NEW SINGLE FAMILY RESIDENCE + ATTACHED ADU

1053 ECHO DRIVE
LOS ALTOS, CA 94024
APN: 189-46-020

FIRE DEPT. NOTES

1. AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE INSTALLED THROUGHOUT THE NEW HOUSE & ATTACHED GARAGE. A PERMIT WILL BE APPLIED AS A DEFERRED ITEM. THE OWNER(S) AND CONTRACTOR(S) ARE RESPONSIBLE FOR CONSULTING WITH THE WATER PURVEYOR OF RECORD IN ORDER TO DETERMINE IF ANY MODIFICATION OR UPGRADE OF THE EXISTING WATER SERVICE IS REQUIRED. A STATE OF CALIFORNIA (C-16) FIRE PROTECTION CONTRACTOR SHALL SUBMIT PLANS, CALCULATIONS, A COMPLETED PERMIT APPLICATION & APPROPRIATE FEES TO THIS DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO BEGINNING OF WORK.

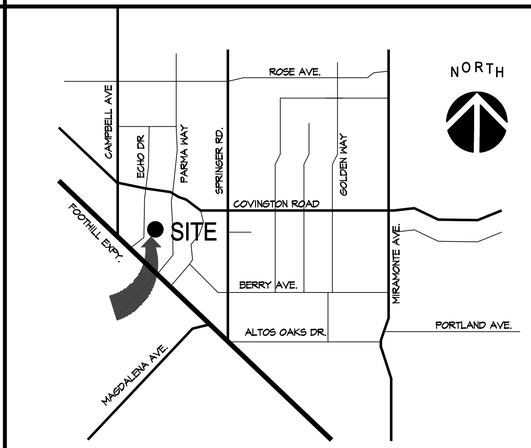
2. POTABLE WATER SUPPLIES SHALL BE PROTECTED FROM CONTAMINATION CAUSED BY FIRE PROTECTION WATER SUPPLIES. IT IS THE RESPONSIBILITY OF THE APPLICANT AND ANY CONTRACTORS AND SUBCONTRACTORS TO CONTACT THE WATER PURVEYOR SUPPLYING THE SITE OF SUCH PROJECT, AND TO COMPLY WITH THE REQUIREMENTS OF THAT PURVEYOR. SUCH REQUIREMENTS SHALL BE INCORPORATED INTO THE DESIGN OF ANY WATER-BASED FIRE PROTECTION SYSTEMS, AND / OR FIRE SUPPRESSION WATER SUPPLY SYSTEMS OR SOTRAGE CONTAMINATION OF THE POTABLE WATER SUPPLY OF THE PURVEYOR OF RECORD. FINAL APPROVAL OF THE SYSTEM(S) UNDER CONSIDERATION WILL NOT BE GRANTED BY THIS OFFICE UNTIL COMPLIANCE WITH THE REQUIREMENTS OF THE WATER PURVEYOR OF RECORD ARE DOCUMENTED BY THAT PURVEYOR AS HAVING BEEN MET BY THE APPLICANT.

3. PROVIDE AN APPROVED ADDRESS NUMBER PLACED IN A POSITION THAT IS PLAINLY LEGIBLE AND VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. THESE NUMBERS SHALL CONTRAST WITH THEIR BACKGROUND. WHERE REQUIRED BY THE FIRE CODE OFFICIAL, ADDRESS NUMBERS SHALL BE PROVIDED IN ADDITIONAL APPROVED LOCATIONS TO FACILITATE EMERGENCY RESPONSE. ADDRESS NUMBERS SHALL BE ARABIC NUMBERS OR ALPHABETICAL LETTERS. NUMBERS SHALL BE A MINIMUM 6 INCHES HIGH WITH A MINIMUM STROKE WIDTH OF 0.5 INCH.

   WHERE ACCESS IS BY MEANS OF A PRIVATE ROAD AND THE BUILDING CANNOT BE VIEWED FROMT HE PUBLIC WAY, A MONUMENT, POLE OR OTHER SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE. ADDRESS NUMBER SHALL BE MAINTAINED.

4. ALL CONSTRUCTION SITE MUST COMPLY WITH APPLICABLE PROVISIONS OF THE CFC CHAPTER 33 AND OUR STANDARD DETAIL AND SPECIFICATION SI-7.

LOCATION MAP



PROJECT CONTACT

PROPERTY OWNER
DI WU & GAOXIANG LIU
1053 ECHO DRIVE
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(650) 732-8466
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ARCHITECT
MARCH DESIGN
569 CLYDE AVENUE, UNIT 520
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EMAIL: mma.ala@gmail.com

CIVIL ENGINEER
WEC & ASSOCIATES
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(650) 887-0321 FAX
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ADVANCED TREE CARE
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EMAIL: rweather@pacbell.net

GREEN BUILDING CONSULTANT
JBRGY LLC
P.O. BOX 60192
PALO ALTO, CA 94306
(408) 671-6588
EMAIL: richardyyang@yahoo.com

PROJECT SUMMARY TABLE

ZONING COMPLIANCE			
	EXISTING	PROPOSED	ALLOWED/ REQUIRED
LOT COVERAGE: LAND AREA COVERED BY ALL STRUCTURES THAT ARE OVER 6 FEET IN HEIGHT	2,673 S.F. (22.6%)	3,024 S.F. (25.6%)	3,550 S.F. (30.0%)
FLOOR AREA : MEASURED TO THE OUTSIDE SURFACES OF EXTERIOR WALLS	2,612 S.F. (22.1%)	3,932 S.F. (33.0%)	3,933 S.F. (33.0%X11,000+10%X834)
SETBACKS:		GRD. FLR./ 2ND FLR.	GRD. FLR./ 2ND FLR.
FRONT	32'-3"	25'-0" / 33'-0 1/2"	25'-0"
REAR	44'-0"	44'-1" / 51'-8"	25'-0"
RIGHT SIDE	9'-4"	10'-2 1/2" / 23'-5 1/2"	10'-0" / 17'-6"
LEFT SIDE	13'-10"	10'-10" / 24'-0"	10'-0" / 17'-6"
HEIGHT:	14'-6"	26'-11 1/2"	27'-0"

SQUARE FOOTAGE BREAKDOWN			
	EXISTING	CHANGE IN	TOTAL PROPOSED
HABITABLE LIVING AREA: INCLUDES HABITABLE BASEMENT AREAS	2,238 S.F.	1268.1 S.F.	3506.1 S.F.
NON-HABITABLE AREA: (DOES NOT INCLUDE COVERED PORCHES OR OPEN STRUCTURES)	374 S.F.	52.2 S.F.	426.2 S.F.

LOT CALCULATION		
NET LOT AREA	11,834 S.F.	
FRONT YARD HARDSCAPE AREA HARDSCAPE AREA IN THE FRONT YARD SETBACK SHALL NOT EXCEED 50%	847.9 S.F. (57.3%)	
LANDSCAPING BREAKDOWN	TOTAL HARDSCAPE AREA (EXISTING AND PROPOSED): 3429.6 S.F. EXISTING SOFTSCAPE (UNDISTURBED) AREA: 4,811 S.F. NEW SOFTSCAPE AREA: 1,083.3 S.F. SUM OF ALL THREE SHOULD EQUAL THE SITE'S NET LOT AREA	

DRAWING INDEX

PROJECT SUMMARY

APN:	189-46-020
USE:	SINGLE FAMILY RESIDENCE
ZONING DISTRICT:	R1-10
TYPE OF CONSTRUCTION:	V-B
OCCUPANCY GROUP:	R3/ U
SIZE OF LOT:	+/-11,834 S.F.
ALLOWABLE LOT COVERAGE	3,550 S.F.
PROPOSED LOT COVERAGE:	3,024 S.F.
MAX. ALLOWABLE FLOOR AREA: (11,000 S.F. X 35%+ 834 S.F. X10%)	3,933 S.F.
FLOOR AREAS OF STRUCTURE	
ATTACHED GARAGE	426.2 S.F.
GROUND FLOOR AREA	1,969.3 S.F.
2ND FLOOR AREA:	1,536.8 S.F.
TOTAL FLOOR AREA:	3,932.3 S.F.
ATTACHED ADU:	1021 S.F.
MAXIMUM BUILDING HEIGHT:	27'-0"
PROPOSED BUILDING HEIGHT:	26'-11 1/2"
REQUIRED PARKING:	2
PARKING PROVIDED:	2

DEFERRED SUBMITTAL/ APPROVAL

ALL FIRE SPRINKLER PLANS SHALL BE SUBMITTED DIRECTLY TO THE SANTA CLARA COUNTY FIRE DEPARTMENT BY A LICENSED C-16 FIRE SPRINKLER CONTRACTOR.

PROJECT SCOPE

1. DEMOLISH EXISTING ATTACHED GARAGE 374 S.F., EXISTING SINGLE STORY HOUSE, 2238 S.F.

2. NEW CONSTRUCTION OF A 3432 S.F. SINGLE STORY HOUSE (INCLUDING AN ATTACHED 2-CAR GARAGE), AND AN ATTACHED 1021 S.F ADU. MAIN EXTERIOR BUILDING MATERIALS ARE CEMENT PLASTER & WOOD SIDING FINISH, AND METAL ROOF.

APPLICABLE CODES

2022 CRC, CBC (FOR STRUCTURAL), CPC, CMC, CEC, CALIFORNIA ENERGY CODE AND CITY OF LOS ALTOS ORDINANCES

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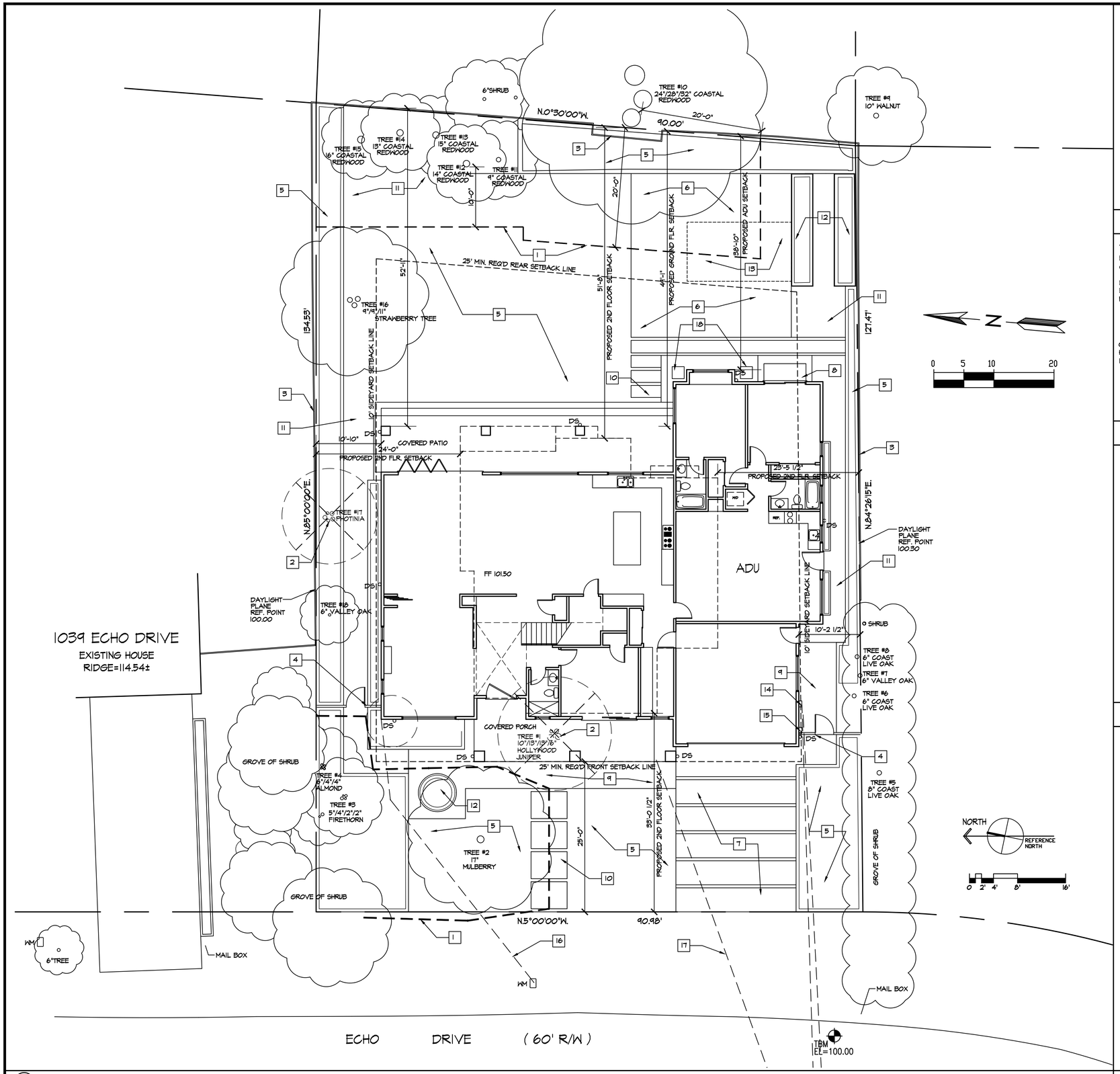
FIRE DEPT. COMMENTS
APRIL 21, 2025

LIU RESIDENCE
NEW SINGLE FAMILY RESIDENCE + ATTACHED ADU
1053 ECHO DRIVE
LOS ALTOS, CA 94024
APN: 189-46-020

DATE 03/17/25
CHECKED
DRAWN MM
JOB NO.

TITLE SHEET

A1.0



1 PROPOSED SITE PLAN

1/8"=1'-0"

PROPERTY LINE

TREE PROTECTION FENCING (MIN. 5 FT. TALL W/ POSTS DRIVEN TO GROUND)

(E) TREE TO REMAIN

(N) TREES & PLANTS SEE LANDSCAPE DRAWINGS

(E) TREE TO BE REMOVED SEE TREE TABLE & ARBORIST REPORT

EM (N) ELEC. METER/ PANEL (400 AMP)

GM (N) GAS METER

(N) SSCO (N) SANITARY SEWER CLEAN OUT

DS (N) DOWNSPOUT LOCATION W/ SPLASH BLOCK SEE CIVIL DRAWING

LEGEND

A. BUILDING SETBACK VERIFICATION: PRIOR TO FOUNDATION INSPECTION BY THE CITY, THE LLS OF RECORD SHALL PROVIDE A WRITTEN CERTIFICATION THAT ALL BUILDING SETBACKS ARE PER THE APPROVED PLANS.
B. ALL REMAINING EXISTING LANDSCAPE TO BE PROTECTED FROM DAMAGE DURING CONSTRUCTION, TYPICAL.
C. REMOVE EXISTING LANDSCAPE WHERE NEW CONSTRUCTION OCCURRED, VERIFY WITH OWNER FOR ITEM TO BE SAVED AND REUSED
D. REMOVE EXISTING FENCE WHERE NEW CONSTRUCTION OCCURRED
E. SEE SOIL REPORT FOR SITE & FOUNDATION COMPACTION & GRADING REQUIREMENTS.
F. ANY CONSTRUCTION WITHIN THE CITY RIGHT-OF-WAY MUST HAVE AN APPROVED PERMIT FOR CONSTRUCTION IN THE PUBLIC STREET PRIOR TO COMMENCEMENT OF WORK." APPLY FOR THIS PERMIT AT THE PUBLIC WORKS ENGINEERING (PWE) DIVISION. **THE PERFORMANCE OF THIS WORK IS NOT AUTHORIZED BY THE BUILDING PERMIT ISSUANCE BUT SHOWN ON THE BUILDING PERMIT FOR INFORMATION ONLY."**
G. REFER TO SHT. C-1 FOR DOWNSPOUT/ SPLASH BLOCK LOCATIONS.
H. REMOVE ALL (E) ONSITE SUBGRADE SEWER LINE & REPLACE WITH NEW.
I. HARDSCAPE WITH MORE THAN SIX-FOOT ENCROACHMENT INTO THE REQUIRED REAR YARD SHALL BE NO GREATER THAN SIX INCHES IN HEIGHT.

GENERAL NOTES

1. PROVIDE TYPE 1 TREE PROTECTION PER CITY STANDARDS. SEE ARBORIST REPORT.
2. REMOVE (E) NON-PROTECTED TREE AND SHRUBS.
3. (E) 6' HT. WD. FENCE TO REMAIN.
4. (N) 6' HT. WD. FENCE & GATES
5. (N) LANDSCAPING. SEE LANDSCAPING PLANS.
6. (N) WOOD DECK.
7. (N) CONC. DRIVEWAY
8. (N) CONC. LANDING & STEP
9. (N) CONC. WALKWAY & PATIO
10. (N) CONC. STEPPING STONE
11. DECOMPOSED GRANITE (D.G.)
12. (N) PLANTER. SEE LANDSCAPE DRAWINGS.
13. FUTURE POOL LOCATION. SEPARATE PERMIT.
14. (N) ELEC. METER. COORDINATE WITH PG & E.
15. (N) GAS METER. COORDINATE WITH PG & E.
16. NEW WATER METER & 2" WATER LINE. COORDINATE WITH WATER COMPANY.
17. NEW 4" SANITARY SEWER LINE.
18. NEW HEAT PUMP UNIT (1 FOR MAIN HOUSE & 1 FOR ADU)

KEYNOTES

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LIU RESIDENCE

NEW SINGLE FAMILY RESIDENCE + ATTACHED ADU

1053 ECHO DRIVE

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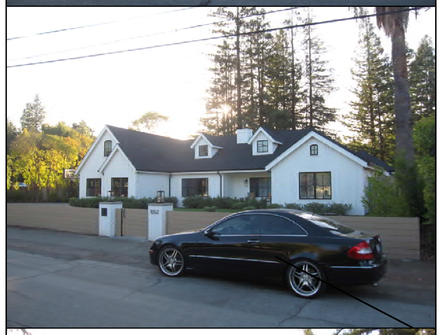
CHECKED

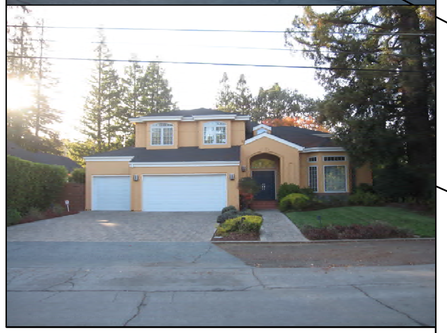
DRAWN MM

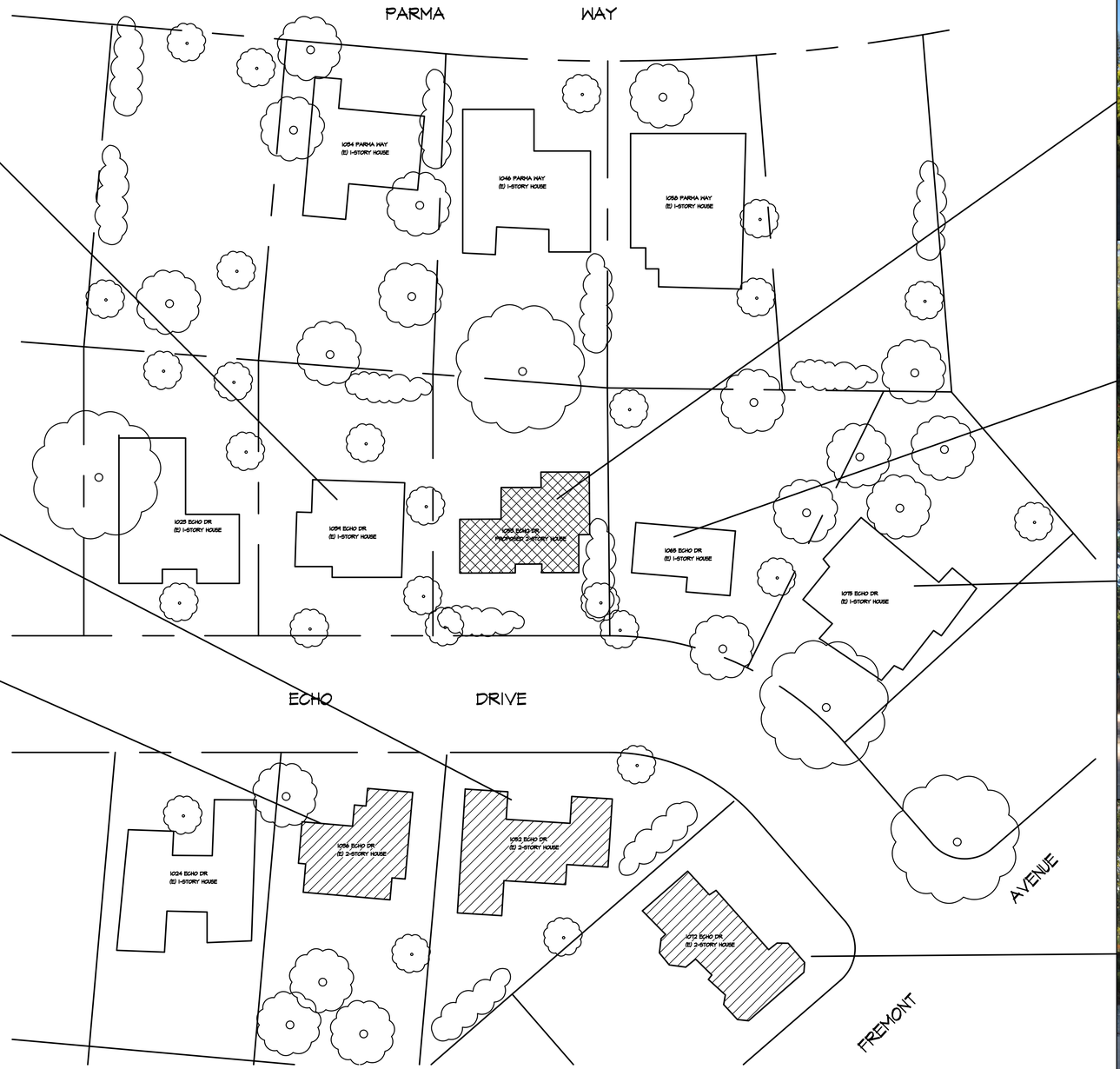
JOB NO.

