 2 COAT CEMENT PLASTER

 WEATHER BARRIER PLYWOOD SHEATHING

 WOOD STUDS W/ BATT INSULATION • GYPSUM BOARD TYP, SEE WALL TYPES FOR LOCATIONS OF INTERIOR CEMENT PLASTER

#### 4) 1-HR RATED FLOOR CEILING ASSEMBLY:

 HARDWOOD FLOORING • 1 1/2" LIGHTWEIGHT CONCRETE ACOUSTIC UNDERLAYMENT

PLYWOOD

• TJI FLOOR FRAMING

 ACOUSTIC BATT INSULATION KINETICS ICW ISOLATION HANGER

• 3/4" FURRING CHANNEL • 2 LAYERS 5/8" GYPSUM BOARD

#### 5) **ROOF ASSEMBLY**:

 PEDESTAL PAVERS DRAINAGE COMPOSITE

WATERPROOF MEMBRANE

 R-4 MIN RIGID INSULATION PLYWOOD

ROOF TRUSSES

 BATT INSULATION • 5/8" GYPSUM BOARD

ASSEMBLY.

6) NO INTERIOR CLASS I VAPOR RETARDERS TO BE INSTALLED ON THE CEILING SIDE OF THE

STRUCTURAL ROOF SHEATHING.

7) AIR-IMPERMEABLE INSULATION ONLY. INSULATION SHALL BE APPLIED IN DIRECT CONTACT WITH THE UNDERSIDE OF THE



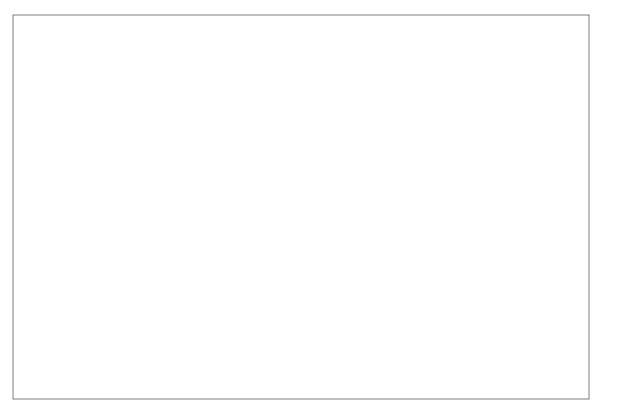
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WAVERLEY RESIDENCES

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WALL SECTION AND SCHEMATIC DETAILS





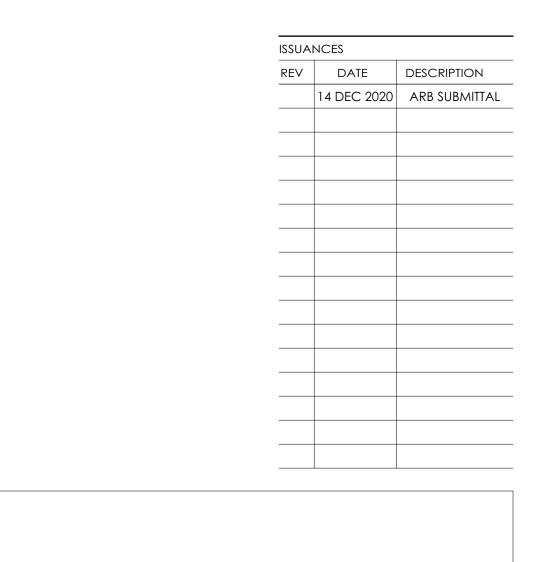


ENTRY RIGHT 3

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3D IMAGES



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> WAVERLEY RESIDENCES

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SITE LIGHTING ANALYSIS

Luminaire S	Luminaire Schedule									
Symbol	Qty	Label	Description	Lum. Watts	Lum. Lumens	LLD	LDD	UDF	LLF	Filename
$\odot$	11	F1	BEGA 24008	30	2236	0.944	0.900	1.000	0.850	24008_BEGA_IES.ies
	7	F2	BEGA 33344	14	847	1.000	1.000	1.000	1.000	33344_BEGA_IES.ies
-	4	F3	BEGA 22215	3	173	0.944	0.900	1.000	0.850	22215_BEGA_IES.ies
$\odot$	5	F4	KUZCO EC44113-BK	25.4	2673	0.944	0.900	1.000	0.850	EC44113-BK - Elle.IES
$\odot$	4	F5	KENALL SPG18-xxx-MW-5S-SU-TP-30L-40K8-DCC-DV	35	4138	0.944	0.900	1.000	0.850	SPG18-xxx-MW-5S-SU-TP-30L-40K8-DCC-D
	20	F6	BEGA 22248	6	262	0.944	0.900	1.000	0.850	22248_BEGA_IES.IES