PROPOSED SITE PLAN

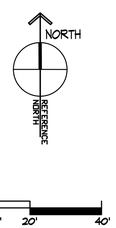
A1.1



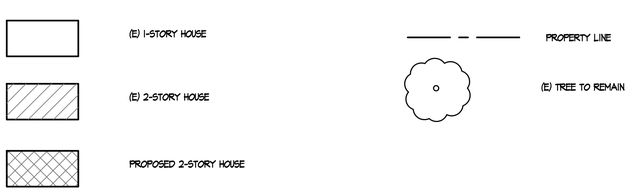




1 SITE CONTEXT 1/20"=1'-0"



0 10' 20' 40'



LEGEND

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SITE CONTEXT

A1.2

① 3D RENDERING– FRONT VIEW

② 3D RENDERING– REAR VIEW

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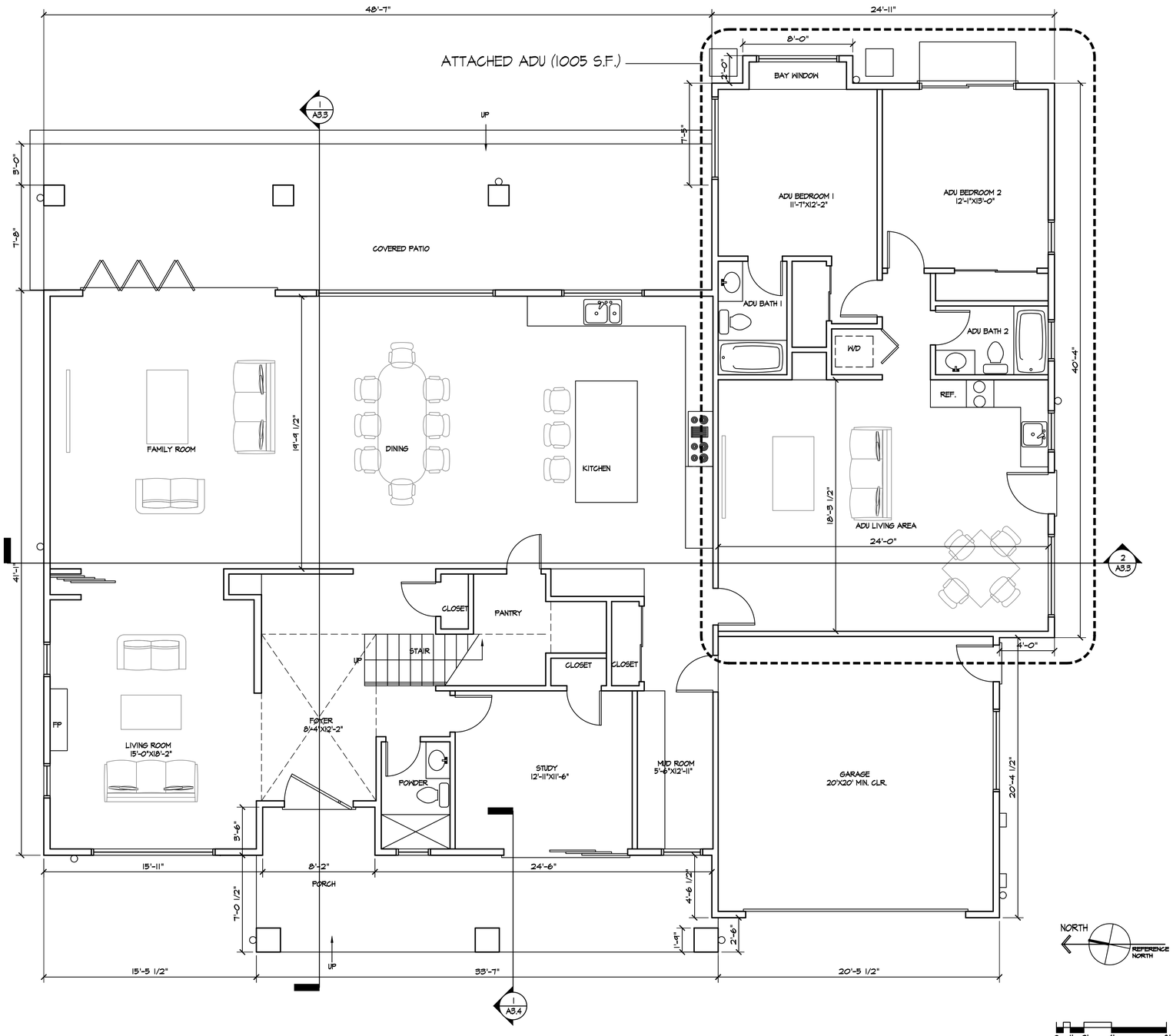
3D RENDERINGS

A1.3



1 PROPOSED GROUND FLOOR PLAN

1/4" = 1'-0"

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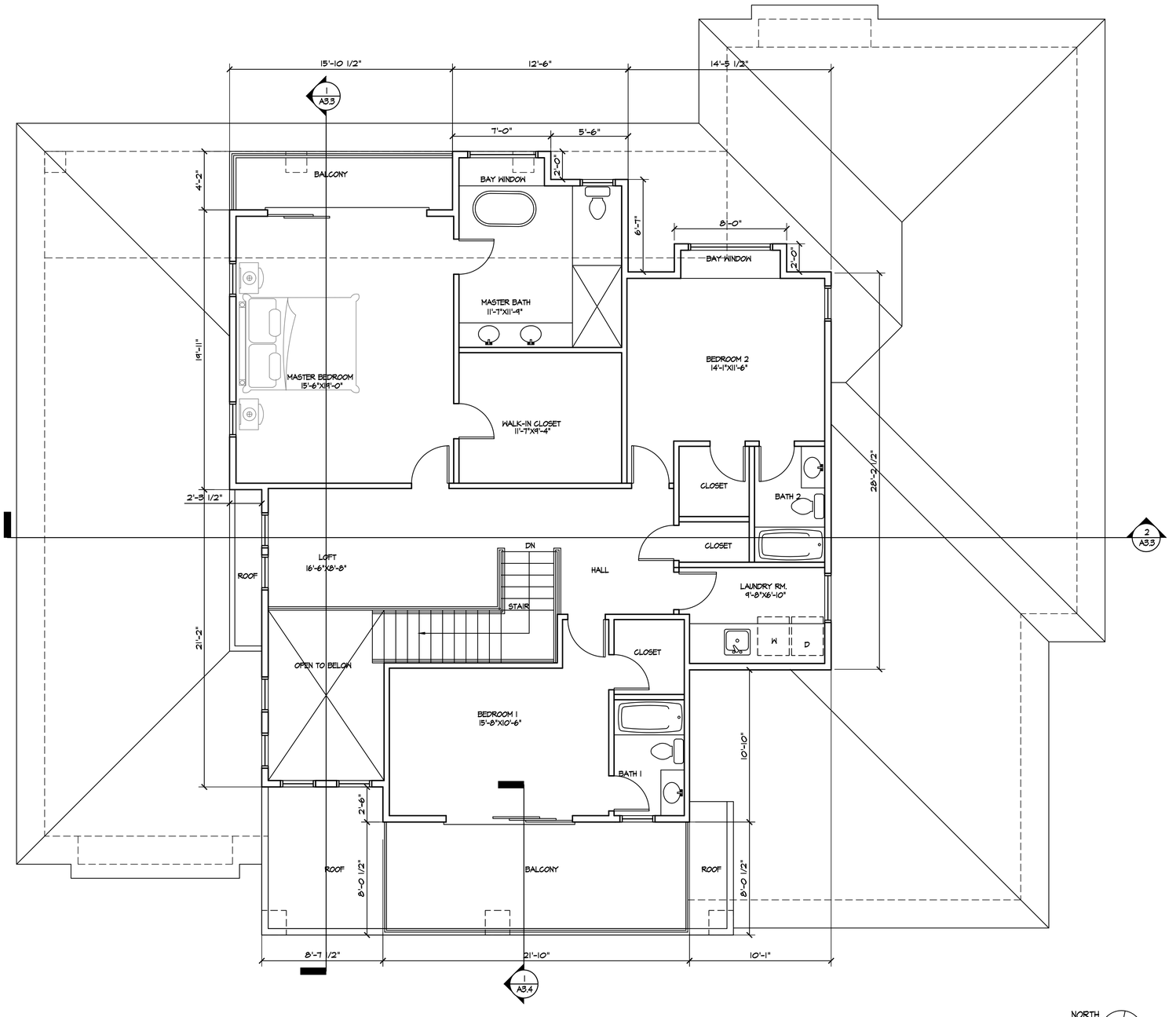
PROPOSED GROUND FLOOR PLAN

A2.1



0 1' 2' 4' 8'

1 PROPOSED SECOND FLOOR PLAN

1/4" = 1'-0"

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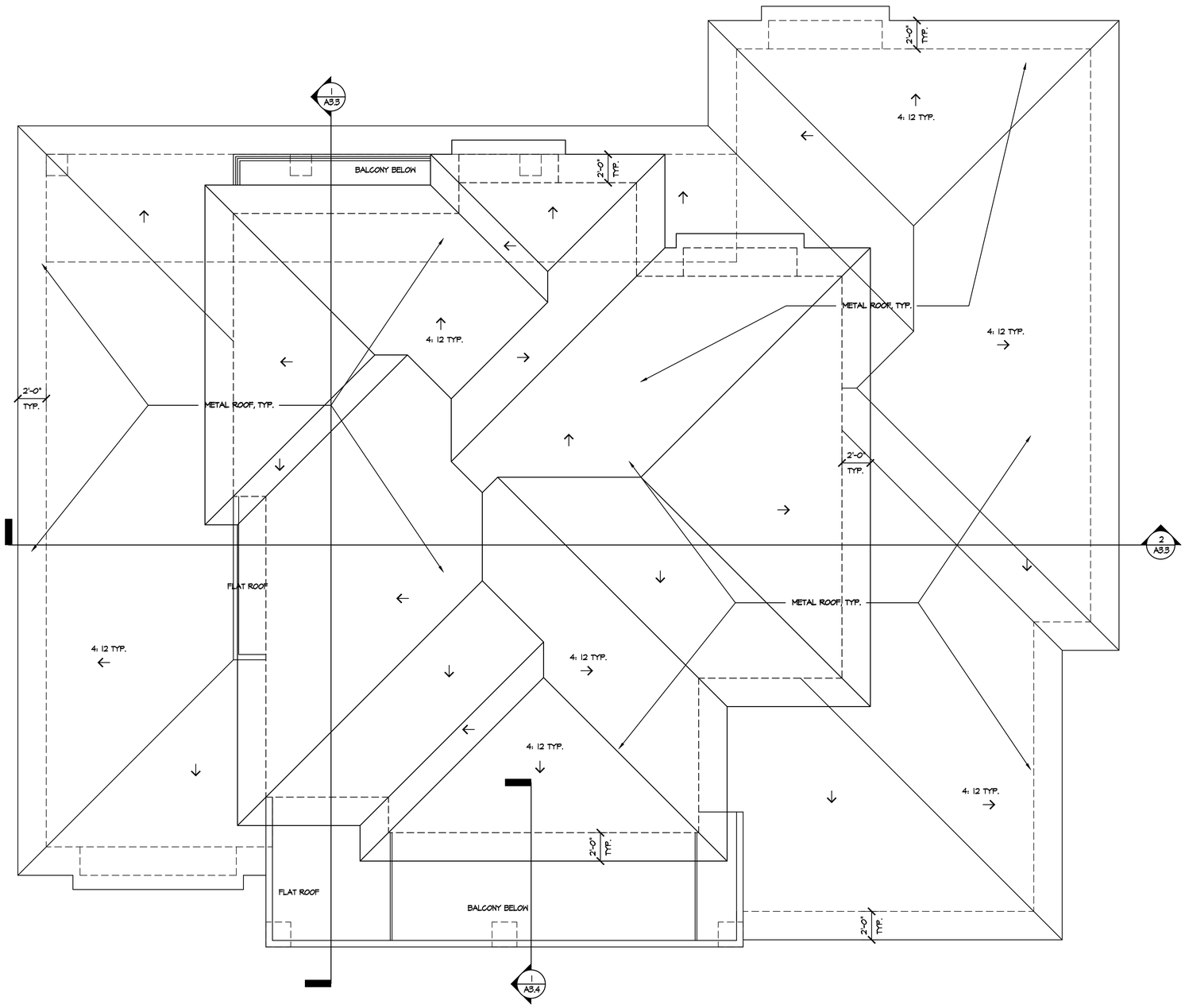
PROPOSED SECOND FLOOR PLAN

A2.2



1 PROPOSED ROOF PLAN

1/4" = 1'-0"

NORTH
REFERENCE NORTH

0 1' 2' 4' 8'

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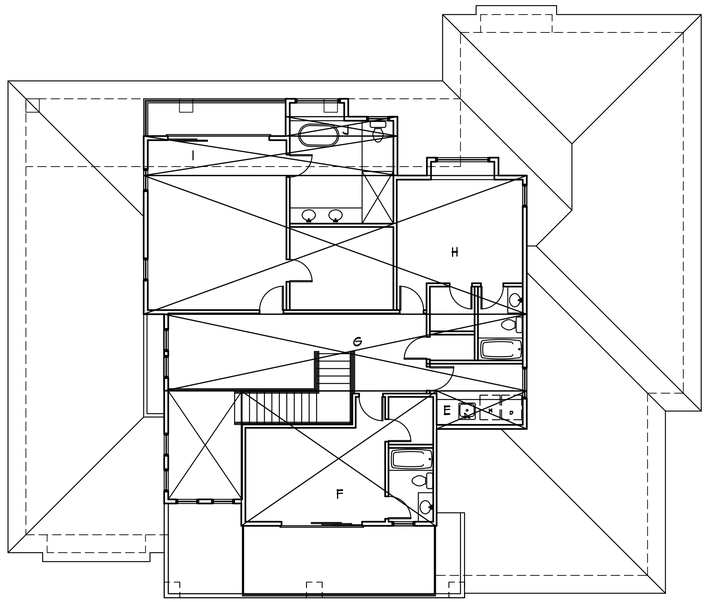
PROPOSED ROOF PLAN

A2.3



1 SECOND FLOOR AREA CALCULATION

1/8"=1'-0"

FLOOR AREA CALCULATION

FIRST FLOOR

SECTION	DIMENSIONS	AREA
A	20'-11" X 20'-4 1/2"	426.2
B	24'-6" X 3'-6"	85.7
C	15'-11" X 3'-6"	55.7
D	48'-7" X 37'-7 1/2"	1827.9
SUBTOTAL		2345.5

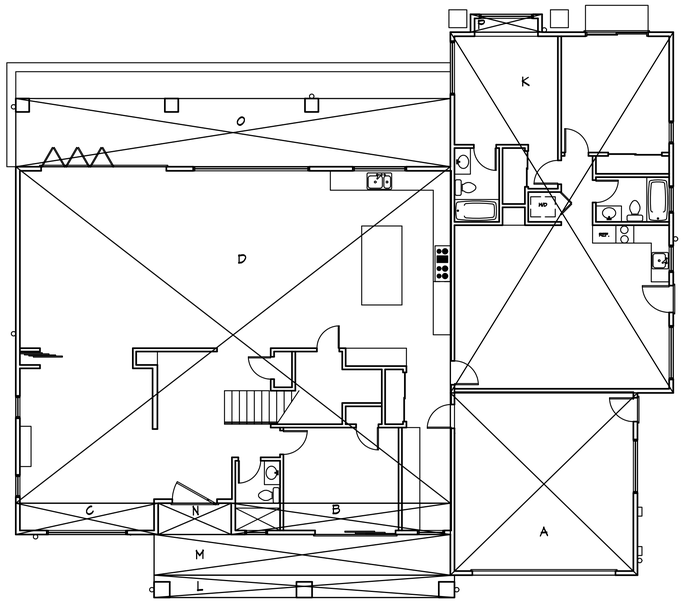
SECOND FLOOR

SECTION	DIMENSIONS	
E	10'-1" X 4'-3"	42.9
F	21'-10" X 15'-1"	329.3
G	40'-7" X 8'-7"	348.3
H	42'-10" X 15'-6"	663.9
I	28'-4 1/2" X 4'-5"	125.3
J	12'-6" X 2'-2"	27.1
SUBTOTAL		1536.8

TOTAL FLOOR AREA	3932.3 SF < 3933 SF

ATTACHED ADU

SECTION	DIMENSIONS	
K	24'-11" X 40'-4"	1005.0
P	8'-0" X 2'-0"	16.0
SUBTOTAL		1021.0



2 GROUND FLOOR AREA CALCULATION

1/8"=1'-0"

FLOOR COVERAGE CALCULATION

SECTION	DIMENSIONS	AREA
GROUND FLOOR AREA		
L	33'-1" X 2'-6"	84.0
M	33'-1 1/2" X 4'-6 1/2"	150.4
N	8'-2" X 3'-6"	28.6
O	48'-7" X 7'-7 1/2"	370.4
TOTAL		633.4

TOTAL COVERAGE	3028.9 SF < 3550 SF

ATTACHED ADU

SECTION	DIMENSIONS	
K	24'-11" X 40'-4"	1005.0
P	8'-0" X 2'-0"	16.0
SUBTOTAL		1021.0

ADU COVERAGE	1021.0 SF

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FLOOR & COVERAGE AREA CALCULATIONS

A2.4

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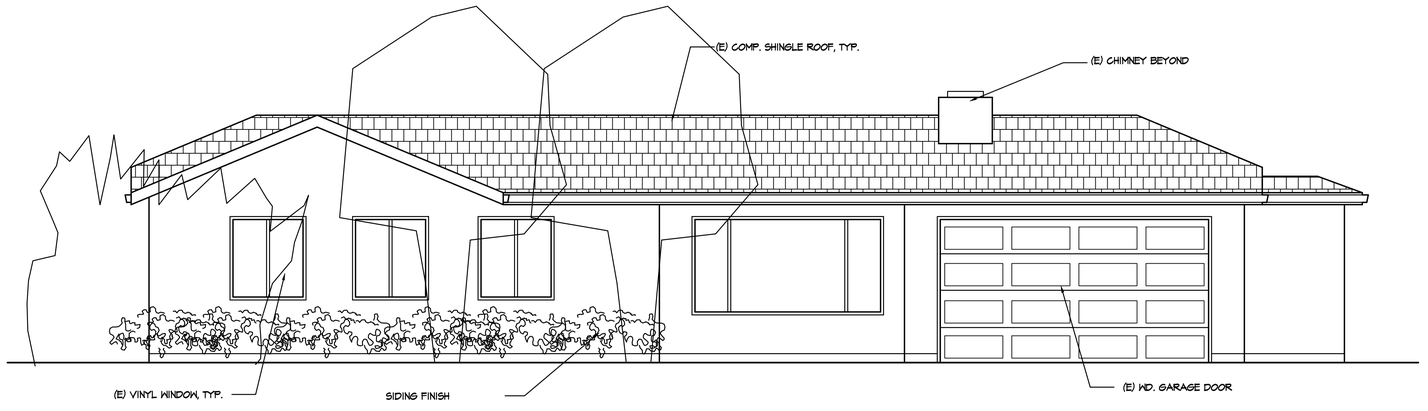


0 1' 2' 4' 8'

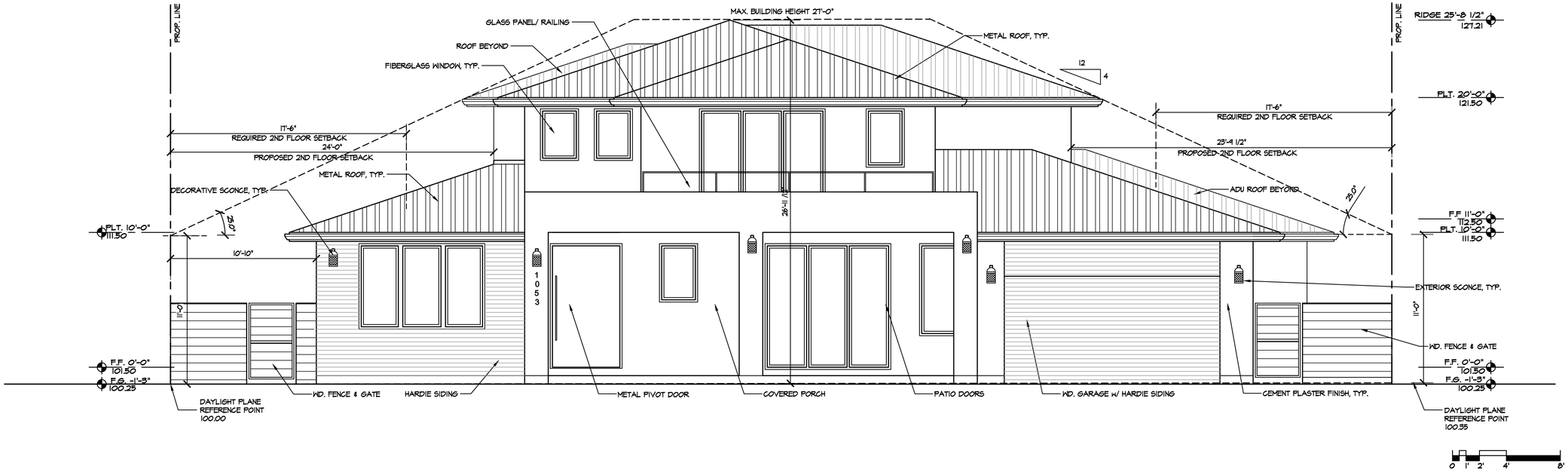
DATE	03/17/25
CHECKED	
DRAWN	MM
JOB NO.	

EXISTING STREET ELEVATION

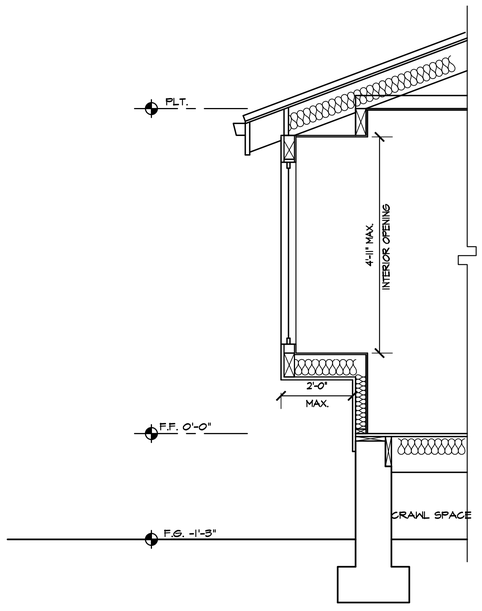
A3.0

1 EXISTING STREET ELEVATION (WEST)

1/4" = 1'-0"



1 PROPOSED STREET ELEVATION (WEST) 1/4" = 1'-0"



3 BAY WINDOW SECTION 1/2" = 1'-0"

2 PROPOSED RIGHT SIDE ELEVATION (SOUTH) 1/4" = 1'-0"

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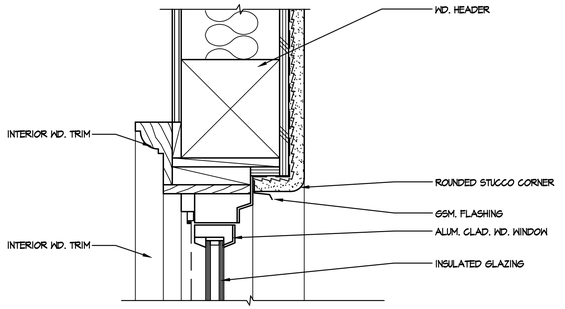
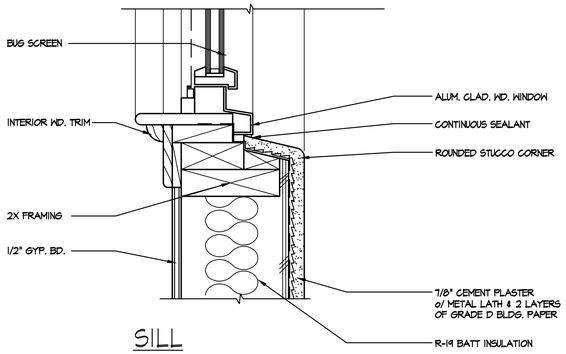
PROPOSED EXTERIOR ELEVATIONS

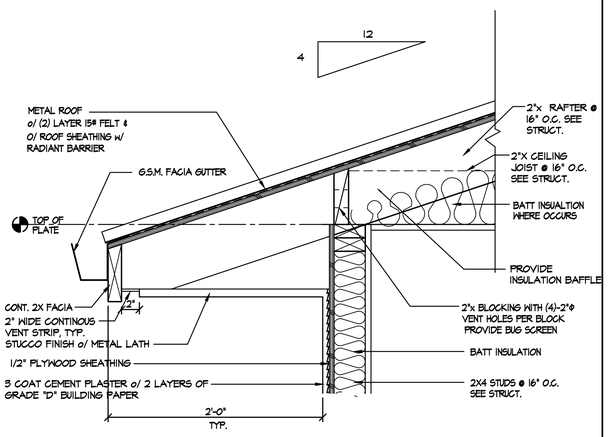
A3.1



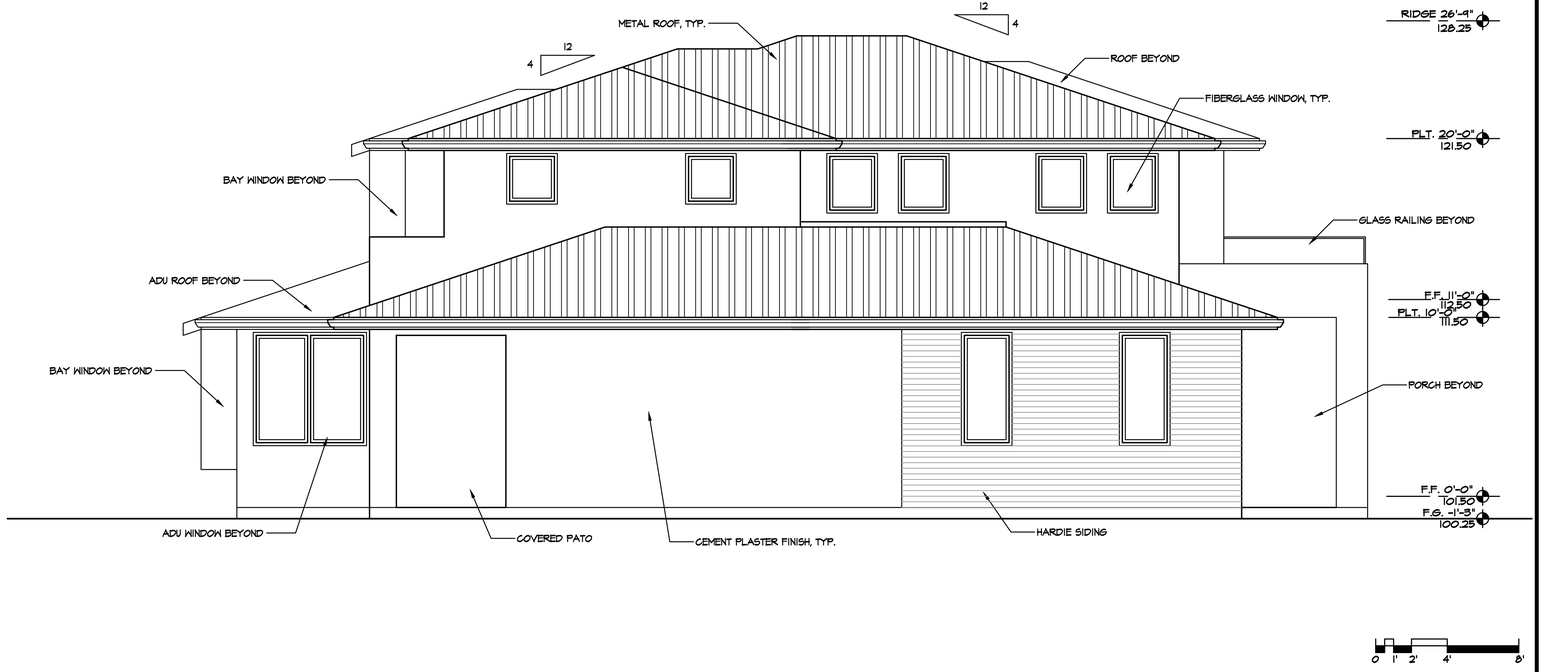


3 TYPICAL RECESSED WINDOW DETAIL 3" = 1'-0"

1 PROPOSED REAR ELEVATION (EAST) 1/4" = 1'-0"



4 TYPICAL EAVE DETAIL 1 1/2" = 1'-0"



2 PROPOSED LEFT SIDE ELEVATION (NORTH) 1/4" = 1'-0"

MArch
DESIGN
ARCHITECTURE | INTERIOR | PLANNING
569 CLYDE AVENUE, UNIT 520
MOUNTAIN VIEW, CA 94043
650. 302. 1987
mike@march.design

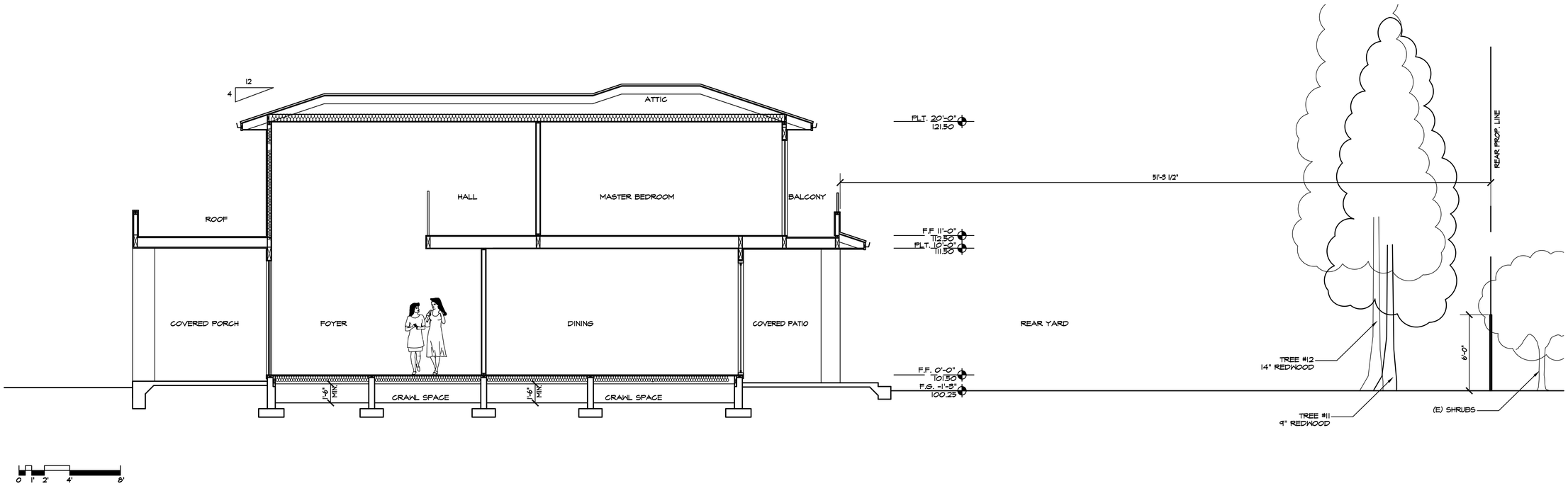
REVISIONS

LIU RESIDENCE
NEW SINGLE FAMILY RESIDENCE + ATTACHED ADU
1053 ECHO DRIVE
LOS ALTOS, CA 94024
APN: 189-46-020

DATE 03/17/25
CHECKED
DRAWN MM
JOB NO.

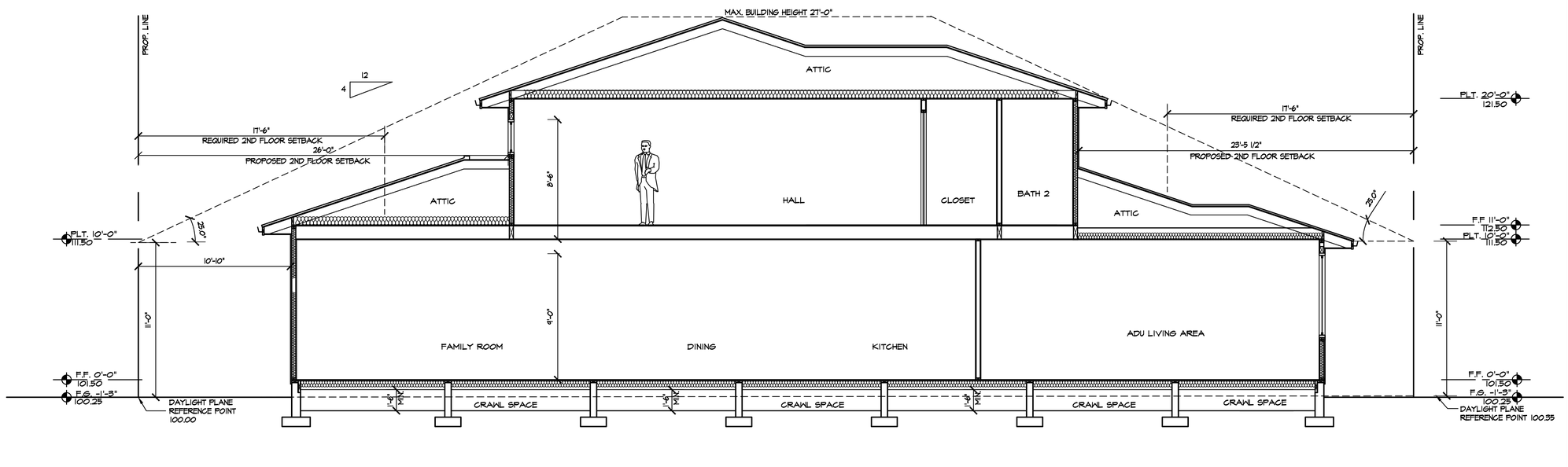
PROPOSED EXTERIOR ELEVATIONS

A3.2



1 SECTION

1/4" = 1'-0"



2 SECTION

1/4" = 1'-0"

MArch
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REVISIONS

LIU RESIDENCE

NEW SINGLE FAMILY RESIDENCE + ATTACHED ADU

1053 ECHO DRIVE

LOS ALTOS, CA 94024

APN: 189-46-020

DATE 03/17/25

CHECKED

DRAWN

JOB NO.

BUILDING SECTIONS

A3.3

MArch
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REVISIONS

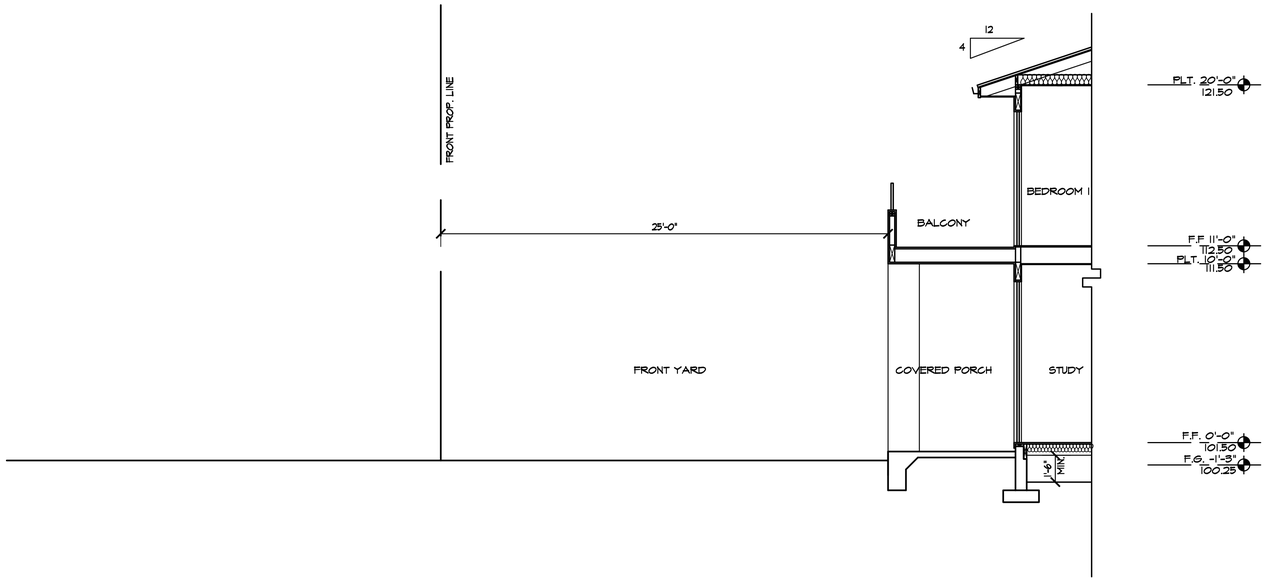
LIU RESIDENCE
NEW SINGLE FAMILY RESIDENCE + ATTACHED ADU

1053 ECHO DRIVE
LOS ALTOS, CA 94024
APN: 189-46-020

DATE 03/17/25
CHECKED
DRAWN
JOB NO.

BUILDING SECTION

A3.4



0 1' 2' 4' 8'

1 SECTION

1/4" = 1'-0"

2022 CALIFORNIA GREEN BUILDING RESIDENTIAL STANDARD CODE MADATORY MESURES

CALGREEN BUILDING NOTE

4.106.2 Storm water drainage and retention during construction. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.1.) Retention basins of sufficient size shall be utilized to retain storm water on the site. 2.) Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency. 3.) Compliance with a lawfully enacted storm water management ordinance. **Note:** Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil. (Website: https://www.waterbaords.ca.gov/water_issues/programs/storwater/construction.html)

4.106.3. Grading and paving. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following: 1.) Swales 2.) Water collection and disposal systems 3.) French drains 4.) Water retention gardens 5.) Other water measures which keep surface water away from buildings and aid in groundwater recharge. **Exception:** Additions and alterations not altering the drainage path.

4.106.4.1 New one- and two-family dwellings and town- houses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device. **Exemption:** A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger at the time of original construction in accordance with the California Electrical Code.

4.201.1 Building meets or exceeds the requirements of the California Building Energy Efficiency Standards.

4.303.1 Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with Sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.4.4.

Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a non compliant plumbing fixture, types of residential buildings affected and other important enactment dates.

4.303.1.1 Water closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type Toilets. **Note:** The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

4.303.1.2 Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.

4.303.1.3 Showerheads.
4.303.1.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time. **Note:** A hand-held shower shall be considered a showerhead.

4.303.1.4.1 Residential lavatory faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.

4.303.1.4.2 Lavatory faucets in common and public use areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.

4.303.1.4.3 Metering faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle.

4.303.1.4.4 Kitchen faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. **Note**: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

4.303.3 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1701.1 of the California Plumbing Code.

4.304.1 Outdoor potable water use in landscape areas. Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent. **Notes:** The Model Water Efficient Landscape Ordinance (MWELO) is located in California Code of Regulation, Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including a water budget calculator, are available at: https://www.water.ca.gov.

4.406.1 Rodent proofing. Annular spaces around pipes, electric cables, conduits, or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the enforcing agency.

4.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance. **Exceptions:** 1.) Excavated soil and land-clearing debris. 2.) Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite. 3.) The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

4.408.2 Construction waste management plan. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency. 1) Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale. 2.) Specify if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream). 3.) Identify diversion facilities where the construction and demolition waste material will be taken. 4.) Identify construction methods employed to reduce the amount of construction and demolition waste generated. 5.) Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

4.408.3 Waste management company. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1. **Note:** The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.

4.408.5 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1 through 5, Section 4.408.3 or Section 4.408.4. **Note:** 1.) Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at http://www.hcd.ca.gov/building-standard/calgreen/cal-green-form.html may be used to assist in documentation compliance with this section. 2.) Mixed construction and demolition debris (C&D) processors can be located at California Department of Resources Recycling and Recovery (CalRecycle).

4.410.1 Operation and maintenance manual. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building: 1.) Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure. 2) Operation and maintenance instructions for the following: a.) Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment. b.) Roof and yard drainage, including gutters and downspouts. c.) Space conditioning systems, including condensers and air filters. d.) Landscape irrigation systems. e.) Water reuse systems. 3.) Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations. 4) Public transportation and/or carpool options available in the area. 5.) Educational material on the positive impacts of an interior relative humidity between 30–60 percent and what methods an occupant may use to maintain the relative humidity level in that range. 6) Information about water-conserving landscape and irrigation design and controllers which conserve water. 7) Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation. 8.) Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc. 9) Information about state solar energy and incentive programs available. 10.) A copy of all special inspection verifications required by the enforcing agency or this code. 11.) Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures. 12.) Information and/or drawings identifying the location of grab bar reinforcements.

4.410.2 Recycling by occupants. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive. **Exception:** Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are note required to comply with the organic waste portion of this section.

4.503.1 Fireplace. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

4.504.1 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of water, dust and debris, which may enter the system.

4.504.2 Finish material pollutant control. Finish materials shall comply with this section.

Table 4.504.2 Sealant VOC Limit
(Less Water and Less Exempt Compounds in Grams per Liter)

SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine Deck	760
Nonmembrane Roof	300
Roadway	250
Single-Ply Roof Membrane	450
Other	420
SEALANT PRIMERS	
Architectural	
Non Porous	250
Porous	775
Modified Bituminous	500
Marine Deck	760
Other	750

4.504.2.1 Adhesives, sealants and caulks. Adhesives, sealants and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply: 1.) Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below. 2.) Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with Section 94507.

Table 4.504.1 Adhesive VOC Limit [1, 2]
(Less Water and Less Exempt Compounds in Grams per Liter)

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
Indoor Carpet Adhesives	50
Carpet Pad Adhesives	50
Outdoor Carpet Adhesives	150
Wood Flooring Adhesive	100
Rubber Floor Adhesives	60
Subfloor Adhesives	50
Ceramic Tile Adhesives	65
VCT and Asphalt Tile Adhesives	50
Drywall and Panel Adhesives	50
Cove Base Adhesives	50
Multipurpose Construction Adhesives	70
Structural Glazing Adhesives	100
Single-Ply Roof Membrane Adhesives	250
Other Adhesive not specifically listed	50
SPECIALTY APPLICATIONS	
PVC Welding	510
CPVC Welding	490
ABS Welding	325
Plastic Cement Welding	250
Adhesive Primer for Plastic	550
Contact Adhesive	80
Special Purpose Contact Adhesive	250
Structural Wood Member Adhesive	140
Top and Trim Adhesive	250
SUBSTRATE SPECIFIC APPLICATIONS	
Metal to Metal	30
Plastic Foams	50
Porous Material (except wood)	50
Wood	30
Fiberglass	80

4.504.2.2 Paints and coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.

Table 4.504.3 VOC Content Limits For Architectural Coatings [2, 3]
(Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds)

COATING CATEGORY	G/L
Flat coatings	50
Nonflat coatings	100
Nonflat - high gloss coatings	150
Specialty Coatings	
Aluminum roof coatings	400
Basement specialty coatings	400
Bituminous roof coatings	50
Bituminous roof primers	350
Bond breakers	350
Concrete curing compounds	350
Concrete/masonry sealers	100
Driveway sealers	50
Dry fog coatings	150
Faux finishing coatings	350
Fire resistive coatings	350
Floor coatings	100
Form-release compounds	250
Graphic arts coatings (sign paints)	500
High temperature coatings	420
Industrial maintenance coatings	250
Low solids coatings1	120
Magnesite cement coatings	450
Multicolor coatings	250
Pretreatment wash primers	420
Primers, sealers, and undercoaters	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Rust preventative coatings	250
Shellacs	
Clear	730
Opaque	550
Specialty primers, sealers, and undercoaters	100
Stains	250
Stone consolidants	450
Swimming pool coatings	340
Traffic marking coatings	100
Tub and tile refinish coatings	420
Waterproofing membranes	250
Wood coatings	275
Wood preservatives	350
Zinc-rich primers	340

4.504.2.3 Aerosol paints and coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.

4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following: 1.) Manufacturer's product specification. 2.) Field verification of on-site product containers.

4.504.3 Carpet systems. All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350) See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx..

4.504.4 Resilient flooring systems. Where resilient flooring is installed , at least 80% of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350) See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx..

4.504.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5

Table 4.504.5 Formaldehyde Limits[1]
Maximum Formaldehyde Emissions in Parts per Million

PRODUCT	CURRENT LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard[2]	0.13

4.505.2 Concrete slab foundations. Concrete slab foundations required to have a vapor retarder by the California Building Code, Chapter 19 or concrete slab-on-ground floors required to have a vapor retarder by the California Residential Code , Chapter 5, shall also comply with this section.

4.505.2.1 Capillary break. A capillary break shall be installed in compliance with at least one of the following: 1.) A 4-inch (101.6 mm) thick base of ½ inch (12.7 mm) or larger clean aggregate shall be provided with a vapor retarder in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06. 2.) Other equivalent methods approved by the enforcing agency. 3.) A slab design specified by a licensed design professional.

4.505.3 Moisture content of building materials. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following: 1.) Moisture content shall be determined with either a probe-type or a contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements found in Section 101.8 of this code.2.) Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece to be verified. 3) At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing. Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.

4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following: 1.) Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building. 2.) Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control. a.) Humidity controls shall be capable of adjustment between a relative humidity range of ≤ 50 percent to a maximum of 80 percent. A humidity control may utilize manual or automatic means of adjustment. b.)A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in).**Notes:** 1.) For the purposes of this section, a bathroom is a room which contains a bathtub, shower, or tub/shower combination. 2.) Lighting integral to bathroom exhaust fans shall comply with the California Energy Code.

4.507.2 Heating and air-conditioning system design. Heating and air-conditioning systems shall be sized, designed and have their equipment selected using the following methods: 1.)The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J—2016 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods. 2.)Duct systems are sized according to ANSI/ACCA 1 Manual D—2016 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.3.)Select heating and cooling equipment according to ANSI/ACCA 3 Manual S—2014 (Residential Equipment Selection) or other equivalent design software or methods. **Exception**: Use of alternate design temperatures necessary to ensure the systems function are acceptable.

702.1 Installer training. HVAC system installers shall be trained and certified in the proper installation of HVAC systems, including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include, but are not limited to the following: 1.) State certified apprenticeship programs. 2.) Public utility training programs. 3.) Training programs sponsored by trade, labor or statewide energy consulting or verification organizations. 4.) Programs sponsored by manufacturing organizations. 5.) Other programs acceptable to the enforcing agency.

702.2 Special inspection. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or the duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualification acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector. 1.) Certification by a national or regional green building program or standard publisher. 2) Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors. 3) Successful completion of a third party apprentice training program in the appropriate trade. 4.) Other programs acceptable to the enforcing agency.

703.1 Documentation. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified in the application checklist.

Richard Yang
GreenPoint Rater
Rater ID# 2009-367
Expire: 11/12/26

PROJECT: 1053 Echo Drive, Los Altos, CA 94024
APN: 189-46-020

SHEET NO.

CG

2022 RESIDENTIAL CALGREEN NOTES

CALGREEN SIGNATURE DECLARATIONS

Project Name: Liu Residence

Project Address: 1053 Echo Drive Los Altos

Project Description: New 2-Story Single Family Home + attached ADU

SECTION 1 – DESIGN VERIFICATION

Complete all lines of Section 1 – "Design Verification" and **SUBMIT THE ENTIRE CHECKLIST (COLUMNS 2 AND 3) WITH THE PLANS AND BUILDING PERMIT APPLICATION TO THE BUILDING DEPARTMENT.**

The design professional responsible for compliance with Cal Green Standards has reviewed the plans and certifies that the items checked above are hereby incorporated into the project plans and will be implemented into the project in accordance with the requirements set forth in the **2022 California Green Building Standards Code** as adopted by the City of Los Altos.

Design Professional's Signature — Date: 11/13/24

Design Professional's Name (Please Print): Mike Ma

Signature of Green Point Rater/Certified ICC Cal Green Special Inspector/Consulting Group — Date: 11/12/2024

Name of Green Point Rater/Inspector (Please Print): Richard Yang — Phone No.: (408) 677-6588

Email Address: richard@jbrcyllc.com — License No.: GPR2009-301,ICC8786778

SECTION 2 – IMPLEMENTATION VERIFICATION

Complete, sign and submit the completed checklist, including column 3, together with all original signatures on Section 2 to the Building Department **PRIOR TO BUILDING DEPARTMENT FINAL INSPECTION**.

I have inspected the work and have received sufficient documentation to verify and certify that the project identified above was constructed in accordance with this Green Building Checklist and in accordance with the requirements of the **2022 California Green Building Standards Code** as adopted by the City of Los Altos.

Signature of Licensed Green Point Rater/Certified ICC CalGreen Special Inspector/ Consulting Group — Date

Name of Green Point Rater/Inspector (Please Print) — Phone No.

Email address — License No.

Environmental Quality		
Fireplaces		
4.503.1 Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with US EPA New Source Performance Standards (NSPS) emission limits as applicable and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.	N/A	
Pollutant Control		
4.504.1 Duct openings and other related air distribution component openings shall be covered during construction.	☐	
4.504.2.1 Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits.	☐	
4.504.2.2 Paints, stains and other coatings shall be compliant with VOC limits.	☐	
4.504.2.3 Aerosol paints and coatings shall be compliant with product weighted MIR limits for ROC and other toxic compounds.	N/A	
4.504.2.4 Documentation shall be provided to verify that compliant VOC limit finish materials have been used.	☐	
4.504.3 Carpet and carpet systems shall be compliant with VOC limits.	☐	
4.504.4 80 percent of floor area receiving resilient flooring shall comply with specified VOC criteria.	☐	
4.504.5 Particleboard, medium density fiberboard (MDF) and hardwood plywood used in interior finish systems shall comply with low formaldehyde emission standards.	☐	
Interior Moisture Control		
4.505.2 Vapor retarder and capillary break is installed at slab-on-grade foundations.	☐	
4.505.3 Moisture content of building materials used in wall and floor framing is checked before enclosure.	☐	
Indoor Air Quality and Exhaust		
4.506.1 Each bathroom shall be provided with the following: 1. ENERGY STAR fans ducted to terminate outside of the building. 2. Fans must be controlled by a humidity control (separate or built-in); OR functioning as a component of a whole-house ventilation system. 3. Humidity controls with manual or automatic means of adjustment, capable of adjustment between a relative humidity range of ≤ 50 percent to a maximum of 80 percent	☐	
Environmental Comfort		
4.507.2 Duct systems are sized, designed, and equipment is selected using the following methods: 1. Establish heat loss and heat gain values according to ANSI/ ACCA 2 Manual J-2016 or equivalent. 2. Size duct systems according to ANSI/ACCA 1 Manual D-2016 or equivalent. 3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2014 or equivalent.	☐	
Installer and Special Inspector Qualifications		
Qualifications		
702.1 HVAC system installers are trained and certified in the proper installation of HVAC systems.	☐	
702.2 Special inspectors employed by the enforcing agency must be qualified and able to demonstrate competence in the discipline they are inspecting.	☐	
Verifications		
703.1 Verification of compliance with this code may include construction documents, plans, specifications builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which show substantial conformance.	☐	

1. Green building measures listed in this table may be mandatory if adopted by a city, county, or city and county as specified in Section 101.7
2. Required prerequisite for this Tier.
3. These measures are currently required elsewhere in statute or in regulation

2022 CALGREEN RESIDENTIAL MANDATORY MEASURES CHECKLIST Version 1_12_2023

DEVELOPMENT SERVICES DEPARTMENT – BUILDING DIVISION
VERONICA TINOCO, BUILDING OFFICIAL
BLDPERMIT@LOSALTOSCA.GOV • WWW.LOSALTOSCA.GOV

PURPOSE:

The 2022 Cal Green Code applies to all newly constructed hotels, motels, lodging houses, dwellings, dormitories, condominiums, shelters, congregate residences, employee housing, factory-built housing, and other types of dwellings with sleeping accommodations and new accessory buildings associated with such uses. This section also applies to additions and alterations where there is an increase in conditioned space and specifies that these requirements only apply to the specific area of the addition or alteration. Existing site and landscaping improvements that are not otherwise disturbed are not subject to the requirements of Cal Green.