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min Description	Grid Z
Bike Area	Illuminance	Fc	12.38	15.4	8.0	1.55	1.93	0
East Driveway	Illuminance	Fc	2.99	22.7	0.1	29.90	227.00	0
Garage	Illuminance	Fc	5.66	10.4	3.2	1.77	3.25	0
Property Line	Illuminance	Fc	0.02	0.5	0.0	N.A.	N.A.	0
Site Pedestrian	Illuminance	Fc	2.85	68.6	0.0	N.A.	N.A.	0

\*\*\*LIGHTING LAYOUT VERIFICATION\*\*\*

SITE PHOTOMETRICS

ALL VALUES SHOWN IN CIRCULATION AREA ARE MAINTAINED HORIZONTAL FOOTCANDLES AT 0'-0" AFF

PHOTOMETRIC DATA USED AS INPUT FOR THESE CALCULATIONS IS BASED ON ESTABLISHED IES PROCEDURES AND PUBLISHED LAMP, RATINGS, FIELD PERFORMANCE WILL DEPEND ON ACTUAL LAMP, BALLAST, ELECTRICAL, AND SITE CHARACTERISTICS.

Calculations have been performed according to IES standards and good practice. Some differences between measured values and calculated results may occur due to tolerances in calculation methods, testing procedures, component performance, measurement techniques and field conditions such as voltage and temperature variations. Input data used to generate the attached calculations such as room dimensions, reflectances, furniture and architectural elements significantly affect the lighting calculations. If the real environment conditions do not match the input data, ifferences will occur between measured values and calculated values.



PHONE: (510) 638-0158 - FAX (510) 638-2908

REPORT FOR: HEATHER YOUNG ARCHITECTS; KARLEE GAILEY BY: APPLICATIONS ENGINEERING; YUCHENG LU SALES REPRESENTATIVE: ALR; JD STEPHENS

by Lighting Analysts

AGI32 VERSION 19.2 AGI (C) 1999-2018 LIGHTING ANALYSTS, INC. 10268 W. CENTENNIAL ROAD, SUITE 202 LITTLETON, CO 80127

18562 - 160-164 WAVERLEY RESIDENCES - SITE

PROJECT DESCRIPTION

PALO ALTO, CA

	# #	PLAN	IT LIST			111000
#	<u>QU.</u>	SIZE	BOTANICAL NAME	COMMON NAME	HEIGHT × WIDTH	<u>MOCOLS</u> <u>PLANT</u> <u>FACTOR</u>
А	э	36" BOX	CORNUS CAPITATA 'MOUNTAIN MOON'	EVERGREEN DOGWOOD	20' ×  5'-20'	М
В	3	48" BOX	TRISTANIOPSIS LAURINA 'ELEGANT'	ELEGANT SWAMP MYRTLE	20'x35' x  5'-25'	М
C	2	36" BOX	ACER RUBRUM 'RED OCTOBER GLORY'	RED MAPLE	20'x35' x  5'-25'	М
D	8	36" BOX	PODOCARPUS GRACILLIOR (TREE FORM)	FERN PINE *(PRUNED TO 10' WIDE)	20'x40'x '20'*	М
E	10	36" BOX	LAURUS NOBILIS	BAY LAUREL	5'-40' x  5'-25'	L
F	2	24" BOX	ACER PALMATUM 'RED EMPEROR' (MULTI)	JAPANESE MAPLE (MULTI TRUNK)	12' x 12'	М
G	7	156	PITTOSPORUM 'SILVER SHEEN'	SILVER SHEEN PITTOSPORUM	10'-5'	М
H	6	156	CAMELLIA SAS. 'WHITE DOVES'	WHITE CAMELLIA SASANQUA	5'-5'	М
I	AS SHOWN	5 <i>G</i>	NANDINA 'FIRECRACKER'	HEAVENLY BAMBOO	2.5'x 3'	L
7	6	156	OLEA 'LITTLE OLLIE'	NON-FRUITING DWARF OLIVE	4'-6' × 4'-6'	VL
K	AS SHOWN	16	LOMONDRA 'BREEZE'	MATT RUSH	2'-3' × 3'	L
L	AS SHOWN	16	AEONIUM ARBOREUM	AEONIUM (SUCCULENT)	'-6" ×  '	L
Υ	AS SHOWN	16	ARCTOSTAPHYLOS 'EMERALD CARPET'  @ 30" O.C.	MANZANITA GROUND COVER	6"-12" × 3'	L
N	4	56	DISTICTUS BUCCINATORIA	TRUMPET VINE	2' ×  2'	М