Project Name: Liu Residence

Project Address: 1053 Echo Drive Los Altos

Project Description: New 2-Story Single Family Home + attached ADU

Instructions (for projects of 300 sq. ft. or more):

1. The owner or owner's agent shall employ a licensed qualified green-point rater (www.buildgreen.org) experienced with the 2022 California Green Building Standards Codes to verify and assure that all required work described herein is properly planned and implemented in the project.
2. The green-point rater, in collaboration with the design professional shall review **Column 2** of this checklist, and initial all applicable measures, sign and date **Section 1 –Design Verification** at the end of this checklist., this form shall be incorporated into the plans.
   PRIOR TO FINAL INSPECTION BY THE BUILDING DEPARTMENT, the Green-Point Rater shall complete Column 3 and sign and Date **Section 2 – Implementation Verification** at the end of this checklist and submit the completed form to the Building Department.

MANDATORY FEATURE OR MEASURE	COLUMN 2 **Project Requirements** Rater to initial applicable measures prior to submitting forms	COLUMN 3 **Verification** Rater to verify during construction as applicable to project
Planning and Design		
Site Development		
4.106.2 A plan is developed and implemented to manage storm water drainage during construction	☐	
4.106.3 Construction plans shall indicate how site grading, or a drainage system will manage all surface water flows to keep water from entering buildings.	☐	
4.106.4 Provide capability for electric vehicle charging for one- and two-family dwellings; townhouses with attached private garages; multifamily dwellings; and hotels/motels in accordance with Section 4.106.4.1 or 4.106.4.2	☐	
Energy Efficiency		
General		
4.201.1 Building meets or exceeds the requirements of the *California Building Energy Efficiency Standards*[3].	☐	
Water Efficiency and Conservation		
Indoor Water Use		
4.303.1. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) installed in residential buildings shall comply with the prescriptive requirements of Sections 4.303.1.1 through 4.303.1.4.4.	☐	
4.303.2 Plumbing fixtures and fittings required in Section 4.303.1 shall be installed in accordance with the *California Plumbing Code* and shall meet the applicable referenced standards.	☐	
4.303.1.4.3 Metering faucets in residential buildings shall not deliver more than 0.2 gallons per cycle.	N/A	
Outdoor Water Use		
4.304.1 Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.	☐	
Material Conservation and Resource Efficiency		
Enhanced Durability and Reduced Maintenance		
4.406.1 Annular spaces around pipes, electric cables, conduits, or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the enforcing agency.	☐	
Construction Waste Reduction, Disposal and Recycling		
4.408.1 Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with one of the following: 1. Comply with a more stringent local construction and demolition waste management ordinance, or 2. A construction waste management plan per Section 4.408.2, or 3. A waste management company per Section 4.408.3, or 4. The waste stream reduction alternative per Section 4.408.4	☐	
Building Maintenance and Operation		
4.410.1 An operation and maintenance manual shall be provided to the building occupant or owner.	☐	
4.410.2 Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive. See exception for rural jurisdictions	N/A	

March DESIGN
ARCHITECTURE | INTERIOR | PLANNING
569 CLYDE AVENUE, UNIT 520
MOUNTAIN VIEW, CA 94043
650. 302. 1987
mike@march.design

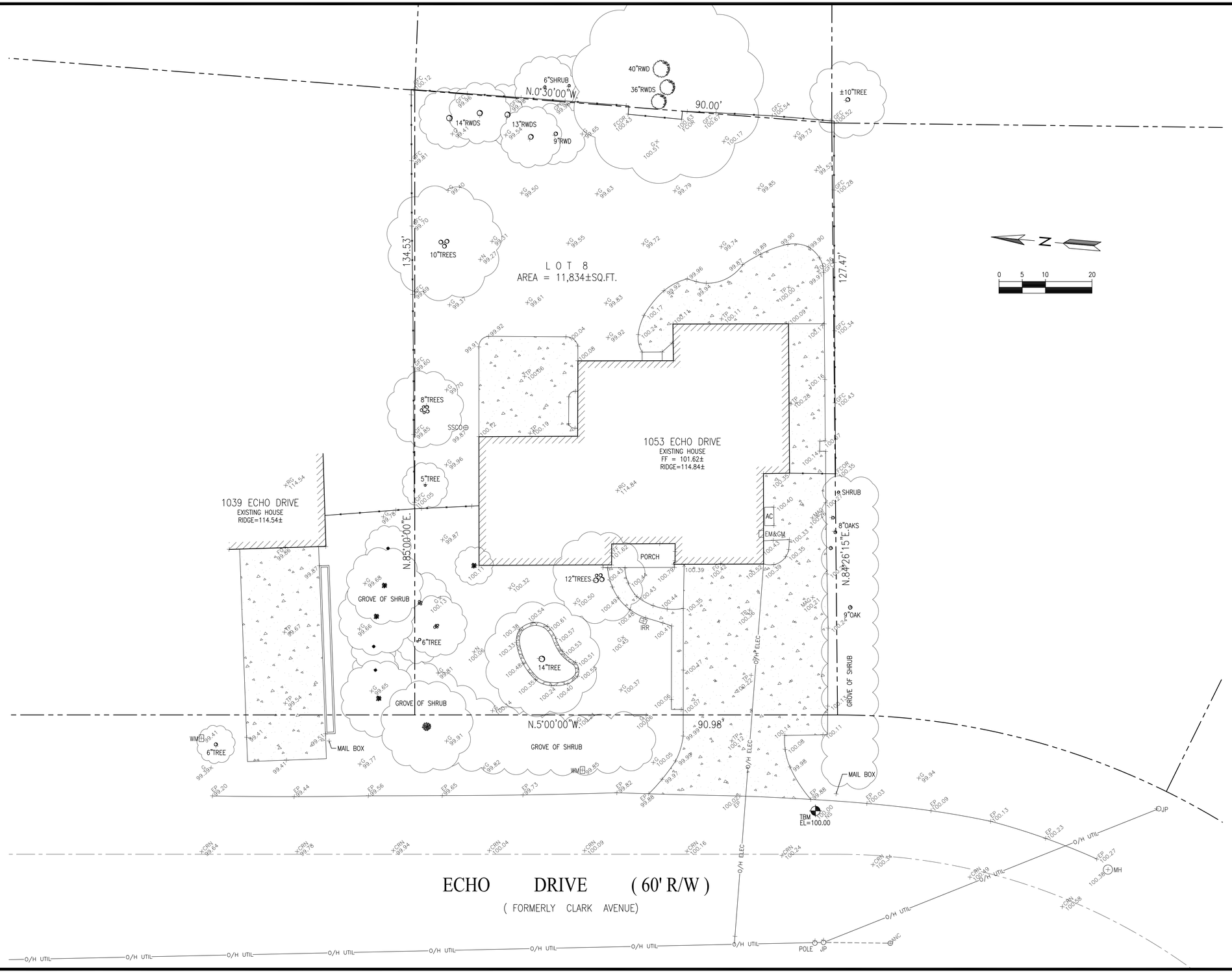
REVISIONS

LIU RESIDENCE
NEW SINGLE FAMILY RESIDENCE + ATTACHED ADU
1053 ECHO DRIVE
LOS ALTOS, CA 94024
APN: 189-46-020

DATE 03/17/25
CHECKED
DRAWN MM
JOB NO.

2022 CALGREEN MANDATORY CHECKLIST

CG.1



LEGEND:

AC	ASPHALT CONCRETE
BC	BUILDING CORNER
BW	BACK OF WALK
CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CRN	CROWN
DW	DRIVEWAY
EC	EDGE OF CONCRETE
EM	ELECTRIC METER
EP	EDGE OF PAVEMENT
FCOR	FENCE CORNER
FD	FOUND
FF	FINISHED FLOOR
FL	FLOW LINE
FH	FIRE HYDRANT
FW	FRONT OF WALK
G	GROUND
GC	GARAGE CORNER
GF	GARAGE FACE/FRONT
GFC	GROUND AT FENCE
GM	GAS METER
HCR	HANDICAP RAMP
INV	INVERT
IP	IRON PIPE
JP	JOINT POLE
LG	LIP OF GUTTER
O/H	OVERHEAD
PC	PROPERTY CORNER
RW	RETAINING WALL
SL	STREET LIGHT
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
SDMH	STORM DRAIN MANHOLE
TBC	TOP BACK ROLLED CURB
TC	TOP OF CURB
TOB	TOP OF BANK
TOE	TOE OF BANK
TP	TOP OF PAVEMENT
TRC	TOP OF ROLLED CURB
TW	TOP OF WALL
U/G	UNDERGROUND
VCP	VITRIFIED CLAY PIPE
WV	WATER VALVE
WM	WATER METER BOX
–CTV–	CABLE TELEVISION LINE
–E–	ELECTRICAL LINE
–G–	GAS LINE
–SS–	SANITARY SEWER LINE
–SD–	STORM DRAIN LINE
–T–	TELEPHONE LINE
–W–	WATER LINE

BASIS OF BEARINGS:

THE BEARING, N46°00'00"W, OF THE MONUMENT LINE OF FREMONT AVENUE, AS SHOWN ON THAT CERTAIN MAP FILED IN THE OFFICE OF THE RECORDER OF SANTA CLARA COUNTY, STATE OF CALIFORNIA, IN BOOK 12 OF MAPS AT PAGE 41, WAS USED AS THE BASIS OF BEARINGS SHOWN ON THIS MAP.

BASIS OF ELEVATION:

TBM ELEV=100.00 (ASSUMED)

UTILITY NOTE:

UNDERGROUND UTILITIES. SHOWN PER SURFACE EVIDENCE AND RECORD MAPS. MAY BE DIFFERENT THAN AS SHOWN. BEFORE EXCAVATION, CALL UNDERGROUND SERVICE ALERT (USA) 1-800-642-2444.

LEGAL DESCRIPTION:

LOT 8, BLOCK 4, MAP REF: BOOK 12 PAGES 40 AND 41

NOTE:

1. MEASUREMENT OF BUILDING LINE IS TO THE FACE OF STUCCO OR SIDING

WU RESIDENCE

1053 ECHO DRIVE
LOS ALTOS, CA
APN: 189-46-020

WEC & ASSOCIATES
2625 MIDDLEFIELD RD #658
PALO ALTO, CA 94306
TEL: (650) 823-6466
FAX: (650) 887-1294

LICENSE STAMPS AND SIGNATURE

LICENSED LAND SURVEYOR
YI-RAN HUANG
EXP 12/31/25
L. 8235
STATE OF CALIFORNIA

ISSUED

No.	Description	Date

DATE: JUNE 12, 2024
SCALE: 1"=10'
DRAWN: BG
JOB: 10078

SHEET TITLE:

TOPOGRAPHIC SURVEY

SHEET NO.

C.0

© WEC

GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO VERIFY ALL CONTROLLING DIMENSIONS WITH ARCHITECTURAL PLANS AND SHALL VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH ALL EXISTING CONDITIONS. THEY SHALL BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING. VERIFY THE LOCATIONS OF ALL UNDERGROUND UTILITIES BEFORE STARTING CONSTRUCTION. ANY SITE WORK THAT DEVIATES FROM WHAT IS SHOWN ON THE PLANS SHALL HAVE THE ENGINEER'S APPROVAL PRIOR TO PROCEEDING WITH THE DEVIATING WORK ITEM. CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" (800) 642-2444 PRIOR TO EXCAVATION.

2. THE SITE SHALL BE FINE GRADED TO PROVIDE A MINIMUM OF 5% ACROSS VEGETATED OR DIRT AREA AND 2% ACROSS HARDSCAPED AREA, AWAY FROM THE BUILDING PERIMETER. EXISTING DRAINAGE COMING FROM ADJACENT PROPERTIES SHALL BE MAINTAINED. IN NO CASE SHALL THE FINAL GRADING INCREASE SHEET FLOW ONTO ADJACENT PROPERTIES.

3. UNLESS SHOWN ON THE PLAN OTHERWISE, HOUSE AND GARAGE MUST HAVE DOWN SPOUTS THAT ARE DIRECTED TO SPLASH BLOCKS (2 FEET LONG) THAT DEFLECT THE WATER AWAY FROM BUILDING FOUNDATION BY SURFACE DRAINAGE. ALL DOWNSPOUT AND GUTTER SHALL BE GALV. SHEET METAL.

4. AN ENCROACHMENT PERMIT IS REQUIRED FOR WORK IN THE PUBLIC RIGHT OF WAY IN THE CITY OF LOS ALTOS. CONTRACTOR SHALL OBTAIN A STREET WORK PERMIT FROM PUBLIC WORKS ENGINEERING FOR ANY PROPOSED CONSTRUCTION WHICH WILL IMPACT THE USE OF THE SIDEWALK, STREET AND ALLEY OR ON THE PROPERTY IN WHICH THE CITY HOLDS AN INTEREST.

5. 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 THIS WORK IS NOT AUTHORIZED BY THE BUILDING PERMIT ISSUANCE BUT SHOWN ON THE BUILDING PERMIT FOR INFORMATION ONLY.

6. IF GROUNDWATER OR RUNOFF WATER IS ENCOUNTERED AND REQUIRES REMOVAL FROM THE EXCAVATION AREA, ALL EXCAVATION AND/OR BUILDING ACTIVITIES MUST IMMEDIATELY STOP. THE PLAN FOR THE DEWATERING OF THE EXCAVATION MUST BE DESIGNED AND SUBMITTED FOR APPROVAL TO THE PUBLIC WORKS-ENGINEERING DIVISION. ONCE APPROVAL OF THE PLAN DESIGN HAS BEEN RECEIVED, IMPLEMENTATION OF THE PLAN IS REQUIRED PRIOR TO THE COMMENCEMENT OF THE EXCAVATION AND/OR BUILDING ACTIVITIES.

GENERAL NOTES | 5

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AD	AREA DRAIN
BW	BOTTOM OF WALL
CB	CATCH BASIN
CIP	CAST IRON PIPE
CL	CENTER LINE
CONC	CONCRETE
CS	CRAWL SPACE ELEV.
DD	DECK DRAIN
DIP	DUCT IRON PIPE
DS	DOWNSPOUT
DWY	DRIVEWAY
(E)	EXISTING
EG	EXISTING GRADING
EM	ELECTRICAL METER
EP	EDGE OF PAVEMENT
FF	FINISH FLOOR ELEVATION
FG	FINISHED GROUND ELEV.
FP	FINISHED PAVEMENT
FS	FINISH SURFACE ELEV
GB	GRADE BREAK
GM	GAS METER
GR	GRATE ELEVATION
HP	HIGH POINT
INV	INVERT ELEVATION
JT	JOINT TRENCH
JP	JOINT POLE
LD	LANDSCAPE DRAIN
LF	LINEAR FEET
(N)	NEW
RIM	RIM ELEVATION
S	SLOPE
SD	STORM DRAIN LINE
SDCO	STORM DRAIN CLEANOUT
SDFM	STORM DRAIN FORCED MAIN
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
TW	TOP OF WALL ELEVATION
TYP	TYPICAL
W	DOMESTIC WATER LINE
WM	WATER METER

ABBREVIATION | 4

SS	SANITARY SEWER	SL	STREET LIGHT
E	ELECTRIC	IRR	IRRIGATION
TV	TV/CABLE TV	X	FENCE
FS	FIRE SERVICE	JT	JOINT TRENCH
W	DOMESTIC WATER	O/H	OVERHEAD WIRES
T	TELEPHONE	×16.07	(E) SPOT ELEVATION
G	NATURAL GAS	×16.07 FS	(N) SPOT ELEVATION
FM	FORCE MAIN		

DS — SPLASH BLOCK, MIN. 2 FEET LONG DEFLECT THE WATER AWAY FROM BOTH BLDG. DOWNSPOUT

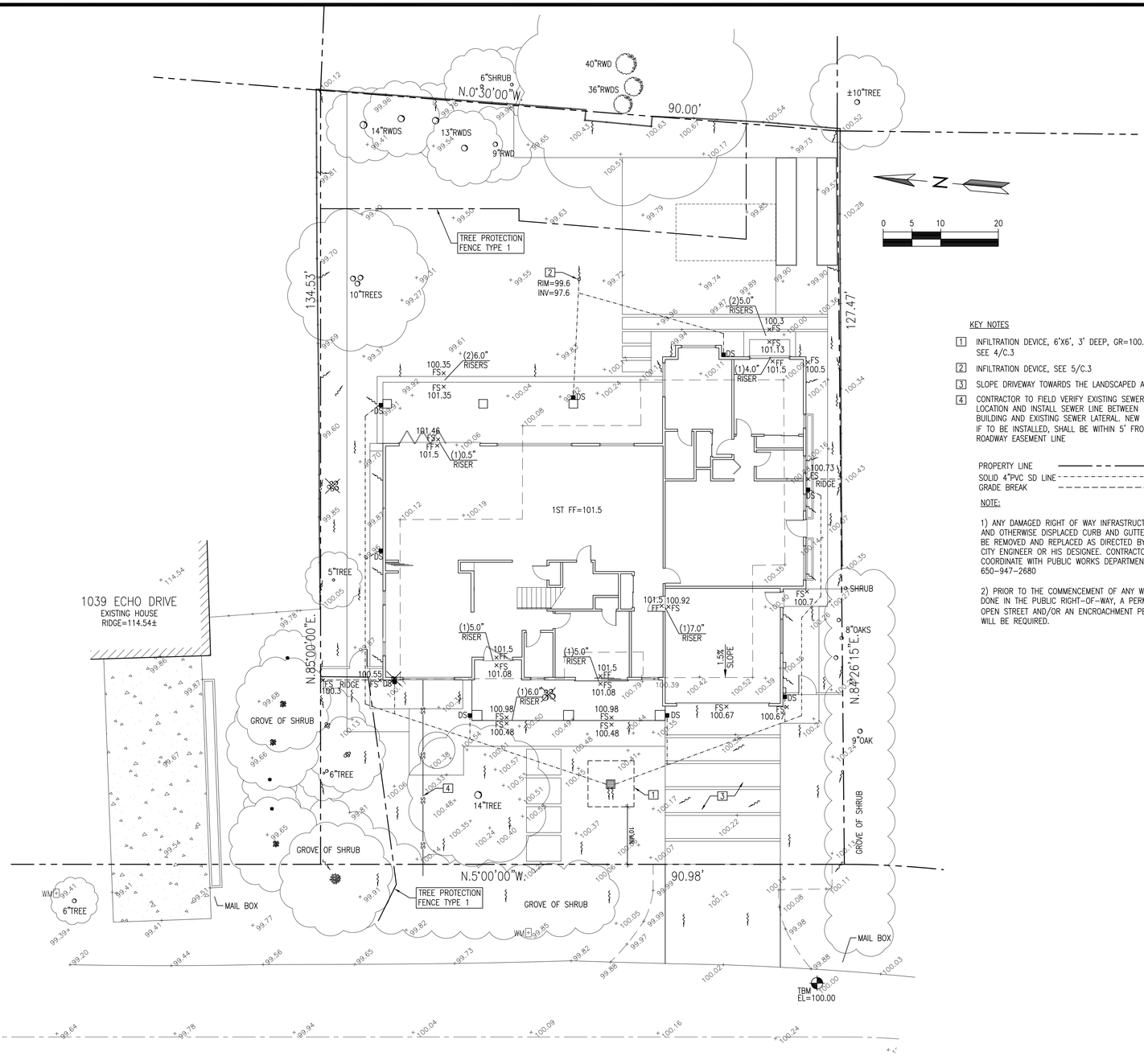
LEGEND | 3

EATHWORK QUANTITIES:

CUT(OUTSIDE BLDG FOOTPRINT)	20 C.Y.
CUT(INSIDE BLDG FOOTPRINT)	210 C.Y.
FILL	25 C.Y.
BALANCE	205 C.Y.

EARTHWORK QUANTITIES SHOWN ARE FOR PLANNING PURPOSES ONLY. CONTRACTOR SHALL PERFORM THEIR OWN EARTHWORK QUANTITY CALCULATION AND USE THEIR CALCULATION FOR BIDDING AND COST ESTIMATING PURPOSES.

CUT AND FILL EST. | 2



ECHO DRIVE (60' R/W)

(FORMERLY CLARK AVENUE)

GRADING AND DRAINAGE PLAN SCALE: 1"=10' | 1

KEY NOTES

1. INFILTRATION DEVICE, 6'X6', 3' DEEP, GR=100.3 SEE 4/C.3
2. INFILTRATION DEVICE, SEE 5/C.3
3. SLOPE DRIVEWAY TOWARDS THE LANDSCAPED AREA
4. CONTRACTOR TO FIELD VERIFY EXISTING SEWER LINE LOCATION AND INSTALL SEWER LINE BETWEEN BUILDING AND EXISTING SEWER LATERAL. NEW SSCO, IF TO BE INSTALLED, SHALL BE WITHIN 5' FROM ROADWAY EASEMENT LINE

PROPERTY LINE
SOLID 4"PVC SD LINE
GRADE BREAK

NOTE:

1) ANY DAMAGED RIGHT OF WAY INFRASTRUCTURES AND OTHERWISE DISPLACED CURB AND GUTTER SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE CITY ENGINEER OR HIS DESIGNEE. CONTRACTOR SHALL COORDINATE WITH PUBLIC WORKS DEPARTMENT AT 650-947-2680

2) PRIOR TO THE COMMENCEMENT OF ANY WORK DONE IN THE PUBLIC RIGHT-OF-WAY, A PERMIT TO OPEN STREET AND/OR AN ENCROACHMENT PERMIT WILL BE REQUIRED.

WU RESIDENCE

1053 ECHO DRIVE
LOS ALTOS, CA
APN: 189-46-020

WEC & ASSOCIATES
AEC
2625 MIDDLEFIELD RD #658
PALO ALTO, CA 94306
TEL: (650) 823-6466
FAX: (650) 887-1294

LICENSE STAMPS AND SIGNATURE

REGISTERED PROFESSIONAL ENGINEER — YI-RAN WU — 069334 — EXP. 6/30/25 — CIVIL — STATE OF CALIFORNIA

ISSUED

No.	Description	Date

DATE: NOV 5, 2024
SCALE: AS SHOWN
DRAWN: J
JOB: 10078

SHEET TITLE:

GRADING & DRAINAGE PLAN

SHEET NO.

C.1

© WEC

EROSION CONTROL AND BEST MANAGEMENT PRACTICE:

1. CONTRACTOR SHALL ASSUME THE CONCEPTS ON THE EROSION CONTROL PLAN/NOTES, IF PROVIDED, ARE MINIMUM REQUIREMENTS, THE FULL EXTENTS OF WHICH ARE TO BE DETERMINED BY CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR THE EXACT DESIGN AND EXTENT OF CONTRACTOR'S INTENDED USE AND MANAGEMENT OF THE CONSTRUCTION SITE.

2. ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED BY THE CONTRACTOR AND REPAIRED AS REQUIRED AT THE CONCLUSION OF EACH WORKING DAY DURING THE RAINY SEASON. REPAIRS TO DAMAGED FACILITIES SHALL BE MADE IMMEDIATELY UPON DISCOVERY.

3. THE CONTRACTOR SHALL REMOVE ANY ACCUMULATION OF SILT OR DEBRIS FROM THE EROSION CONTROL SEDIMENT BASINS FOLLOWING EACH STORM AND SHALL CLEAR THE OUTLET PIPES OF ANY BLOCKAGE.

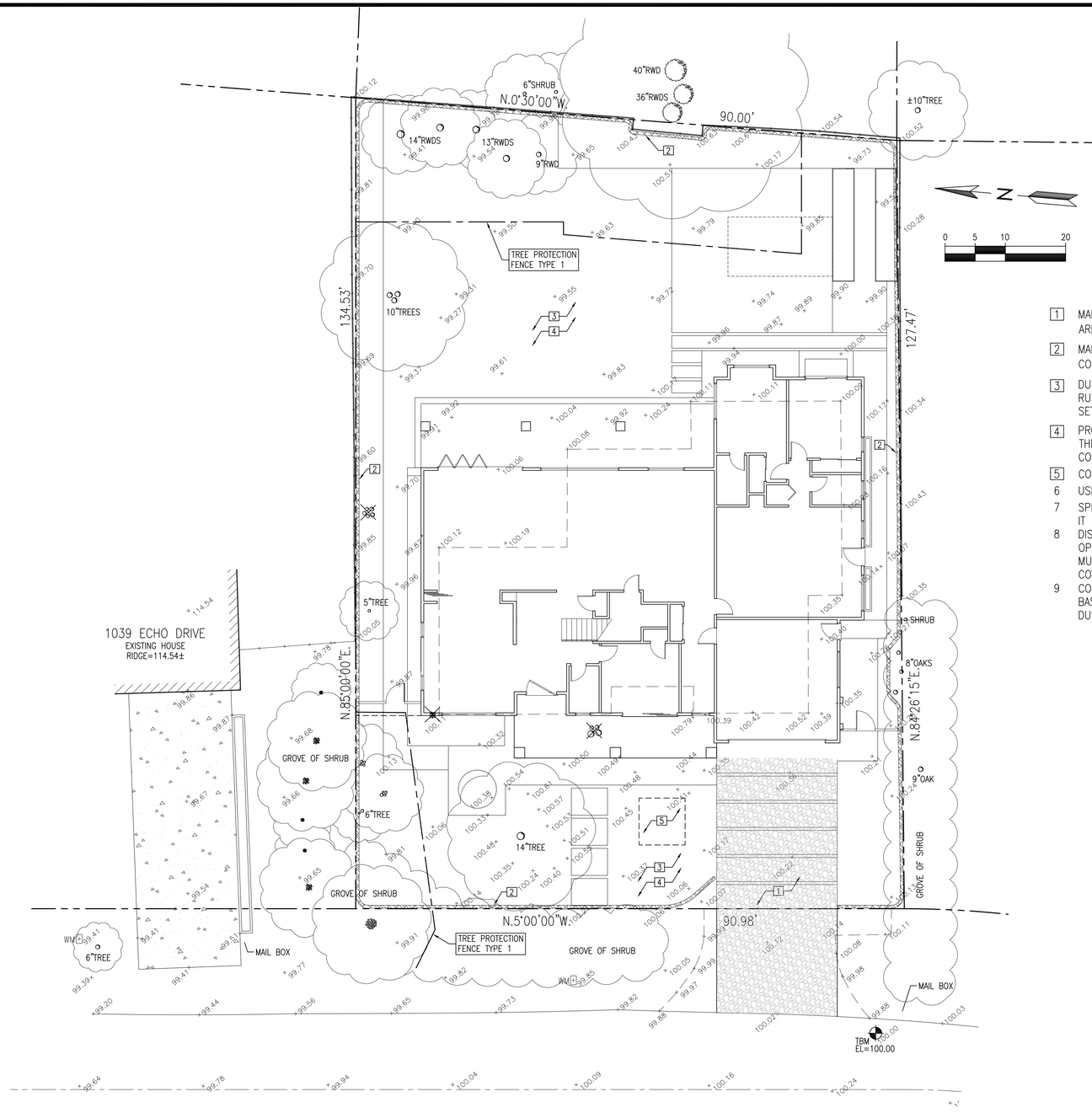
4. STOCKPILED MATERIAL SHALL BE COVERED WITH VISQUEEN OR TARPAULIN UNTIL THE MATERIAL IS REMOVED FROM THE SITE. ANY REMAINING BARE SOIL THAT EXISTS AFTER THE STOCKPILE HAS BEEN REMOVED SHALL BE COVERED UNTIL A NATURAL GROUND COVER IS ESTABLISHED OR IT MAY BE SEEDED OR PLANTED TO PROVIDE GROUND COVER PRIOR TO THE FALL RAINY SEASON.

5. PROTECT ADJACENT PROPERTIES AND UNDISTURBED AREAS FROM CONSTRUCTION IMPACTS USING VEGETATIVE BUFFER STRIPS, SEDIMENT BARRIERS OR FILTER, DIKES, MULCHING OR OTHER MEASURES AS APPROPRIATE.

6. CONTRACTOR SHALL MAINTAIN ADJACENT STREETS IN A NEAT, CLEAN, DUST FREE AND SANITARY CONDITION AT ALL TIMES. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CLEAN UP ON ADJACENT STREETS AFFECTED BY THEIR CONSTRUCTION. NO STOCKPILING OF BUILDING MATERIALS WITHIN THE PUBLIC RIGHT-OF WAY IS PERMITTED.

7. PROTECT DOWN SLOPE DRAINAGE COURSES, STREAMS AND STORM DRAINS WITH ROCK FILLED SAND BAGS, TEMPORARY DRAINAGE SWALES, SILT FENCES, EARTH BERMS, STORM DRAIN INLET FILTERS AND/OR STRAW BALES USED ONLY IN CONJUNCTION WITH PROPERLY INSTALLED SILT FENCES. PROVIDE ROCKED DRIVEWAY FOR SITE ACCESS DURING CONSTRUCTION.

GENERAL NOTES | 2



ECHO DRIVE (60' R/W)

(FORMERLY CLARK AVENUE)

1 MAINTAIN STABILIZED CONSTRUCTION AREA. SEE DETAIL 2/C.3

2 MAINTAIN FIBER ROLL FOR EROSION CONTROL. SEE DETAIL 1/C.3

3 DURING CONSTRUCTION ALLOW SEDIMENT-LADEN RUNOFF TO FORM PONDING AND ALLOW SEDIMENTS TO SETTLE OUT PRIOR TO DISCHARGE

4 PROVIDE AND MAINTAIN VEGETATION COVERAGE AROUND THE THE EXTEND OF THE DISTURBED AREA DURING CONSTRUCTION UNTIL PHASED GRADING ACTIVITIES

5 CONCRETE WASHOUT AREA, SEE DETAIL 3/C.3

6 USE (DON'T OVERUSE) WATER FOR DUST CONTROL.

7 SPRINKLING THE GROUND SURFACE WITH WATER UNTIL IT IS MOIST BEFORE GRADING ACTIVITIES.

8 DISTURBED SOIL NOT INCLUDED IN IMMEDIATE OPERATIONS MUST BE PROTECTED BY VEGETATION, MULCHING OR OTHER EFFECTIVE MEANS OF GROUND COVER.

9 CONTRACTOR SHALL SWEEP THE STREET ON A WEEKLY BASIS, OR ADDITIONALLY AS NEEDED TO CONTROL DUST.

EROSION CONTROL PLAN SCALE: 1"=10' | 1

WU RESIDENCE

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LOS ALTOS, CA
APN: 189-46-020

WEC & ASSOCIATES
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PALO ALTO, CA 94306
TEL: (650) 823-6466
FAX: (650) 887-1294

LICENSE STAMPS AND SIGNATURE

REGISTERED PROFESSIONAL ENGINEER
YI-RAN WU
069334
EXP: 6/30/25
CIVIL
STATE OF CALIFORNIA

ISSUED

No.	Description	Date

DATE: NOV 5, 2024
SCALE: AS SHOWN
DRAWN: J
JOB: 10078

SHEET TITLE:

EROSION CONTROL PLAN

SHEET NO.

C.2

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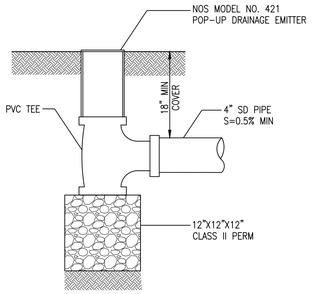
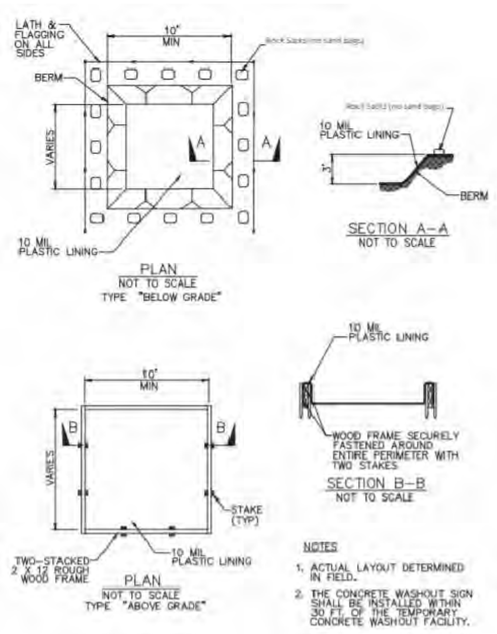
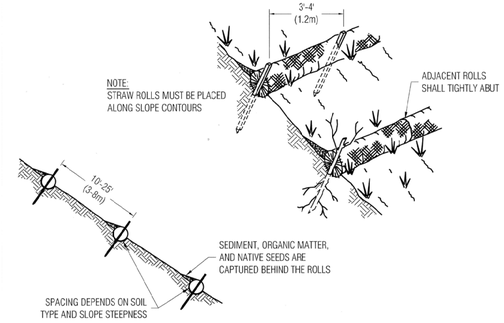


INFILTRATION DEVICE N.T.S. | 5



CONCRETE WASHOUT AREA | 3



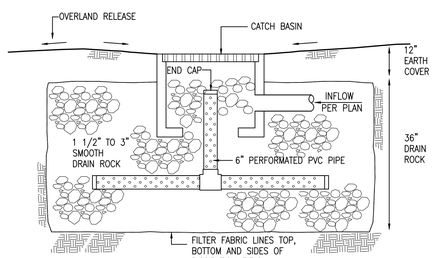
NOTES:
1. STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" (75-125mm) DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL
2. VERTICAL SPACING FOR SLOPE INSTALLATIONS
   1:1 SLOPES = 10 FEET APART
   2:1 SLOPES = 20 FEET APART
   3:1 SLOPES = 30 FEET APART
   4:1 SLOPES = 40 FEET APART
   <4:1 SLOPE = ONE ROW AT LOW POINT
3. REMOVED SEDIMENT SHALL BE DEPOSITED IN AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT TO RUN OFF-SITE AND CAN BE PERMANENTLY STABILIZED

Approved: _____ City Engineer 1/4/10 Date

CITY OF LOS ALTOS, CALIFORNIA INCORPORATED DECEMBER 1952

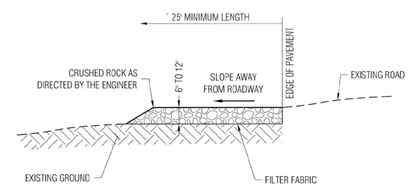
REVISION		ENGINEERING DIVISION	
Description	Date	STRAW ROLLS	EC-4

FIBER ROLL DETAIL | 1



SEE PLAN FOR DIMENSIONS

INFILTRATION DEVICE SCALE: N.T.S. | 4



NOTES:
1. PROVIDE A FANNED STABILIZED CONSTRUCTION ENTRANCE TO ACCOMODATE THE TURNING RADIUS OF CONSTRUCTION EQUIPMENT ON AND OFF THE PUBLIC STREET
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE ALONG NEW DRIVEWAY CORRIDOR FOR THE FULL PROPOSED WIDTH

Approved: _____ City Engineer 1/4/10 Date

CITY OF LOS ALTOS, CALIFORNIA INCORPORATED DECEMBER 1952

REVISION		ENGINEERING DIVISION	
Description	Date	STABILIZED CONSTRUCTION SITE ENTRANCE	EC-2

STABILIZED CONTRUCTION ENTRANCE | 2

WU RESIDENCE

1053 ECHO DRIVE
LOS ALTOS, CA
APN: 189-46-020

WEC & ASSOCIATES
AEC
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PALO ALTO, CA 94306
TEL: (650) 823-6466
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LICENSE STAMPS AND SIGNATURE

REGISTERED PROFESSIONAL ENGINEER
YI-RAN WU
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EXP. 6/30/25
CIVIL
STATE OF CALIFORNIA

ISSUED

No.	Description	Date

DATE: NOV 5, 2024
SCALE: AS SHOWN
DRAWN: J
JOB: 10078

SHEET TITLE:

DETAILS

SHEET NO.

C.3

© WEC

WELO
Water Budget and Water Use Calculator

INSTRUCTIONS:

1. Enable macros.
2. Enter values in blue cells. Gray cells will automatically fill.
3. For Eto, refer to Appendix A of the ordinance, available here: https://www.water.ca.gov/Programs/Water-Use-And-Efficiency/Urban-Water-Use-Efficiency
4. Print this sheet and submit with Landscape Document Package for the Comprehensive Performance Compliance Pathway.

Date:	3/16/2025
Project Name:	ECHO DRIVE RESIDENCE
Project Contact:	Jing Zhang
Project Contact Email:	jzhang307@gmail.com

Maximum Applied Water Allowance (MAWA)	Project Type	ETo	ETAF	Special Landscape Area (SLA)	Total Landscape Area including SLA	MAWA (gal/yr)	
	Residential	43.0	0.55	170	4,095	**62,090**	MAWA =(ETo) * (0.62) *[(ETAF*LA) + ((1-ETAF) * SLA)].

Estimated Total Water Use (ETWU)	ETo	(SF * PF) / IE	SLA	ETWU (gal/yr)	
	43.0	1,726	170	**50,553**	ETWU =(ETo) * (0.62) *[(PF*SF/IE) + SLA]

Difference between MAWA and ETWU	**11,538**	**Project meets water budget.**

ETWU Calculation (Regular landscape areas)	Zone #	Description	Select Irrigation	Square Feet (SF)	Plant Factor (PF)	Irrigation Efficiency (IE)	(SF * PF) / IE
	1	LOW WATER SHRUB	Drip	825	0.30	0.81	306
	2	LOW WATER GRASS	Drip	1,997	0.30	0.81	740
	3	MED WATER TREE	Drip	528	0.50	0.81	326
	4	MED WATER SHRUB	Drip	575	0.50	0.81	355
	Landscape area (not including SLA)			**3,925**			**1,726**

ETWU Calculation Special Landscape Areas (SLA)	Description	Square Feet (SF)	Plant Factor / Irrigation Efficiency (PF/IE)	(SF * PF) / IE
	Edible planting area	0	1.0	-
	Multi-use and sports field turf area	0	1.0	-
	Area irrigated with recycled water	0	1.0	-
	Pool	170	1.0	170
	Total SLA	**170**		**0**

Total Landscape Area (including SLA) from ETWU Calculation	**4,095**

LANDSCAPE DOCUMENTATION PACKAGE CHECKLIST

LANDSCAPE DOCUMENTATION PACKAGE CHECKLIST

1. PROJECT INFORMATION
   - A. DATE – 03/16/2025
   - B. APPLICANT – JING ZHANG, LANDSCAPE ARCHITECT
   - C. PROJECT ADDRESS – 1053 ECHO DRIVE, LOS ALTOS, CA 94024
   - D. TOTAL LANDSCAPE AREA – 8,807 SF
   - E. TYPE OF PROJECT – SINGLE FAMILY RESIDENCE
   - F. CHECKLIST OF ALL DOCUMENTS IN PACKAGE – SEE L0.0
   - G. CONTACTS OF APPLICANT – EMAIL: JINGZHANG307@GMAIL.COM
     PHONE: 760–960–8220
   - H. "I AGREE TO COMPLY WITH THE REQUIREMENTS OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND SUBMIT A COMPLETE LANDSCAPE DOCUMENTATION PACKAGE"

Jing Zhang 03/16/2025

APPLICANT'S SIGNATURE DATE

2. APPENDIX B – WATER EFFICIENT LANDSCAPE WORKSHEET – SEE SHEET L0.0
3. APPENDIX C – LANDSCAPE PLAN – SEE SHEET L1.0, L4.0 AND L4.1
   IRRIGATION PLAN – SEE SHEET L5.0–L5.4
   GRADING PLAN – SEE CIVIL GRADING AND DRAINAGE PLANS BY CIVIL ENGINEER.

THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE DIRECTOR OF COMMUNITY DEVELOPMENT WHEN A LANDSCAPE PROJECT IS SUBJECT TO THE REQUIREMENTS OF THIS CHAPTER, PRIOR TO FINAL INSPECTION.

- A. CERTIFICATE OF COMPLETION
- B. CERTIFICATE OF INSTALLATION, FOLLOWING INSTALLATION OF LANDSCAPING
- C. IRRIGATION SCHEDULE
- D. LANDSCAPE AND IRRIGATION MAINTENANCE SCHEDULE
- E. IRRIGATION AUDIT REPORT

LICENSED LANDSCAPE ARCHITECT
JING ZHANG
Signature
09/30/2025
Renewal Date
09/16/2025
Date
STATE OF CALIFORNIA

PROJECT:
WU&LIU RESIDENCE
1053 ECHO DRIVE
LOS ALTOS, CA 94024

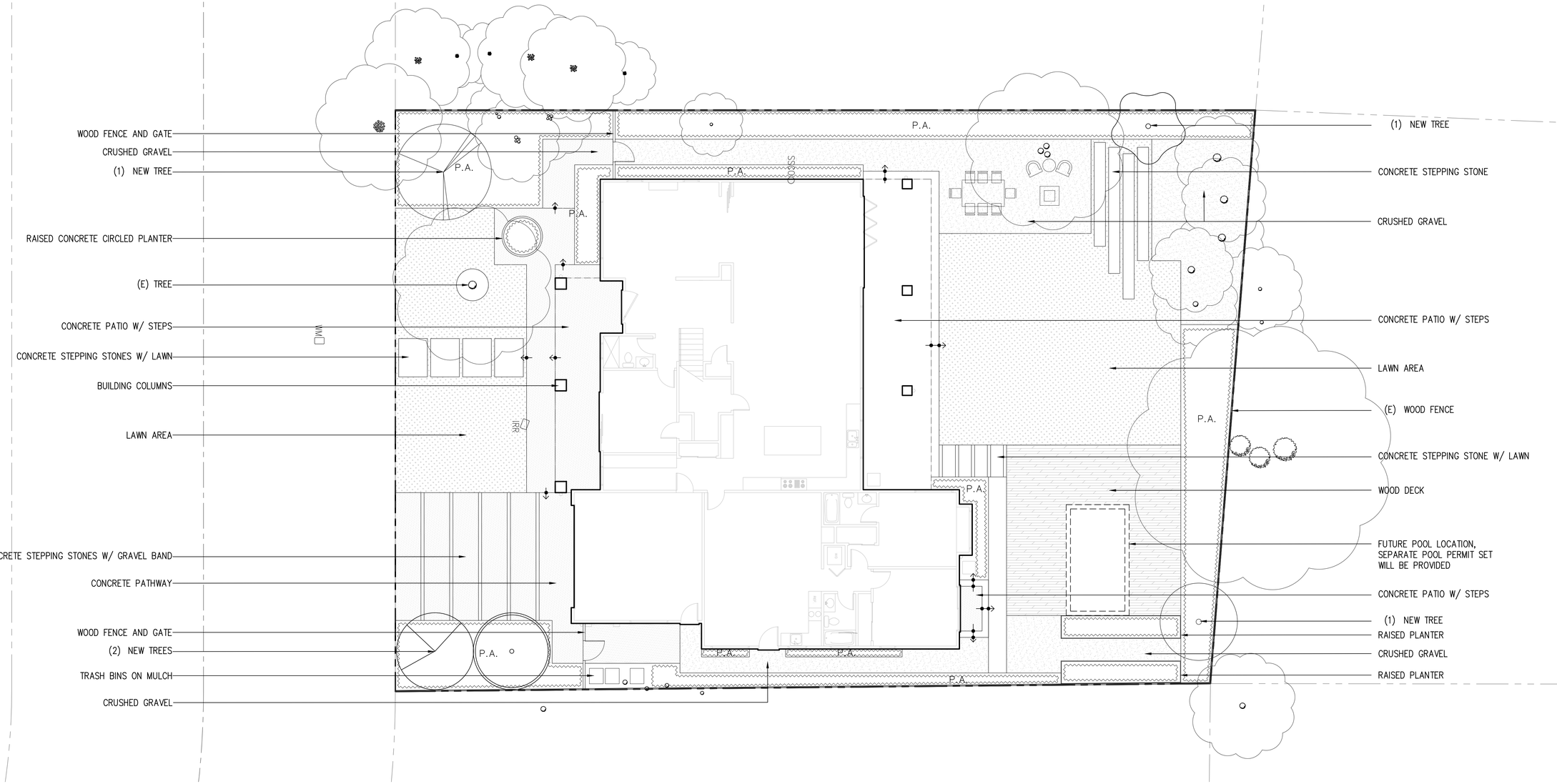
REVISIONS:

NO.	DATE	DESCRIPTION

DRAWING TITLE:
LANDSCAPE DOCUMEN-TATION

PROJECT NO: 007
SCALE: AS SHOWN
DRAWN BY: JZ/YG
REVIEWED BY:
ISSUE DATE:

DRAWING NO:
L0.0



MATERIAL SCHEDULE

DETAIL	DESCRIPTION
	CONCRETE PAVING_PATHWAY AND PATIO LIGHT GRAY W/ LIGHT SAND FINISH
	CONCRETE STEPPING STONE_DRIVEWAY LIGHT GRAY W/ LIGHT SAND FINISH
	CRUSHED GRAVEL 1/8" TO 1/4" GOLD CLEAN/WASHED CRUSHED STONE
	CONCRETE STEPS ON LAWN SIZE T.B.D. LIGHT GRAY W/ LIGHT SAND FINISH
	CONCRETE STEPS ON CRUSHED GRAVEL SIZE T.B.D. LIGHT GRAY W/ LIGHT SAND FINISH
	RAISED CONCRETE PLANTER SIZE T.B.D. LIGHT GRAY W/ LIGHT SAND FINISH
	WOOD DECK TIMBER WOOD, SIZE AND COLOR T.B.D.
	RAISED VEGETABLE PLANTER LIGHT GRAY W/ LIGHT SAND FINISH
	WOOD FENCE AND GATE SIZE AND MATERIAL T.B.D.

GENERAL NOTES

1. VERIFY EXISTING SITE INFORMATION, INCLUDING STREET GRADES, UTILITIES, PROPERTY LINES, LIMITS OF ROADWAYS, CURBS AND GUTTERS, AND NOTIFY THE LANDSCAPE ARCHITECT WITH ANY DISCREPANCIES.

2. PROVIDE WRITTEN NOTIFICATION OF ALL DISCREPANCIES BETWEEN EXISTING AND PROPOSED SITE IMPROVEMENTS.

3. REFERENCE TO NORTH REFERS TO TRUE NORTH. REFERENCE TO SCALE APPLIES TO FULL-SIZED DRAWINGS ONLY. DO NOT SCALE FROM REDUCED DRAWINGS.

MATERIAL NOTES

1. USE LOCAL AND REGIONAL MATERIALS, AND USE RECYCLED AND SALVAGED MATERIALS WHENEVER POSSIBLE. ALL MATERIALS TO COME FROM MAX. 500 MILES FROM SITE.

2. USE MATERIALS WITH A LONG LIFE SPAN.

3. ALL CONCRETE TO CONTAIN 30-50% FLYASH OR OTHER POST CONSUMER EQUIVALENT. ALL COLOR PIGMENTS TO BE NATURAL.

4. RECYCLE UNUSED CONSTRUCTION MATERIALS BY DROPPING AT LOCAL SALVAGE YARDS. AVOID LANDFILL DEPOSITS AS MUCH AS POSSIBLE. ASK LANDSCAPE ARCHITECT FOR LIST OF SALVAGE DROP PLACES.

5. GRIND ALL HEALTHY WOODY SHRUBS AND TREES THAT HAVE BEEN REMOVED FROM SITE; AND NON PRESSURE TREATED WOOD SCRAPS FOR PLANTING MULCH. GRIND ON SITE.

6. ALL PAINTS AND STAINS TO BE WATER BASED AND FREE OF HARMFUL CHEMICALS OR OFF GASES WHEN APPLIED. SUBMIT PRODUCT CUT SHEETS PRIOR TO INSTALLATION.