THE PLANTING DESIGN INTENT IS TO COMPLIMENT THE ARCHITECTURE AND TO PROVIDE AN INTERESTING AND PLEASANT OUTDOOR ENVIRONMENT. I HAVE TAKEN SPECIAL CARE TO PROVIDE ADEQUATE EVERGREEN PRIVACY SCREENING BETWEEN THE NEW DWELLINGS AND BETWEEN THE PROJECT SITE AND THE NEIGHBORING PROPERTIES. HIGH WATER USE LAWN AREAS ARE MINIMAL AND LIMITED TO AREAS OF ACTIVE PLAY. THE PLANTING DESIGN PRIMARILY UTILIZES LOW TO MODERATE WATER USE PLANTS AND FOLLOWS THE GUIDELINES OF THE STATE WATER EFFICIENT LANDSCAPE ORDINANCE (WELO)

IRRIGATION DESIGN INTENT THE IRRIGATION SYSTEM WILL BE FULLY AUTOMATIC. SPRAY IRRIGATION WILL BE USED ONLY FOR LAWN ARES AND WILL UTILIZE MATCHED PRECIPITATION SPRAY HEADS FOR MAXIMUM WATER CONSERVATION. THE REMAINDER OF THE PLANTING AREAS WILL BE IRRIGATED USING WATER EFFICIENT DRIP IRRIGATION AND COMPLY WITH THE GUIDELINES OF THE STATE WATER EFFICIENT LANDSCAPE ORDINANCE (WELO)

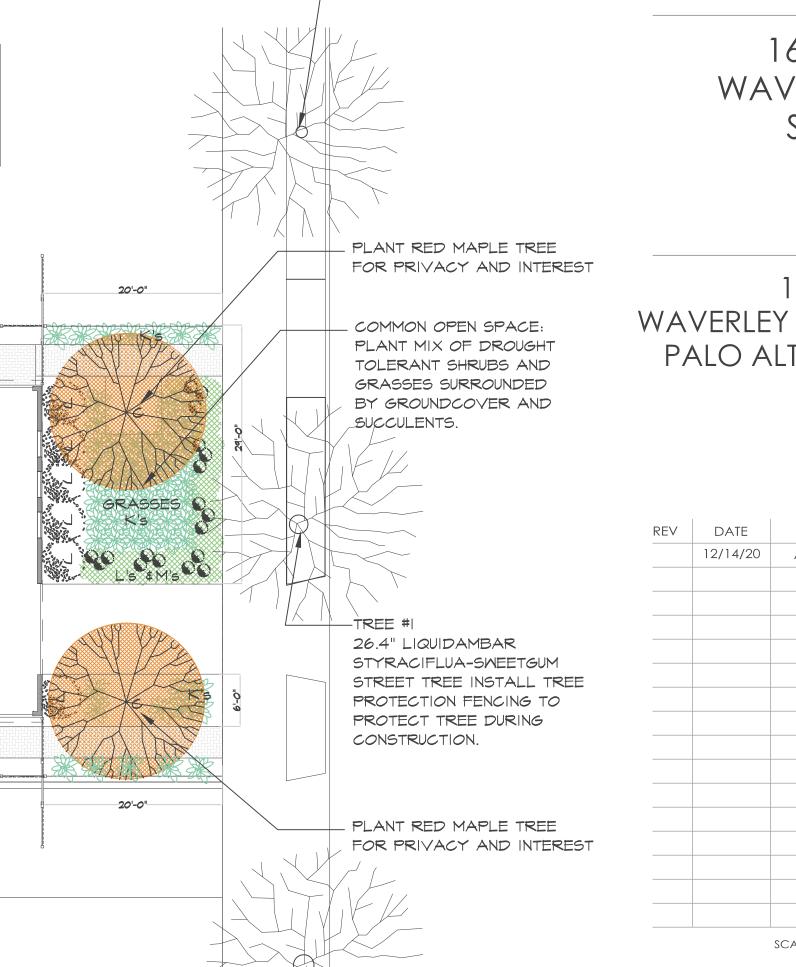
PLANT EVERGREEN SCREENING

TREES ALONG



MARA YOUNG LANDSCAPE ARCHITECT CAL. LICENSE # 3754 PHONE:(650) 704-9255 www.marayoung.com