LEGEND

SYMBOL	DESCRIPTION
———	PROPERTY LINE
(E)	EXISTING
PA	PLANTING AREA

0 8'

LICENSED LANDSCAPE ARCHITECT
JING ZHANG
Signature
09/30/2025
Renewal Date
08/16/2025
Date
STATE OF CALIFORNIA

PROJECT:
WU&LIU RESIDENCE
1053 ECHO DRIVE
LOS ALTOS, CA 94024

REVISIONS:

NO.	DATE	DESCRIPTION

DRAWING TITLE:
LAYOUT AND MATERIAL PLAN

PROJECT NO:
007

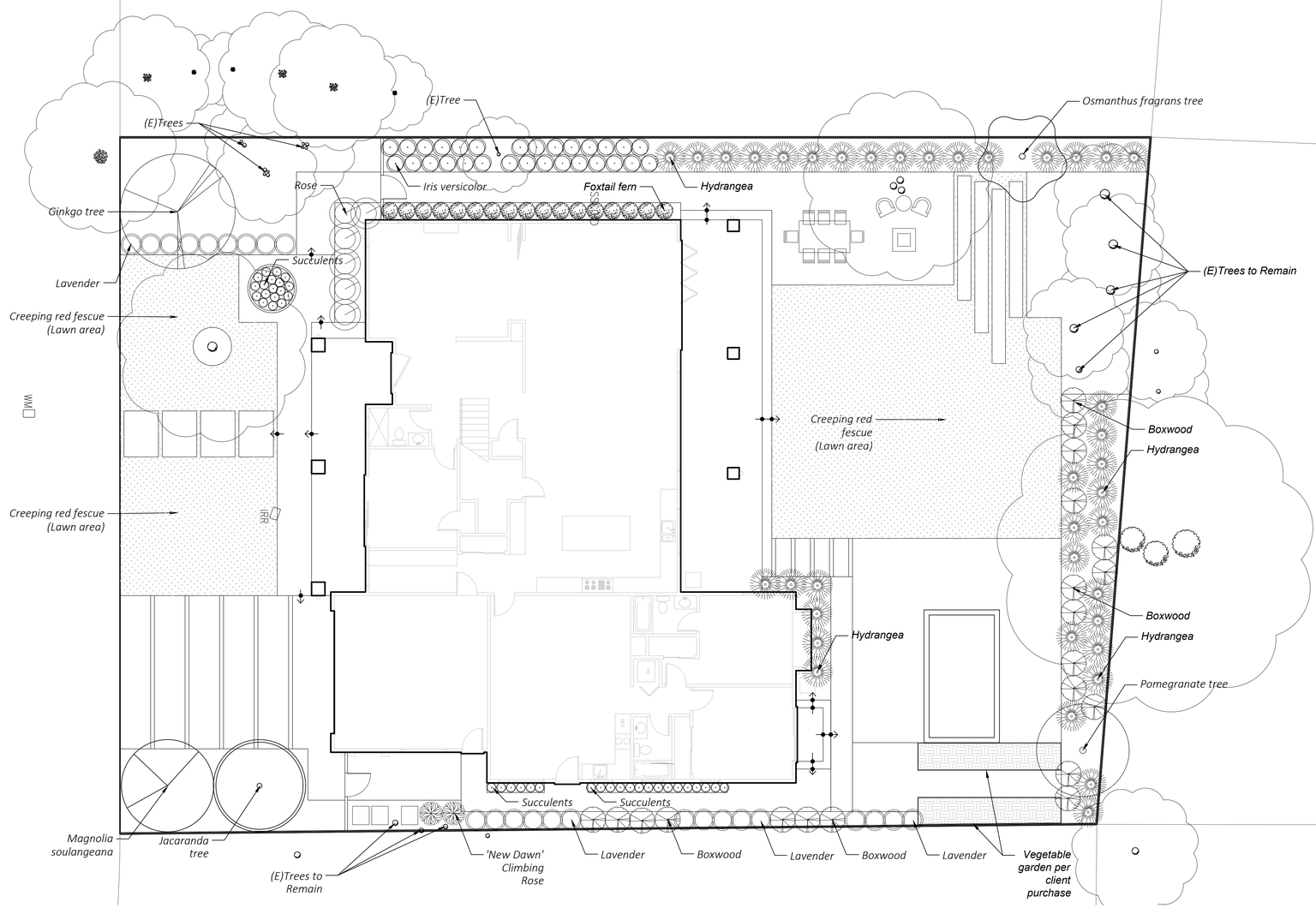
SCALE:
AS SHOWN

DRAWN BY:
JZ/YG

REVIEWED BY:

ISSUE DATE:

DRAWING NO:
L1.0



PLANTING NOTES

1. ALL PLANTING AREAS SHALL BE FREE OF ALL DELETERIOUS MATERIALS AND WEEDS PRIOR TO PLANTING. USE NO CHEMICALS.

2. ALL PLANT LOCATIONS SHALL BE CONFIRMED IN THE FIELD BY THE LANDSCAPE ARCHITECT. COORDINATE THE LOCATIONS OF ALL PLANTING WITH EXISTING AND PROPOSED SITE FEATURES, I.E., UNDERGROUND UTILITIES, DRAINAGE STRUCTURES, LIGHT FIXTURES, ETC. ANY CONFLICTS TO BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.

3. ALL PLANT QUANTITIES AND SIZES OF PLANT AREAS TO BE CONFIRMED IN FIELD BY CONTRACTOR.

4. PLANTS SHALL BE SUFFICIENTLY ROOTED TO THE EDGE OF THE CONTAINER AND TO AN EXTENT SUFFICIENT TO HOLD THE ROOTBALL INTACT WHEN REMOVED FROM THE CONTAINER.

5. PLANTS SHALL BE FREE FROM ALL PESTS AND DISEASES. NO PLANTS SHALL BE ACCEPTABLE THAT SHOW SIGNS OF CIRCLING OR GIRDLING OF ROOTS, OR ANY OTHER ROOT–BOUND CONDITION. PLANTS SHALL BE UNDAMAGED AND HAVE PROPER BRANCH STRUCTURE.

6. ALL NEW LAWN AREAS AND PLANTING BEDS TO RECEIVE A MINIMUM OF 6 INCHES OF TOPSOIL. RIP SUBSOIL TO 8 INCH DEPTH PRIOR TO PLACING TOPSOIL. PLACE TOPSOIL IN 3 INCH MAXIMUM LIFTS AND ROTOTILL INTO UNDERLYING MATERIAL TO ELIMINATE INTERFACE.

7. ALL PLANTING AREAS TO BE TILLED SO THAT THE SOIL IS LOOSE AND NOT COMPACTED. TO PREPARE PLANTING BEDS, CULTIVATE INTO TOP 8 INCHES OF SOIL, 6 CUBIC YARDS OF NITROLIZED REDWOOD SAWDUST PER 1000 SQUARE FEET, 10 LBS HIGH QUALITY COMPOST PER CUBIC YARD, AND SPREAD "PRE–PLANT PLUS 7–5–7" FERTILIZER AT THE RATE OF 20 POUNDS PER 1000 SQUARE FEET.

8. EXCAVATE PLANTING PITS AS FOLLOWS:
TREES: BALL WIDTH + 24 INCHES, SHRUBS AND VINES: BALL WIDTH +12 INCHES, 6 INCH GROUNDCOVER BEDS: AS REQUIRED

9. LOOSEN SUBGRADE IN PITS TO DEPTH OF BALL +3 INCHES AT PERIMETER OF PIT. PREPARE PLANTING PIT BACKFILL MATERIAL BY USING 3 PARTS EXISTING SOIL (OR APPROVED TOPSOIL) TO 1 PART NITROLIZED FIR SHAVINGS OR NITROLIZED ½ INCH MINUS FIR BARK. USE "PRE–PLANT PLUS 7–5–7" FERTILIZER, BY CALIFORNIA ORGANIC FERTILIZERS, INC., AT THE RATE OF 10–15 POUNDS PER CUBIC YARD, THOROUGHLY MIXING THIS COMBINATION BEFORE BACKFILLING.

10. FOR PLANTING, PLACE "SUPER N 1200", BY CALIFORNIA ORGANIC FERTILIZERS, INC., AT BOTTOM OF PLANTING HOLE. BEFORE PLACING PLANT IN HOLE BACKFILL WITH SOIL MIX ALLOWING 2 INCH BUFFER BETWEEN FERTILIZER AND PLANT ROOT BALL. DO NOT PLACE ROOT BALL DIRECTLY ON FERTILIZER.
APPLY AT FOLLOWING RATE: 1 GALLON CAN, 1/2–1 CUP PER HOLE; 5 GALLON CAN, 1–2 CUPS PER HOLE; 15 GALLON CAN, 3–4 CUPS PER HOLE. SET PLANT PLUMP IN PLANTING PIT AND BRACE RIGIDLY IN POSITION, TAMPING BACKFILL MIX SOLIDLY AROUND THE BALL AND ROOTS, UNTIL PITS ARE APPROXIMATELY 2/3 FULL. WATER THOROUGHLY, SATURATING ROOTBALL. ADD REMAINING BACKFILL MIX TO TOP OF HOLE, ELIMINATING ALL AIR POCKETS.

11. ALL PLANTS SENSITIVE TO WATER BORNE FUNGI SHALL BE PLACED 3 INCHES ABOVE FINISHED GRADE. ALL OTHER PLANTS SHALL BE PLANTED 1 INCH ABOVE FINISHED GRADE. MOUND UP SOIL TO KEEP ROOTS FROM DRYING OUT.

12. FORM WATERING BASINS AT ALL TREES AND SHRUBS AND WATER ALL NEW PLANTINGS DEEPLY AND THOROUGHLY.

13. ALL TREES TO BE GUYED AND STAKED AS REQUIRED.

14. AFTER PLANTING, APPLY "SUPER N 1200", BY CALIFORNIA ORGANIC FERTILIZERS, INC., AT THE RATE OF 10 POUNDS PER 1000 FEET TO ALL PLANTING AREAS. LIGHTLY RAKE IN FERTILIZER TO INCORPORATE INTO SOIL.

15. ALL PLANTING AREAS WITH GROUNDCOVER AND SHRUBS SHALL RECEIVE A 3 INCH LAYER OF RE–GROUND BARK MULCH OR GRAVEL. KEEP 3 INCHES AWAY FROM STEM OR TRUNK. A MULCH SAMPLES SHALL BE SUBMITTED TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO MULCH DELIVERY TO SITE.

IRRIGATION PERFORMANCE NOTES

1. ALL PLANTS TO RECEIVE WATER CONSERVING DRIP EMITTERS AND TREE BUBBLERS FOR TREES. THERE ARE TO BE SUFFICIENT VALVES TO ACCOMMODATE THE DIFFERENT WATER REQUIREMENTS FOR PLANTS WITH DIFFERENT EXPOSURES AND PLANT TYPES.

2. DRIP SYSTEM TO BE INSTALLED WITH A PRESSURE–REDUCING DEVICE.

3. DRIP EMITTERS TO BE OF THE PRESSURE COMPENSATING TYPE.

4. ALL MAIN LINE PRESSURIZED PIPING SHALL BE SCHEDULE 40 PVC AND BURIED TO A DEPTH OF 12".

5. IRRIGATION SYSTEM SHALL BE COMPRISED OF AUTOMATICALLY CONTROLLED VALVES ON AN AUTOMATIC CONTROL SYSTEM. CONTROLLER TO BE A WATER CONSERVING E.T. CONTROLLER WITH RAIN SHUT OFF DEVICE: WEATHERTRAK MODEL # WTPLS–09 BY HYDROPOINT 800.362.8774

6. ALL EQUIPMENT REQUIRED SHALL BE PROVIDED TO INSURE A COMPLETE AND FUNCTIONAL SYSTEM. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH ALL LOCAL CODES AND MANUFACTURER'S INSTRUCTIONS. AVOID ANY CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING OR ARCHITECTURAL FEATURES.

7. PLACE VALVE BOXES IN DESCREET LOCATIONS, AWAY FROM PATIOS. FINAL LOCATIONS TO BE APPROVED BY LANDSCAPE ARCHITECT.

8. DOMESTIC WATER SUPPLY TO BE PROTECTED FROM THE IRRIGATION SYSTEM CONNECTION VIA A DOUBLE CHECK ANTI–SIPHON VALVE PER CITY AND STATE REQUIREMENTS.

9. FLUSH MAINLINES BEFORE INSTALLING REMOTE CONTROL VALVES. FLUSH LATERAL LINES BEFORE INSTALLING DRIP VALVES. VISUALLY INSPECT MAINLINE FOR LEAKS UNDER FULL OPERATING PRESSURE BEFORE BACKFILLING.

10. LAWN WILL BE WATERED WITH SPRINKLERS. USE WATER SAVING MP ROTATOR SPRINKLERS.

0 8'

LICENSED LANDSCAPE ARCHITECT
JING ZHANG
Signature
09/30/2025
Renewal Date
09/16/2025
Date
STATE OF CALIFORNIA

PROJECT:
WU&LIU RESIDENCE
1053 ECHO DRIVE
LOS ALTOS, CA 94024

REVISIONS:

NO.	DATE	DESCRIPTION

DRAWING TITLE:
PLANTING PLAN

PROJECT NO:
007

SCALE:
AS SHOWN

DRAWN BY:
JZ/YG

REVIEWED BY:

ISSUE DATE:

DRAWING NO:
L4.0

PLANTING SCHEDULE

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPREAD	HEIGHT	WATER USE(based on WUCOLS IV)	COUNTS
TREE							
	Ginkgo biloba	Ginkgo	24" BOX	15-30 ft	15-40 ft	MODERATE	1
	Jacaranda mimosifolia	Jacaranda Tree	24" BOX	15-30 ft	20-30 ft	MODERATE	1
	Magnolia X soulangeana	Magnolia soulangeana	24" BOX	10-20 ft	10-15 ft	MODERATE	1
	Osmanthus fragrans	Sweet Osmanthus	24" BOX	10-15 ft	10-20 ft	MODERATE	1
	Punica granatum	Pomegranate tree	24" BOX	6-12 ft	8-12 ft	MODERATE	1
SHRUB AND GROUNDCOVER							
	Buxus 'Green Velvet'	Great Velvet Boxwood	5 GAL	2-4 ft	2-4 ft	LOW	20
	Hydrangea macrophylla 'Bailmer'	Reblooming Hydrangea	5 GAL	4-6 ft	3-4 ft	MODERATE	38
	Rosa floribunda 'St. Tropez'	St. Tropez Rose Tree	5 GAL	2-3 ft	4-5 ft	LOW	6
	Lavandula angustifolia	English lavender	1 GAL	1 ft	1 ft	LOW	24
	Iris versicolor L.	Large Blue Iris	1 GAL	1 ft	2 ft	LOW	29
	Asparagus aethiopicus	Foxtail Fern	1 GAL	2 ft	2 ft	LOW	17
	Echeveria 'Blue Setosa'	Blue Setosa	1 GAL	6 in	6 in	LOW	38
	Festuca rubra	Creeping red fescue	1 GAL	1-2 ft	1-2 ft	LOW	2,200 sf

LICENSED LANDSCAPE ARCHITECT
JING ZHANG
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09/30/2025
Renewal Date
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Date
STATE OF CALIFORNIA

PROJECT:
WU&LIU RESIDENCE
1053 ECHO DRIVE
LOS ALTOS, CA 94024

REVISIONS:

NO.	DATE	DESCRIPTION

DRAWING TITLE:
PLANTING LEGEND

PROJECT NO:
007

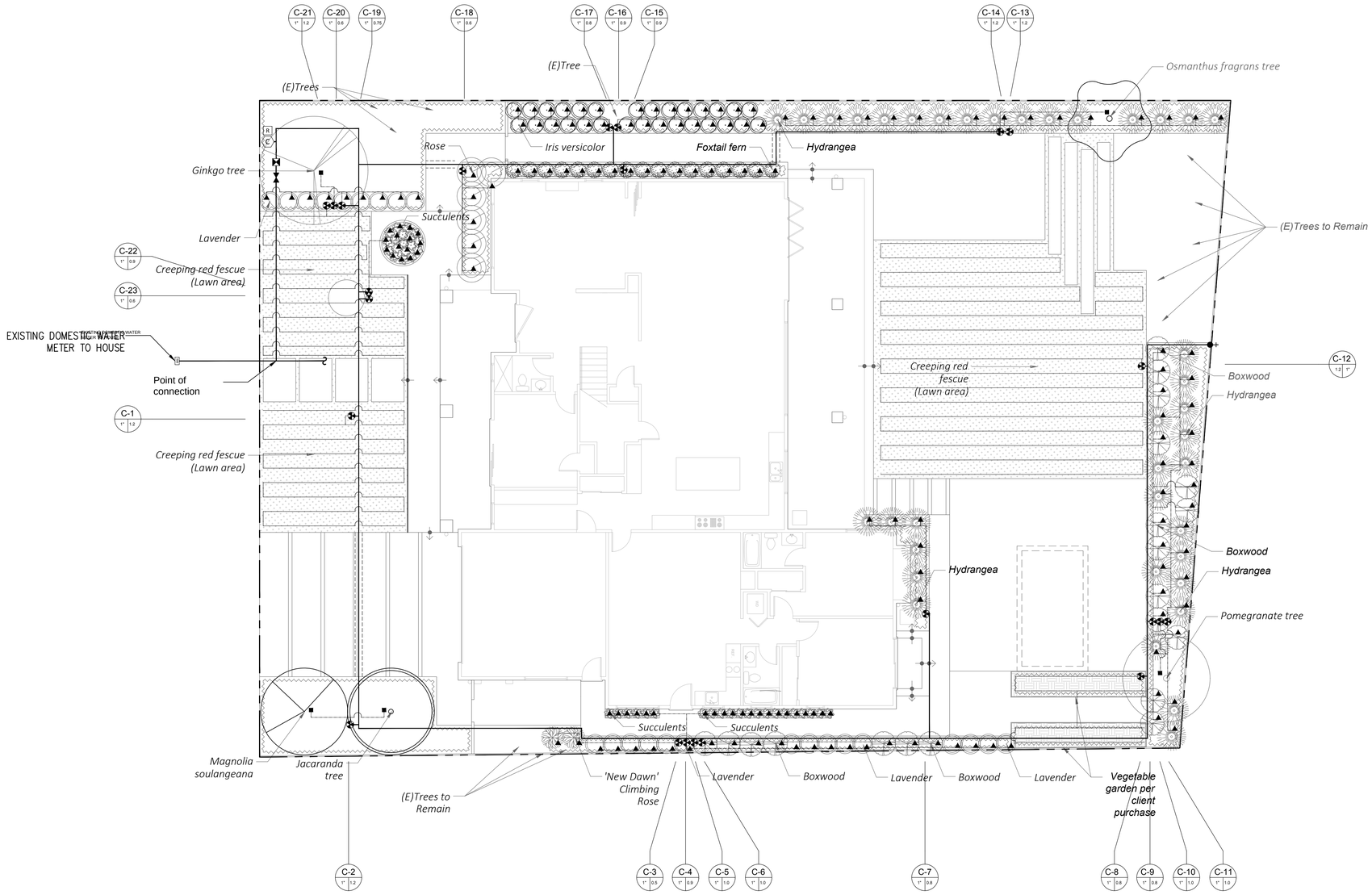
SCALE:
AS SHOWN

DRAWN BY:
JZ/YG

REVIEWED BY:

ISSUE DATE:

DRAWING NO:
L4.1



0 8'

LICENSED LANDSCAPE ARCHITECT
JING ZHANG
Signature
09/30/2025
Renewal Date
09/16/2025
Date
STATE OF CALIFORNIA

PROJECT:
WU&LIU RESIDENCE
1053 ECHO DRIVE
LOS ALTOS, CA 94024

REVISIONS:

NO.	DATE	DESCRIPTION

DRAWING TITLE:
IRRIGATION PLAN

PROJECT NO:
007

SCALE:
AS SHOWN

DRAWN BY:
JZ/YG

REVIEWED BY:

ISSUE DATE:

DRAWING NO:
L5.0

IRRIGATION LEGEND

SYMBOL	MODEL NUMBER	DESCRIPTION	PSI	FLOW RATE (GPM)	MAX. RADIUS	MAX. SPACING	DETAIL #
▲	HEB-40	HUNTER PRESSURE COMPENSATING DRIP BUBBLER INSTALL ONE BUBBLER PER SHRUB	40	4 GPH (.07 GPM)			L5.2/11
■	HEB-60	HUNTER PRESSURE COMPENSATING DRIP BUBBLER INSTALL TWO BUBBLERS PER TREE	40	6 GPH (.1 GPM)			L5.2/10
NOT SHOWN	HE-10-B, HE-050-B	HUNTER SINGLE OUTLET EMITTER	40	1 GPH, 1/2 GPH			L5.2/17-18
●	-	COMPRESSION FITTING STUB-OUT FROM PVC RIGID PIPE TO POLY TUBING					L5.2/19
	ICV-AS-ADJ SERIES/LT-T SERIES	HUNTER REMOTE CONTROL VALVE WITH PRESSURE REGULATION / NDS PVC BALL VALVE					L5.2/3
	ICZ-101-LF-25 / LT-1000-T	HUNTER DRIP ZONE VALVE KIT - INCL. REMOTE CONTROL VALVE, WYE FILTER WITH 150 MESH SCREEN, AND PRESET PRESSURE REGULATOR / NDS PVC BALL VALVE (.5-5 GPM)					L5.2/4
	363LF	ARROWHEAD-CHAMPION LEAD-FREE NO-KINK HOSE BIB WITH INTEGRAL VACUUM BREAKER					L5.2/9
	T-113-LF	NIBCO LEAD FREE GATE VALVE (LINE SIZE)					L5.2/8
	975XL2-1"	WILKINS LEAD-FREE REDUCED PRESSURE BACKFLOW PREVENTER					L5.2/1
R	WSS-SEN	HUNTER SOLAR SYNC WIRELESS WEATHER SENSOR					L5.2/13
C	IC-600-PL ROAM-KIT	HUNTER I-CORE MODULAR CONTROLLER (6 STATIONS) - WALL MOUNT HUNTER MAINTENANCE REMOTE					L5.2/2
C-1 1" 15		CONTROLLER AND STATION NUMBER APPROXIMATE GALLONS PER MINUTE REMOTE CONTROL VALVE SIZE					
		MAIN LINE: 1120-SCHEDULE 40 PVC SOLVENT WELD PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS. 18" COVER.					L5.2/6
		LATERAL LINE: 1120-CLASS 200 PSI PVC SOLVENT WELD PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS. 12" COVER.					L5.2/6
		SUB-SURFACE DRIPLINE: ECO-MAT FLEECE-WRAPED DRIPLINE.					L5.2/16
		DRIP TUBING: TORO T-EHD1645 BLUE STRIPE HOSE WITH TORO LOC-EZE FITTINGS. 6" COVER. DISTRIBUTION TUBING: TORO EHW0437-010 1/4" HOSE.					L5.2/14-16
		SLEEVE (SL): 1120-CLASS 200 PVC PLASTIC PIPE. 24" COVER.					L5.2/6

LICENSED LANDSCAPE ARCHITECT
JING ZHANG
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09/30/2025
Renewal Date
09/16/2025
Date
STATE OF CALIFORNIA

PROJECT:
WU&LIU RESIDENCE
1053 ECHO DRIVE
LOS ALTOS, CA 94024

REVISIONS:

NO.	DATE	DESCRIPTION

DRAWING TITLE:
IRRIGATION NOTES AND LEGEND

PROJECT NO:
007

SCALE:
AS SHOWN

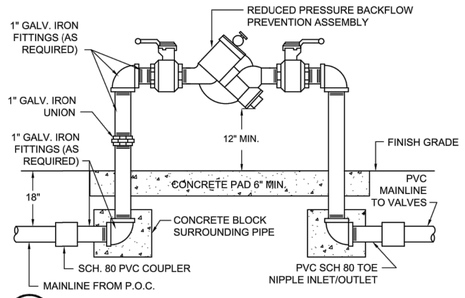
DRAWN BY:
JZ/YG

REVIEWED BY:

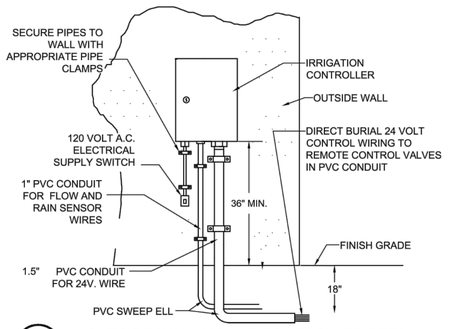
ISSUE DATE:

DRAWING NO:
L5.1

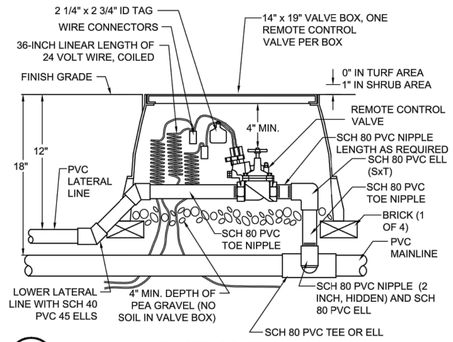
NOTE: EVENLY COAT METAL FITTINGS EXPOSED TO SOIL AND CONCRETE WITH 3M SCOTCHRAP PIPE PRIMER AND THEN WRAP WITH 3M SCOTCHRAP NO. 51 BLACK TAPE (3/4" OVERLAP). USE DIELECTRIC FITTINGS WHERE DISSIMILAR METALS COME INTO CONTACT.



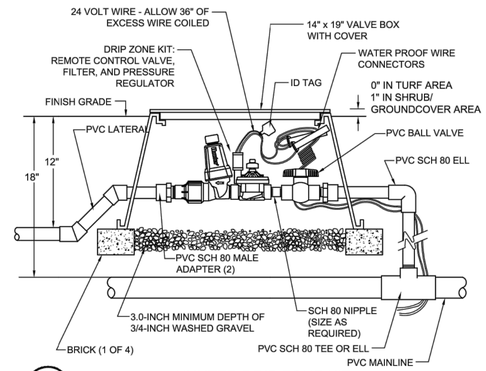
1 REDUCED PRESSURE BACKFLOW ASSEMBLY
NOT TO SCALE



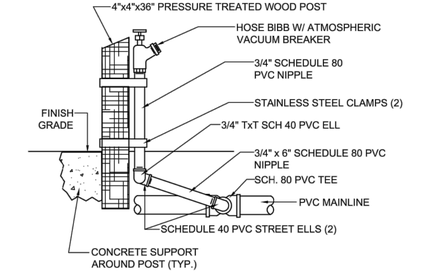
2 OUTSIDE WALL MOUNT CONTROLLER DETAIL
NOT TO SCALE



3 REMOTE CONTROL VALVE
NOT TO SCALE

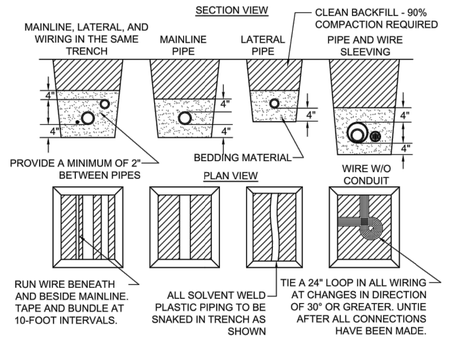


4 HUNTER DRIP ZONE KIT
NOT TO SCALE



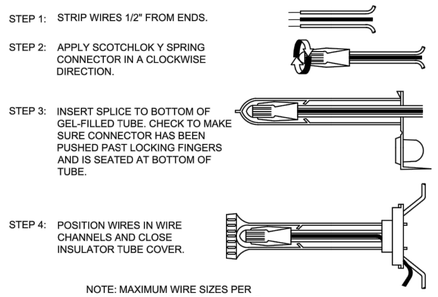
NOTES:
1. CENTER BOX OVER VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN AREA ONLY IF GROUND COVER/SHRUB AREA DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOX EDGES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. VALVE BOXES SHALL HAVE BOLT DOWN LIDS WITH BOLTS INSTALLED.
7. VALVE BOXES SHALL BE BY NDS, CARSON, OR EQUAL.

5 VALVE BOX INSTALLATION DETAIL
NOT TO SCALE



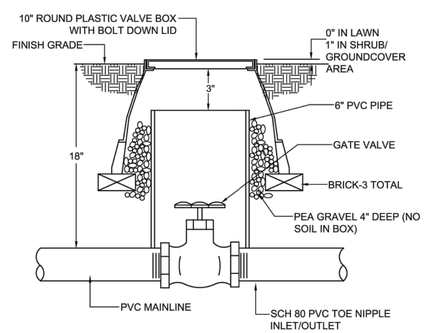
NOTES:
1. SLEEVE BELOW ALL HARDSCAPE ELEMENTS WITH SPECIFIED PVC PIPE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.
2. FOR PIPE AND WIRE BURIAL DEPTHS REFER TO IRRIGATION LEGEND AND SPECIFICATIONS.

6 PIPE AND WIRE TRENCHING
NOT TO SCALE



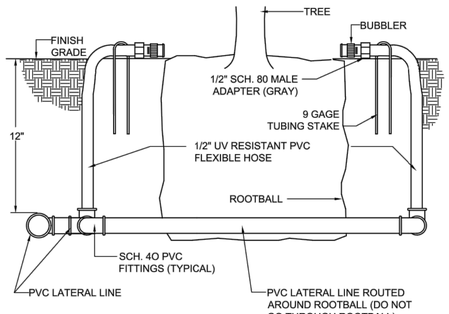
NOTE: MAXIMUM WIRE SIZES PER CONNECTOR ARE THREE # 14'S OR TWO #12'S.

7 WIRE CONNECTION DETAIL
NOT TO SCALE



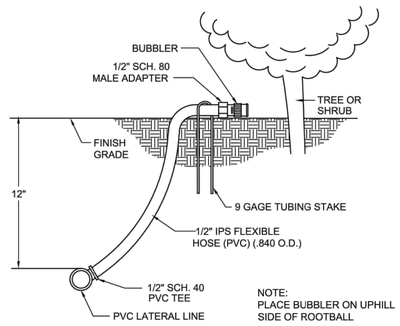
8 GATE VALVE DETAIL - 2" & SMALLER
NOT TO SCALE

9 HOSE BIBB DETAIL
NOT TO SCALE



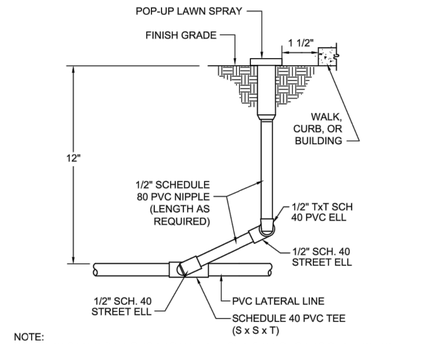
NOTES:
1. INSTALL BUBBLERS BETWEEN THE ROOT BALL AND THE NATIVE SOIL . WATER SHOULD NOT BE HITTING THE TRUNK OF THE TREE.
2. USE WELD-ON 795 FOR ALL FLEXIBLE HOSE CONNECTIONS.
3. NUMBER OF BUBBLERS PER TREE SIZE:
   a. 15G - 24" BOX = 2 BUBBLERS
   b. 36" - 48" BOX = 4 BUBBLERS
   c. 60" - 72" BOX = 6 BUBBLERS

10 TREE BUBBLER DETAIL
NOT TO SCALE



NOTE:
1. USE WELD-ON 795 FOR ALL FLEXIBLE HOSE CONNECTIONS.

11 BUBBLER ON FLEX HOSE DETAIL
NOT TO SCALE



NOTE:
PRE-FABRICATED SWING JOINTS MAY BE USED. SWING JOINTS SHALL BE BY LASCO, RAINBIRD, OR EQUAL

12 LAWN POP-UP INSTALLATION DETAIL
NOT TO SCALE

LICENSED LANDSCAPE ARCHITECT
JING ZHANG
Signature
09/30/2025
Renewal Date
08/16/2025
Date
STATE OF CALIFORNIA

PROJECT:
WU&LIU RESIDENCE
1053 ECHO DRIVE
LOS ALTOS, CA 94024

REVISIONS:

NO.	DATE	DESCRIPTION

DRAWING TITLE:
IRRIGATION DETAILS

PROJECT NO:
007

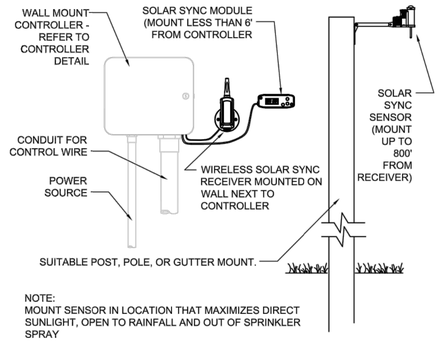
SCALE:
AS SHOWN

DRAWN BY:
JZ/YG

REVIEWED BY:

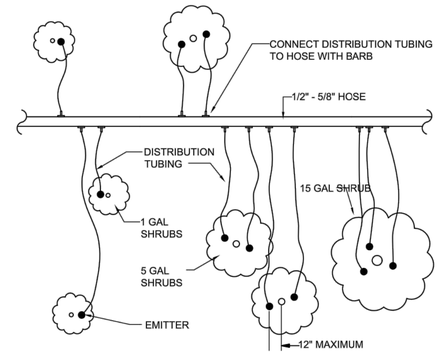
ISSUE DATE:

DRAWING NO:
L5.2



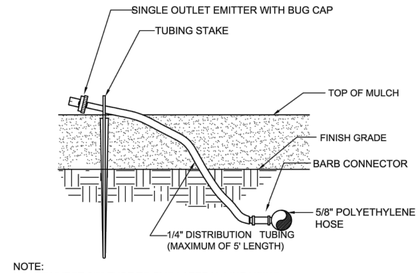
13 HUNTER SOLAR SYNC WEATHER SENSOR

NOT TO SCALE



14 TYPICAL DRIP EMITTER LAYOUT

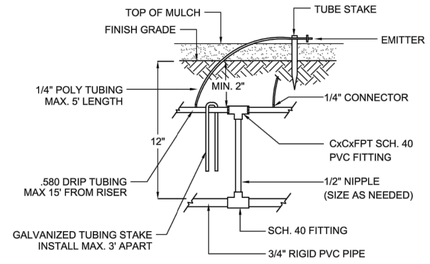
NOT TO SCALE



NOTE:
1. CONNECT 5/8" TUBE TO PVC LATERAL LINE USING COMPRESSION FITTINGS.
2. 5/8" HOSE SHALL NOT RUN LONGER THAN 20' FROM PVC LATERAL LINE.

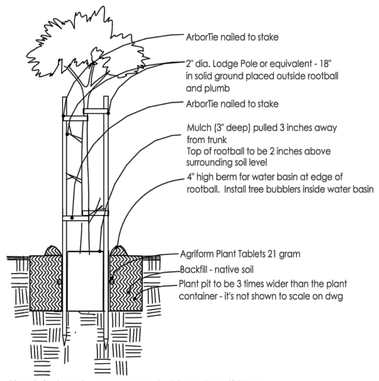
15 SINGLE OUTLET EMITTER DETAIL

NOT TO SCALE



16 RISER TO DRIP TUBING DETAIL

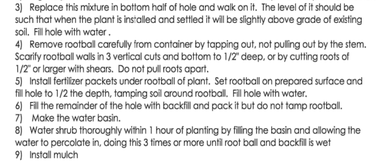
NOT TO SCALE



1) 8 - 12 hours before installation, water all plants while still in containers sufficiently to thoroughly wet root balls
2) Dig hole at least 2" less deep than the container and 3 times wider than the diameter of the container the plants were delivered in.
3) Gouge holes in the side of the plant pit - 2 holes per sq. ft. of wall surface
4) Remove rootball carefully from container with support from below. Sever any circling roots (3/16"dia. or greater) with sharp knife. Do not pull roots apart. The severing of large roots will encourage new roots at the cuts. Install enough backfill under root ball so top of rootball ends up 2" above grade of surrounding soil when it settles. Install some of fertilizer packets under root ball.
5) Fill around rootball with backfill mix to 1/2 its height and pack soil as you fill with shovel handle or feet being careful not to disturb root ball
6) Put Agriform Plant Tablet fertilizer at this level adjacent to rootball and at bottom of hole (5 tablets per 15 gal. or 5 tablets per 1 inch of caliper width. Fill the remainder of the hole with backfill and pack it.
7) Water tree thoroughly by filling the basin and allowing the water to percolate in, doing this 3 times or more until root ball and backfill is wet
8) Install stakes such that the stakes and the tree ties won't damage the tree and the stakes won't lean toward each other. Cut off tops of stakes if necessary to lower below branches that could be rubbed by stakes. Install stakes so they are straight up and don't lean in to each other

17 TREE PLANTING

NOT TO SCALE



1) 8 - 12 hours before installation, water all plants while still in containers sufficiently to thoroughly wet root balls
2) Dig the plant hole at least 3 times the dia. and 2 times the depth of the plant container.
3) Replace this mixture in bottom half of hole and walk on it. The level of it should be such that when the plant is installed and settled it will be slightly above grade of existing soil. Fill hole with water .
4) Remove rootball carefully from container by tapping out, not pulling out by the stem. Scarify rootball walls in 3 vertical cuts and bottom to 1/2" deep, or by cutting roots of 1/2" or larger with shears. Do not pull roots apart.
5) Install fertilizer packets under rootball of plant. Set rootball on prepared surface and fill hole to 1/2 the depth, tamping soil around rootball. Fill hole with water.
6) Fill the remainder of the hole with backfill and pack it but do not tamp rootball.
7) Make the water basin.
8) Water shrub thoroughly within 1 hour of planting by filling the basin and allowing the water to percolate in, doing this 3 times or more until root ball and backfill is wet
9) Install mulch

18 SHRUB PLANTING

NOT TO SCALE

LICENSED LANDSCAPE ARCHITECT
JING ZHANG
Signature
09/30/2025
Renewal Date
09/16/2025
Date
STATE OF CALIFORNIA

PROJECT:
WU&LIU RESIDENCE
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REVISIONS:

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DRAWING TITLE:
IRRIGATION AND LANDSCAPE DETAILS

PROJECT NO:
007

SCALE:
AS SHOWN

DRAWN BY:
JZ/YG

REVIEWED BY:

ISSUE DATE:

DRAWING NO:
L5.3

GENERAL CONDITIONS – SOIL PREPARATION, PLANTING, AND IRRIGATION

1.1 QUALITY ASSURANCE:
A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.
B. It is the Contractor's responsibility to verify all information contained in the plans and specifications and to notify the Architect of any discrepancy prior to ordering products or commencing with the work.
C. Check and verify dimensions, reporting any variations to the Architect before proceeding with the work.

1.2 CONTRACTOR COORDINATION
A. It is the responsibility of the Landscape Contractor to familiarize himself with all grade differences, location of walls, retaining walls, etc., and to coordinate work with the General Contractor.

1.3 DIMENSIONS AND SCALE
A. Dimensions are to take precedence over scale at all times. Large scale details are to take precedence over those at small scale. Dimensions shown on plans shall be adhered to insofar as it is possible, and no deviation from such dimensions shall be made except with the consent of the Architect. The Contractor shall verify all dimensions at the site and shall be solely responsible for same or deviations from same.

1.4 LAWS AND REGULATIONS
A. The Contractor shall conform to and abide by all city, county, state and federal building, labor and sanitary laws, ordinances, rules, and regulations.

1.5 LICENSES AND PERMITS
A. The Contractor shall give all notices and procure and pay for all permits and licenses that may be required to complete the work.

1.6 SUBMITTALS
A. At the request of the owner or the Landscape Architect, submit manufacturer's and/or supplier's specifications and other data needed to prove compliance with the specified requirements including certificates stating quantity, type, composition, weight, and origin of all amendments, chemicals, import soil, planter mix, plants, and irrigation equipment used on the site.

1.7 PRODUCT SUBSTITUTIONS
A. Any product substitutions shall be requested in writing. The Landscape Architect must approve or refuse any substitutions in writing. Lack of written approval will mean the substitution is not approved. Any difference in cost to the Contractor of a less expensive substitution shall be credited to the Owner's

1.8 ERRORS AND OMISSIONS
A. The Contractor shall not take advantage of any unintentional error or omission in the drawings or specifications. He will be expected to furnish all necessary materials and labor that are necessary to make a complete job to the true intent and meaning of these specifications. Should there be discrepancies in the drawings or specifications, the contractor shall immediately call the attention of the Architect to same and shall receive the complete instructions in writing.

1.9 INSPECTIONS/REVIEWS DEFINITION
A. Inspection or observation as used in these specifications means visual observation of materials, equipment, or construction work on an intermittent basis to determine that the work is in substantial conformance with the contract documents and the design intent. Such inspection or observation does not constitute acceptance of the work nor shall it be construed to relieve the contractor in any way from his responsibility for the means and methods of construction or for safety on the construction site. Inspection or observation will be done by the Landscape Architect only if requested by the owner in writing. This service will require a written contract for additional fees.

LANDSCAPE IRRIGATION

PART 1 – GENERAL

1.1 WORK INCLUDED

A. The work includes but is not necessarily limited to the furnishing of all materials, equipments, and labor required to install a complete irrigation system.

1.2 GUARANTEE. The entire sprinkler system shall be guaranteed by the Contractor in writing to be free from defects in material and workmanship for a period of one year from acceptance of the work. The guarantee shall include repair of any trench settlement occurring within the guarantee period, including related damage to paving, landscaping, or improvements of any kind.

1.3 REVIEWS
A. Request the following reviews prior to progressing with the work: (1) Layout of system (2) Depth of lines prior to backfilling (3) Coverage adjustment of all heads, valve boxes and operation of system.

1.4 WATER PRESSURE
A. Verify the existence of the minimum acceptable volume of water at the minimum acceptable dynamic pressure as per plan at the point of connection at the earliest opportunity, reporting insufficient volume and/or pressure to the Landscape Architect. Contractor is responsible for cost of installation of pressure regulator if pressure exceeds 80 psi.

1.5 UTILITIES
A. Verify the location of all existing utilities and services in the line of work before excavating. Take all precautionary measures necessary to avoid damaging

1.6 ELECTRICAL CONNECTION
A. Verify existence of 110 Volt 20 Amp. circuit for irrigation controller (by others) at location noted on plan for installation of controller.

PART 2 – PRODUCTS

2.1 PIPE
A. Plastic pipe is to be polyvinyl chloride, marked 1120–1220, and bearing the seal of the National Sanitation Foundation. Use Schedule 40 polyvinyl chloride, type I–II fittings bearing the seal of the National Sanitation Foundation, and complying with ASTM D2466 for pressure line and also for any water lines under asphalt paving. Use Sch 40 PVC for lateral lines in planting areas unless stronger pipe is specified in the irrigation legend. For joining, use a solvent complying with ASTM D2466 and recommended by the manufacturer of the approved pipe. Pipe is to be continuously and permanently marked with the manufacturer's name, pipe size, schedule number, type of material, and code number.
B. Galvanized steel pipe is to comply with ASTM A120 or ASTM A53, galvanized, Schedule 40, threaded, coupled, and hot–dip galvanized. Use 150 lb. rated galvanized malleable iron, banded pattern fittings. Wrap all galvanized pipe below grade with 2" wide, 10 mil. plastic wrapping tape (#50 Scotch wrap or equal).
C. Drip tubing is to be as noted on plans. Use compression fittings.

2.2 CONTROL WIRE
A. Use type UF direct burial wire minimum size #14, copper, U.L. approved for irrigation control use for runs of 1000 feet or less. For longer runs consult with Landscape Architect. Use 3M DBY Direct Bury Wire Splice Kits or dry splice type wire connectors at splices. No underground splices will be allowed without a splice box.

2.3 OTHER MATERIALS
A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

PART 3 – EXECUTION

3.1 SURFACE CONDITIONS
A. Examine the areas and conditions under which the work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

3.2 EXCAVATION
A. Trenches may be excavated either by hand or machine, but shall not be wider than is necessary to lay the pipes. Care should be taken to avoid damage to existing water lines, utility lines, and roots of plants to be saved.
B. Minimum depth of cover for buried pipelines shall be: 1. Eighteen (18) inches for mainline pressure piping. 2. Eighteen (18) inches for 24 volt wiring from controllers to remote control valves. 3. Twelve (12) inches for lateral distribution lines. 4. Twenty–four (24) inches, minimum cover, with 6" sand bedding and 6" sand cover for any pipe or wire sleeve under A.C. paving.
C. Under existing paving, piping may be installed by jacking, boring, or hydraulic driving except that no hydraulic driving will be permitted under asphalt concrete pavement (most pipes and sleeves under A.C. paving are to be installed prior to installation of the paving). Where cutting or breaking of existing pavement is necessary, secure permission from the Architect before cutting or breaking the pavement, and then make necessary repairs and replacements to the approval of the Architect and at no additional cost to the Owner.

3.3 INSTALLATION OF PIPE
A. Handling and assembly of pipe, fittings, and accessories shall be by skilled tradesmen using methods and tools approved by the manufacturers of the pipe and equipment and exercising care to prevent damage to the materials or equipment.
B. Metal pipe threads shall be sound, clean cut, and cored to full inside diameter. Threaded joints shall be made up with the best quality pure joint compound carefully and smoothly placed on the male threads only throughout the system.
C. On plastic threaded connections use the sealer recommended by the manufacturer of the plastic valve or fitting. Do not use paste sealer products on plastic valves. Tighten plastic threaded connections with light wrench pressure only.
D. Connections and controls shall be functionally as shown on the drawings, but physically shall be the most direct and convenient method while imposing the least hydraulic friction. Install lines in planting areas whenever possible.
E. Thread male PVC connections into metal female connections rather than the opposite.
F. Interior of pipe fittings, and accessories shall be kept clean at all times, and all openings in piping runs shall be closed at the end of each day's work or otherwise as necessary to prevent the entry of foreign materials. Bending of galvanized steel pipe will not be permitted. Install plastic pipe with the markings turned up to be seen from above until the pipe is buried. "Snake" the pipe in the trenches so that there will be a small amount of excess length in the line to compensate for contraction and expansion of the pipe.
G. Place backfill in 6" layers such that there will be no settling. The top 6" of soil is to be the top soil and soil amendment mixture. All backfill shall be free of rock and debris. Test pipe for leaks prior to backfilling joints. Obtain approval of the owner's representative before backfilling joints.

3.4 INSTALLATION OF EQUIPMENT
A. Flush lines clean prior to installation of valves, sprinkler heads, or hose bibs. Install valves, sprinkler heads, controllers, backflow preventors, hose bibs, and other equipment as per the Irrigation Plan and details.

3.5 ELECTRICAL WORK
A. The line voltage work shall consist of connecting the controller to the nearest available 115 volt supply. The line voltage connection shall be in conduit, in accordance with local electrical code. Controllers mounted inside buildings can be plugged into outlets. The low voltage work shall include all necessary wiring from the controller to the automatic sprinkler valves, installed in accordance with the manufacturer's recommendations. A loop of extra wire, a minimum of eighteen (18) inches long shall be provided at each automatic valve. Appropriate expansion loops shall be provided throughout the system to assure that no wiring will be under stress.
B. All splices and connections on the 24 volt system shall be made using 3M DBY Direct Bury Splice Kits, Rain Bird Pentite connector, or equal.
C. Wiring, wherever possible, shall be placed in the same trench with, and alongside of, the irrigation main water line. Tape and bundle wire every ten feet. All wiring placed under paving shall be put in adequately sized Sch 40 PVC pipe sleeves prior to paving operations.
D. Wire for 24 volt control lines shall be size #14 UF direct burial irrigation wire. Unless noted differently on the plan, common grounds shall be white, size #14 UF direct burial wire. For wire runs over 1000 feet consult with Landscape Architect for wire size. Under no circumstances, on multiple controller installations, will a single common ground, shared by each controller, be permitted. Each controller shall have its own separate common ground wire.

3.6 TESTING
A. All testing shall be done in the presence of the Owner's Representative. Center–load all pipelines with clean soil approximately every four feet to resist hydraulic pressures, but leave fittings exposed for inspection. Piping under paving shall be tested before paving is in place. Install a 0 to 160 P.S.I. gauge on lines to be tested. All valves shown on Plans shall be in place and shall be in the closed position. Mains shall be tested at 100 P.S.I., and laterals at 65 P.S.I. If available static water pressure is under 100 P.S.I., provide suitable pump for tests. Fill pipelines slowly to avoid pipe damage, and bleed all air from lines as they are being filled. After closing valve at water source, mains shall hold 100 P.S.I. gauge pressure for two hours with no leaks. Laterals are expected to have minor seepage at multiple swing joint assemblies. Major leaks are not acceptable. Laterals shall be tested for one hour at 65 P.S.I. solely to reveal any piping or assembly flaws. The laterals are not expected to hold gauge pressure. For testing laterals, cap risers or turn adjusting screws on nozzles to the "off" position, as appropriate. Repair any flaws discovered in mains or laterals, then retest in same fashion as outlined in presence of the Landscape Architect until all lines have been approved. Provide required testing equipment and personnel.