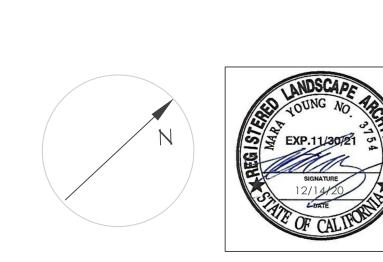
www.fgy-arch.com



TREE #8 21.2 CELTIS

STREET TREE

SINENSIS- ORIENTAL HACKBERRY







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	INTERLOCKING PAVER PATH	SIDE PROPERTY LINE WITH DROUGHT TOLERANT		STREET
		ARCTOSTAPHYLOS 'EMERALD CARPET  GROUNDCOVER PLANT -M @ 30" O.C		SIKLLI
INTERLOCKING PAVER PATIO	STONE ON	SINGUIDEG VEINT IN & SO S.C.		
THE PROPERTY OF THE PROPERTY O	CONCRETE	PRIVATE OPEN SPACE: INSTALL ARTIFICIAL TURF		
	LANDING	SURROUNDED BY LOW WATER USE SHRUBS, GRASSES AND VINES	PLANT RED MAPLE TREE	
	A D D D D D D D D D D D D D D D D D D D		FOR PRIVACY AND INTEREST	160-164
			20'-0"	
PLANT EVERGREEN SCREENING TREES ALONG	MARINE WAR AREN AREN AREN AREN AREN AREN AREN AR	TO THE REPORT OF THE PROPERTY	COMMON OPEN SPACE: PLANT MIX OF DROUGHT	WAVERLEY STREET
REAR PROPERTY LINE			TOLERANT SHRUBS AND GRASSES SURROUNDED	PALO ALTO, CA
TO THE STATE OF TH	G G G G		BY GROUNDCOVER AND	94301
	B		SUCCULENTS.	
		***		
PRIVATE OPEN SPACE: PLANT FLOWERING SHRUBS AND SMALL AND			GRASSES &	
TREES IN WOOD CHIP MULCH FOR	STONE ON	ARTIFICIAL X   X   X   X   X   X   X   X   X   X		rev date description
PLEASANT VIEWING GARDEN FOR REAR UNIT.	CONCRETE PATIO	FÜRF	LS 4M/S	12/14/20 ARB SUBMITTAL
	LAWN WITH OUT OF			
	EDGE		TREE #1 26.4" LIQUIDAMBAR	
			STYRACIFLUA-SMEETGUM	
			STREET TREE INSTALL TREE PROTECTION FENCING TO	
			PROTECT TREE DURING CONSTRUCTION.	
+A S		K K K OF IN D		
			20'-0"	
6 22 0 10 6 22 0 10			PLANT RED MAPLE TREE	
			FOR PRIVACY AND INTEREST	
STONE ON CONCRETE	PRIVATE OPEN SPACE: PLANT EVERGREEN SCREENING TREES AND	INTERLOCKING PAVER PATH		
STEPPING STONES IN WOOD CHIP  MULCH  LANDING	SHRUBS AND GRASSES AROUND  LAWN AREA			
PLANT EVERGREEN SCREENING	PLANT EVERGREEN SCREENING			SCALE= 3/32"=1'-0"
TREES ALONG SIDE PROPERTY LINE	TREES TO PROVIDE PRIVACY BETWEEN	PLANT EVERGREEN SCREENING		
	UNITS	TREES ALONG SIDE PROPERTY LINE WITH		
		DROUGHT TOLERANT ARCTOSTAPHYLOS 'EMERALD CARPET GROUNDCOVER PLANT -M @ 30" O.C.	TREE #9 18.9" LIQUIDAMBAR	
			STYRACIFLUA-SMEETGUM	
			STREET TREE	



HEATHER YOUNG ARCHITECTS
81 ENCINA AVENUE
PALO ALTO, CA 94301
PHONE: 650.473.0400 www.fgy-arch.com

MOCOLS PLANT FACTOR

HEIGHT × WIDTH

20' × |5'-20'

20'x35' x |5'-25' |20'x35' x |5'-25'

15'-40' ×

15'-25'

10'-5'

5'-5'

2.5'x 3'

4'-6' × 4'-6'

2'-3' × 3'

|'**-6**" × |'

6"-12" × 3'

12' x 12'

COMMON NAME

RED MAPLE

BAY LAUREL

MATT RUSH

TRUMPET VINE

EVERGREEN DOGWOOD

ELEGANT SWAMP MYRTLE

SILVER SHEEN PITTOSPORUM

WHITE CAMELLIA SASANQUA

NON-FRUITING DWARF OLIVE

MANZANITA GROUND COVER

HEAVENLY BAMBOO

AEONIUM (SUCCULENT)

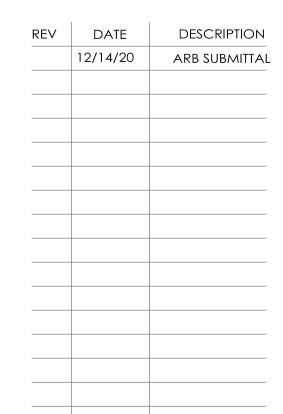
FERN PINE \*(PRUNED TO 10' WIDE) 20'x40'x '20'\*

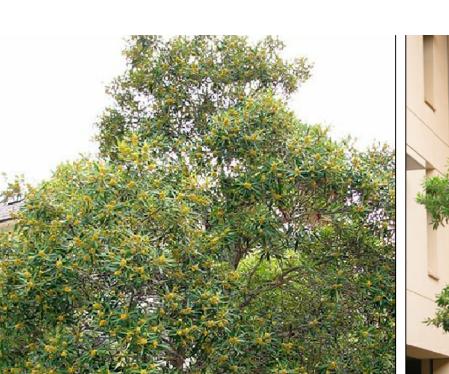
JAPANESE MAPLE (MULTI TRUNK) | 12' x 12'

MARA YOUNG LANDSCAPE ARCHITECT CAL. LICENSE # 3754 PHONE: (650) 704-9255 www.marayoung.com

160-164 WAVERLEY STREET

160-164 **WAVERLEY STREET** PALO ALTO, CA 94301







TREE B- TRISTANIA LAURINA ELEGANT ELEGANT SWAMP MYRTLE





TREE C- ACER RUBRUM OCTOBER GLORY RED MAPLE



TREE A- CORNUS CAPITATA MOUNTAIN MOON

EVERGREEN DOGWOOD

TREE D- PODOCARPUS GRACILLIOR FERN PINE



TREE E- LAURUS NOBILIS BAY LAUREL



PLANT LIST

36" BOX

10

AS SHOWN

AS SHOWN

AS SHOWN

BOTANICAL NAME

LAURUS NOBILIS

CORNUS CAPITATA 'MOUNTAIN MOON'

TRISTANIOPSIS LAURINA 'ELEGANT'

PODOCARPUS GRACILLIOR (TREE FORM)

PITTOSPORUM 'SILVER SHEEN'

CAMELLIA SAS. 'WHITE DOVES'

NANDINA 'FIRECRACKER'

OLEA 'LITTLE OLLIE'

LOMONDRA 'BREEZE'

AEONIUM ARBOREUM

DISTICTUS BUCCINATORIA

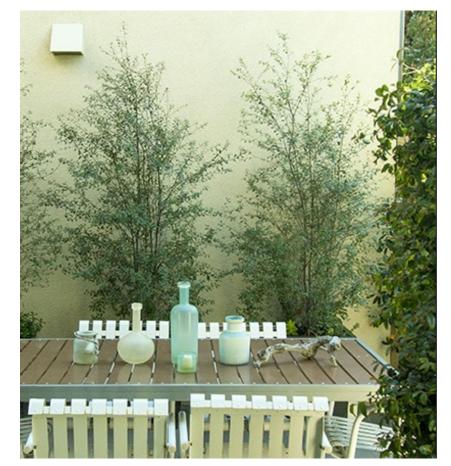
ACER RUBRUM 'RED OCTOBER GLORY'

ACER PALMATUM 'RED EMPEROR' (MULTI)

ARCTOSTAPHYLOS 'EMERALD CARPET'

@ 30" O.C.

TREE F- ACER PALMATUM 'RED EMPEROR' JAPANESE MAPLE



SHRUB G- PITTOSPORUM 'SILVER SHEEN' SILVER SHEEN PITTOSPRORUM



SHRUB H- CAMELLIA SASANQUA 'WHITE DOVES' WHITE CAMELLIA SASANQUA



SHRUB I- NANDIANA 'FIREPOWER' HEAVENLY BAMBOO



SHRUB J- OLEA 'LITTLE OLLIE' DWARF NON FRUITING OLIVE



GRASS K- LOMONDRA 'BREEZE' MATT RUSH



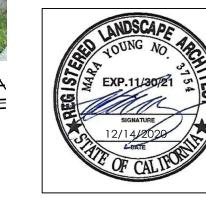
SUCCULENT L-AEONIUM ARBOREUM AEONUM (SUCCULENT)



GROUND COVER M-ARCTOSTAPHYLOS 'EMERALD CARPET' MANZANITA GROUNDCOVER



VINE N-DISTICTUS BUCCINATORIA TRUMPET VINE



PLANT IMAGES

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