3.7 SYSTEM ADJUSTMENT
A. The entire sprinkler system shall be properly adjusted before final acceptance. Adjustments shall include but not necessarily be limited to: (1) Adjustment of arc and distance control devices on sprinklers, including changing nozzle sizes if necessary to assure proper coverage of planted areas. (2) Relocation or addition of sprinkler heads if necessary to properly cover planted areas, without causing excessive water to be thrown onto building, walks, paving, etc. (3) Throttling of automatic valves as necessary to operate sprinklers at manufacturer's recommended pressure. (4) Adjustment and testing of all automatic control devices to assure their proper function, both automatically and manually. (5) Installation of pop–up heads anywhere there is a chance of pedestrians or vehicles hitting heads even if pop–ups are not shown on the plan. (6) Installation of check valves to keep sprinkler head drainage from eroding landscape areas, wasting water, or creating soggy spots in the landscaping.

3.8 AS–BUILT DRAWINGS AND INSTRUCTION
A. Regularly update a print of the system noting any changes which are made by dimensioning features below grade from surface features with at least two dimensions. Prior to final approval, give the Owner 2 copies of clean blueprints marked to show changes during construction. The most important features to mark on the plan are valves, pressure lines, wires, and hose bibs.
B. After the system has been completed, inspected, and approved, instruct the Owner's maintenance personnel in the operation and maintenance of the system. Give the Owner completed warranty cards for the irrigation equipment and keys to controllers and hose bibs.

SOIL PREPARATION AND PLANTING

PART 1 – GENERAL

1.1 DESCRIPTION
A. The work includes, but is not necessarily limited to, the furnishing of all materials, equipment, and labor required to do the installation and complete placement of topsoil, fine grading, soil conditioning, and planting.

1.2 QUALITY ASSURANCE
A. Plant Identification and Quality
1. Plants are to be true to name, with one of each bundle or lot tagged with the name of the plants in accordance with standards of practice of the American Association of Nurserymen. In all cases, botanical names take precedence over common names.
2. Plants shall be vigorous, of normal growth habit, free of diseases, insects, eggs, larvae, excessive abrasions, sun scalds, or other objectionable disfigurements, and shall conform to the standards as outlined by the California Association of Nurserymen. Tree trunks shall be sturdy and well "hardened off". All plants shall have normal well developed branch system, and vigorous, fibrous root systems which are not root bound. Ground cover plants (rooted cuttings) shall have well developed root systems and be kept moist prior to and during installation. Plants shall be nursery grown and of size indicated on Drawings. All plants not conforming to those requirements will be considered defective, removed from the site and replaced with acceptable new plants at the Contractor's expense.
3. Sod shall have a well developed root system. Yellowing, brown, diseased, dried, or pest infested sod shall be rejected. Sod is to be cleanly mowed within 72 hours of delivery to the site. Sod is to be delivered to the site within 24 hours after being harvested and installed immediately after being delivered. Sod shall not be stored on the site overnight. Any sod delivered to the site that cannot be installed the same day shall be removed and not used on the site.
4. Ground cover is to have well developed roots and foliage. It is to be grown in and delivered to the site in flats.

1.3 SUBMITTALS
A. Provide the results of lab tests done on representative samples of existing soils and imported soils to be used for the top 12" or more of landscape area. Tests are to be done by a reputable soils lab (i.e., Perry Lab, Watsonville or Santa Clara Soil and Plant Lab). Samples to be tested are to be collected by lab personnel. Soil samples are to be tested for:
1. Particle size distribution (clay, silt, sand).
2. Agricultural suitability including any excess problems; i.e., salinity (calcium, magnesium), boron, sodium, pH level.
3. Fertility – amounts of available nitrogen, potassium, phosphorous, iron, magnesium, copper, zinc, and boron.
4. Chemicals and/or poisons that would hinder plant growth. The owner is to decide if tests for poisons will be done since there is a small chance that any exist and the cost of testing for them is expensive and difficult.
An interpretation of the test results and their affect on plant performance done by the lab staff or an approved horticultural consultant should be included in the report. The Owner is responsible for the cost of initial testing and for any additional chemicals and amendments that are required that are not already included in the Specifications or Drawings. Soils tests must be done as soon as possible and prior to ordering or installing soil amendments or plant materials. Plant selections and soil amendment specifications are subject to change depending on the results of the soil tests.
5. If bidding is done prior to soil fertility tests, bid 6 cu yds. of nitrolized RWD sawdust and 16 lbs. of 12–12–12 fertilizer per 1000 sq.ft. tilled or dug into the top 6" to 8" of soil in all planting areas for bidding purposes only. Revise bid when results of soil fertility tests are obtained.

1.4 GUARANTEE
A. Trees shall be guaranteed 1 year – all other plant material 120 days following final acceptance. Any plant material needing replacement because of weakness or probability of dying will be replaced with material of similar type and size to that of the surrounding area. The replacement plants will have the same guarantee as the original plants or trees, starting the day of their replacement. The Contractor is not responsible for losses due to vandalism if he has taken reasonable measures for protection of the plants.

1.5 PRODUCT HANDLING
A. Protect plants before and during installation, maintaining them in a healthy condition. Application(s) of anti–desiccant may be required to minimize damage. The Contractor is responsible for vandalism, theft, or damage to plant material until commencement of the maintenance period.

1.6 REVIEWS
A. Request the following reviews by the Owner's Representative at least three (3) days in advance (in writing): (1) Rough grading (of landscape area) (2) Soil test (3) Verification of incorporation depths (4) Finish grade (5) Plant material quality approval (6) Plant material layout (7) Plant pit sizes (prior to planting plants) (8) Preliminary inspection (9) Final inspection (5 day advance notice required)

PART 2 – PRODUCTS

2.1 TOPSOIL
A. Native topsoil or import landscape soil

2.2 NATIVE TOPSOIL
A. Native soil on site without admixture of subsoil, free from rocks over two cubic inches, debris, and other deleterious material. Native topsoil is to be stripped, stockpiled, and reinstalled.

2.3 IMPORT LANDSCAPE SOIL
A. Import landscape soil must be tested and meet the following specification:
1. TEXTURE:
Sandy loam to loam
2. GRADING:

SEIVE SIZE	PERCENT PASSING SIEVE
25.4 mm (1")	95 – 100
9.51 mm (3/8")	85 – 100
53 Micron (270 mesh)	10 – 30

3. CHEMISTRY – SUITABILITY CONSIDERATIONS:
a. Salinity: Saturation Extract Conductivity (ECe x 103 @ 25 degree C.) Less than 4.0
b. Sodium: Sodium Adsorption Ration (SAR) Less than 9.0
c. Boron: Saturation Extract Concentration Less than 1.0 PPM
d. Reaction: pH of Saturated Paste: 5.5 – 7.5
e. Lime: less than 3% by weight
4. PESTS:
a. The population of any single species of plant pathogenic nematode: fewer than 500 per pint of soil.
5. ORGANIC MATTER
a. Soil is to have 5% to 10% organic matter at below 18 inches in depth.
Soil is to have less than 30% organic matter at 0 to 18 inches in depth
Organic matter to be less than 1" dia. Do not use mushroom compost.
No noxious weeds are allowed.
6. FERTILITY CONSIDERATIONS:
a. Soil is to contain sufficient quantities of available nitrogen, phosphorous, potassium, calcium, and magnesium to support normal plant growth. In the event of nutrient inadequacies, provisions shall be made to add required materials to overcome inadequacies prior to planting.
7. COMPACTION
a. Compact the soil enough so it doesn't settle more when walked on and not significantly over time where the flow of drainage will be affected or soil needs to be added. Don't over compact or work soil when it has too much moisture.
Dig bottom layer of import soil into existing soil. Compact in 6 inch lifts.

2.4 ORGANIC SOIL AMENDMENT
A. Redwood sawdust, 0–1/4" in diameter, that is nitrogen stabilized by the supplier, and contains a wetting agent. Also see note on planting plan

2.5 ORGANIC MULCH
A. See Planting Plan

2.6 PLANTER SOIL MIX
A. See Planting Plan and Details.

2.7 BACKFILL FOR PLANT PITS
A. For native soils with 50% or more clay content – 75% topsoil and 25% organic amendment thoroughly mixed and incorporated together with no topsoil clods larger than 1/2" diameter. In heavy clay soils or other soils with large clods this will require mixing the backfill in a stockpile at the site or at the supplier. For soils with less clay content amend only the top 8" of the plant pit backfill as per the soils lab recommendations.

2.8 FERTILIZER
A. Fertilizer needs and amounts will be based on the results of the soil test

B. Sod lawn areas (there is no lawn on the plan)

2.9 PLANT MATERIAL SUBSTITUTES
A. Substitutes will not be permitted except when proof is submitted that plants specified are not available and then only upon approval of the Landscape Architect and Owner.

2.10 OTHER MATERIALS
A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Landscape Architect.

PART 3 – EXECUTION

3.1 SURFACE CONDITIONS
A. Examine the areas and conditions under which the work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.
B. Weed and Debris Removal – All ground areas to be planted shall be cleaned of all weeds and debris prior to any soil preparation or grading work. Weeds and debris shall be disposed of off the site.
C. Contaminated Soil – Do not perform any soil preparation work in areas where soil is contaminated with cement, plaster, paint or other construction debris. Bring such areas to the attention of the Owner's Representative and do not proceed until the contaminated soil is removed and replaced.
D. Moisture Content – Soil shall not be worked when moisture content is so great that excessive compaction will occur, nor when it is so dry that dust will form in the air or that clods will not break readily. Water shall be applied, if necessary, to bring soil to an optimum moisture content for tilling and planting.

3.2 ROUGH GRADING AND TOPSOIL PLACEMENT
A. Request a review by the Owner's Representative to verify specified limits and grades of work completed to date before starting soil preparation work. Place topsoil as required to obtain an 12" minimum depth of topsoil or as noted otherwise on the Plans. (Topsoil may already exist in the planting areas). Integrate topsoil layer into subsoil or existing compacted topsoil layer by ripping. Complete rough grading as necessary to round top and toe of all slopes, providing naturalized contouring to integrate newly graded area with the existing topography. Verify that rough grading is completed in accordance with civil engineering drawings and/or any landscape grading drawings. Break through any compacted layers of subgrade material (sometimes left from building or paving pad compaction) that will not allow water in planting areas to percolate through, causing a boggy, over saturated soil condition. You may have to use a backhoe or rotohammers to break up and turn soil to a minimum depth of 12". If proposed planters are in areas of existing paving or baserock, remove at least 12" of material and bring in top soil up to grade required by grading plan. Rough grading in planting areas is to be such that when amendment is incorporated and the mulch is installed, the grade will be +– 1" to finish grade.
B. Soil Preparation: (1) Distribute soil (organic) amendment and fertilizer in the amounts recommended by the soils lab over all planting areas unless noted otherwise on the Plans. (2) Rip and/or till the amendment and fertilizer into the top 6" to 8" of soil until they are thoroughly mixed in. Hand work areas inaccessible to mechanical equipment. (3) Moisten to uniform depth for settlement and regrade to establish elevations and slopes indicated on Drawings.

3.3 FINISH GRADING
A. The Contractor shall make himself familiar with the site and grading plans and do finished grading in conformance with said Plans and as herein specified.
B. Grades not otherwise indicated shall be uniform levels or slopes between points where elevations are given or between points established by walks, paving, curbs, or catch basins. Finish grades shall be smooth, even, and on a uniform plane with no abrupt changes of surface. Minor adjustments of finish grades shall be made at the direction of the Landscape Architect, if required.
C. All grades shall provide for natural runoff of water without low spots or pockets. Flowline grades shall be accurately set and shall be not less than 2% gradient wherever possible. Grades shall slope away from building foundations unless otherwise noted on Plans. All finish grades (top of mulch) are 1" below finish grade of walks, pavements, curbs, and valve boxes unless otherwise noted.

3.5 MULCHING
A. Recultivate soils compacted by planting or other operations and smooth the soil areas prior to applying mulch. Mulch all planting areas to a depth as noted on plans. This depth should be as per the plans even after being settled and stepped on 30 days after installation. Water lightly to settle mulch. Do not bury ground cover with mulch. Place and settle mulch in such a way that it does not get washed onto paving or block drain swales or inlets.

3.6 WEED CONTROL
A. The Contractor is responsible for pre–emergent weed control. Follow the manufacturer's directions. The Contractor is responsible for the replacement of any plants (other than weeds) that are hurt or killed due to the misuse of weed control products or use of the wrong product. Clay soils can increase the affect of certain pre–emergents. Adjust the application rate accordingly. Some owners may prefer hand weeding to chemical weed control although it is usually more expensive.

3.7 MAINTENANCE
A. Maintenance shall begin immediately after each plant is installed.
B. Maintenance will include:
1. Continuous operations of watering, weeding, cultivating, fertilizing, spraying, insect, pest, fungus, and rodent control, and any other operations to assure good normal growth.
2. Fertilizing: In addition to fertilizing of trees, shrubs and ground covers, herein specified, furnish and apply any additional fertilizers necessary to maintain plantings in a healthy, green vigorous growing condition during the maintenance period.
3. Weeding, Cultivating and Clean Up: Planting areas shall be kept neat and free from debris at all times and shall be cultivated and weeded at no more than 10–day intervals.
4. Insect, Pest and Disease Control: Insects and diseases shall be controlled by the use of approved insecticides and fungicides. Moles, gophers, and other rodents shall be controlled by traps, approved pellets inserted by probe gun, or other approved means.
5. Protection: Work under this Section shall include complete responsibility for maintaining adequate protection for all areas. Any damaged areas shall be repaired at no additional expense to the Owner.
6. Replacements: Immediately replace any plant materials that die or are damaged. Replacements shall be made to the Specifications as required for original plantings.
7. Hand Watering: Even when planting areas are watered with automatic irrigation, the soil surrounding the plant pits can be moist while the sawdust/sand root ball is dry. This can cause the plants to deteriorate or not grow (even during the winter). The plants will do best (especially during the hot season) if they are hand watered deeply until their roots grow out into the surrounding soil.

3.8 PRELIMINARY INSPECTION
A. As soon as all the planting is installed, the Contractor will request the Owner's Representative (in writing) to make a preliminary inspection. The 30 calendar day maintenance period will start when the work is approved. Replacement and/or repairs may be required for approval. The Contractor is to notify the Owner and the Owner's Representative in writing when the 30 day maintenance period begins.

3.9 FINAL INSPECTION
A. At least 5 days prior to the anticipated end of the maintenance period, the Contractor shall submit a written request for final inspection. The planting areas shall be weeded, neat and clean. The work shall be accepted by the Owner exclusive of the plant materials upon written approval of the work by the Owner's Representative.

LICENSED LANDSCAPE ARCHITECT
JING ZHANG
Signature
On 10/2025
Renewal Date
08/16/2025
Date
STATE OF CALIFORNIA

PROJECT:
WU&LIU RESIDENCE
1053 ECHO DRIVE
LOS ALTOS, CA 94024

REVISIONS:

NO.	DATE	DESCRIPTION

DRAWING TITLE:
LANDSCAPE NOTES

PROJECT NO:
007

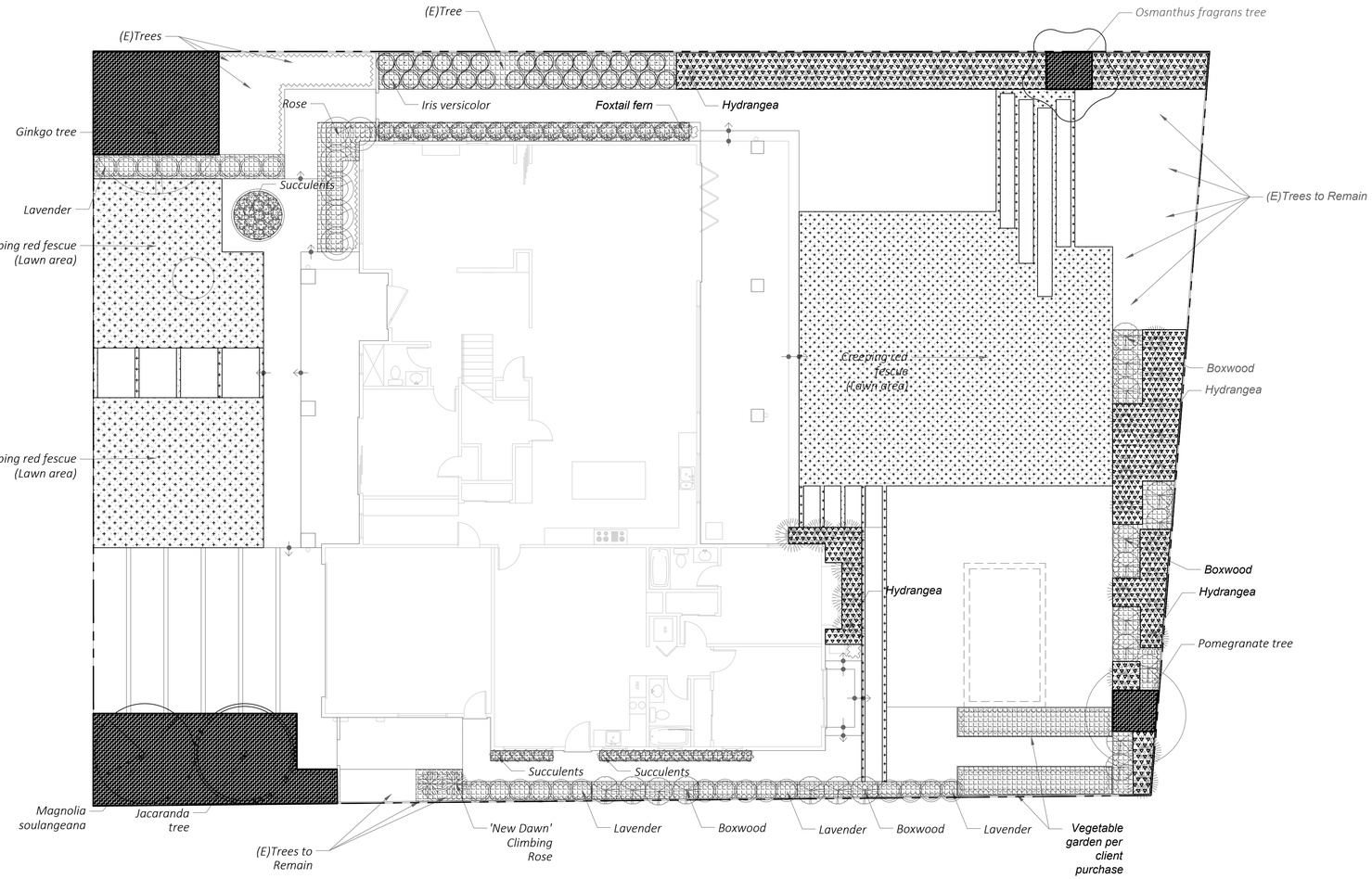
SCALE:
AS SHOWN

DRAWN BY:
JZ/YG

REVIEWED BY:

ISSUE DATE:

DRAWING NO:
L5.4



HYDROZONE SUMMARY

HYDROZONE–DESCRIPTION VALVES		SQ.FT.	% OF TOTAL
3,4,5,6,8,9,15,16,17,18,19,22	DRIP, LOW WATER SHRUB	825.4	21.0%
1,12,21	DRIP, LOW WATER GRASS	1996.6	51.0%
2,10,14,20,23	DRIP, MED WATER TREE	527.5	13.4%
7,11,13	DRIP, MED WATER SHRUB	574.5	14.6%

0 8'

LICENSED LANDSCAPE ARCHITECT
JING ZHANG LA 6047
Signature
09/30/2025
Renewal Date
09/16/2025
Date
STATE OF CALIFORNIA

PROJECT:
WU&LIU RESIDENCE
1053 ECHO DRIVE
LOS ALTOS, CA 94024

REVISIONS:

NO.	DATE	DESCRIPTION

DRAWING TITLE:
HYDROZONE PLAN

PROJECT NO:
007

SCALE:
AS SHOWN

DRAWN BY:
JZ/YG

REVIEWED BY:

ISSUE DATE:

DRAWING NO:
L6.0

Angela Wu
1053 Echo Dr.,
Los Altos, CA 94024

Site: 1053 Echo Dr., Los Altos

Dear Angela,

At your request I visited the above site for the purpose of inspecting and commenting on the regulated trees around the property. A new home is proposed for this property, prompting the need for this tree protection report.

Method:
A protected tree is any of the following:

A. Any tree that is thirty-eight (38) inches in circumference (12 inches in diameter) measured at forty-eight (48) inches (4-feet) above grade;

B. Any tree of a native species that is ten (10) inches in diameter or greater measured at forty-eight (48) inches above grade;

CB. Any tree designated by the historical commission as a heritage tree or any tree under official consideration by the historical commission for heritage tree designation;

C. Any tree which was required by the city to be either saved or planted in conjunction with a development review application. (Ord. 07-314 § 2 (part); prior code § 10-2.26504).

Los Altos requests that all trees within the property or within 8 feet of the property lines be included on the report if the trunk diameter at standard height is greater than 6 inches.

The location of the regulated trees on this site can be found on the plan provided by you. Each tree is given an identification number. The trees are measured at 48 inches above ground level (DBH or Diameter at Breast Height). A condition rating of 1 to 100 is assigned to each tree representing form and vitality on the following scale:

1 to 29	Very Poor
30 to 49	Poor
50 to 69	Fair
70 to 89	Good
90 to 100	Excellent

The height and spread of each tree is estimated. A Comments section is provided for any significant observations affecting the condition rating of the tree.

A Summary and Tree Protection Plan are at the end of the survey providing recommendations for maintaining the health and condition of the trees during and after construction.

A summary of the trees and their suitability for preservation can be found in a Table in the Appendix.

A landscape plan for replanting is provided in the Appendix.

If you have any questions, please don't hesitate to call.

Sincerely

Robert Weatherill
Certified Arborist WE 1936A

Tree Survey

Tree#	Species	DBH	Ht/Sp	Con Rating	Comments
1	Hollywood juniper *Juniperas 'Hollywood'*	10.1"/12.5"/12.9"/6.0"	18/18	60	Good health and condition, multi at grade, **Regulated**
2	Mulberry *Morus spp*	17.3"	18/25	60	Good health and condition, heavily pruned, **Regulated**
3	Firethorn *Pyracantha spp*	5.1"/3.8"/2.0"/2.0"	10/10	30	Poor health and condition **Not Regulated**
4	Almond *Prunus dulcis*	5.5"/4.2"/3.5"	12/8	40	Poor health and condition **Not Regulated**
5	Coast live oak *Quercus agrifolia*	8"est	12/6	20	Good health, poor condition, topped at 10', **Not Regulated**
6	Coast live oak *Quercus agrifolia*	6"est	12/8	20	Good health, poor condition, topped at 10', **Not Regulated**
7	Valley oak *Quercus lobata*	6"est	12/5	20	Good health, poor condition, topped at 10', **Not Regulated**
8	Coast live oak *Quercus agrifolia*	6"est	14/6	20	Good health, poor condition, topped at 10', **Not Regulated**
9	Walnut *Juglans nigra*	10"est	20/15	40	Poor health and condition, neighbor's tree, **Not Regulated**
10	Coastal redwood *Sequoia sempervirens*	24"/28"/32"est	60/30	55	Good health, fair condition, topped at 50', neighbor's tree, **Regulated**
11	Coastal redwood *Sequoia sempervirens*	9.4"	30/5	60	Good health and condition, suppressed by #10 and 12, **Not Regulated**
12	Coastal redwood *Sequoia sempervirens*	13.6"	40/6	70	Good health and condition **Regulated**
13	Coastal redwood *Sequoia sempervirens*	15.1"	45/8	70	Good health and condition **Regulated**
14	Coastal redwood *Sequoia sempervirens*	13.0"	35/5	70	Good health and condition **Regulated**
15	Coastal redwood *Sequoia sempervirens*	15.5"	35/6	70	Good health and condition **Regulated**
16	Strawberry tree *Arbutus unedo*	9.0"/10.5"/8.8"	18/25	70	Good health and condition, multi at grade, **Regulated**
17	Photinia *Photinia fraseri*	9.1"/5.2"/8.6"/5.7"/5.2"	25/18	45	Poor health and condition **Regulated**
18	Valley oak *Quercus lobata*	5.8"	20/8	80	Good health and condition **Not Regulated**

Summary:

There are 18 trees on this property with trunk diameters greater than 6 inches.

Tree #s 1, 2, 10, 12, 13, 14, 15, 16, 17 are Regulated trees

Tree # 1 has been requested for removal to accommodate the new home and landscape. Preservation of the tree will impede the use of real property and no reasonable or feasible alternative (as determined by the Development Services Director) exists to preserve the trees in the current location. Los Altos Municipal Code 11.08.100.A5 See Appendix for Photos.

Tree # 17 has been requested for removal The tree is in poor health which cannot be mitigated through sound arboricultural practices. Los Altos Municipal Code 11.08.100.A1 See Appendix for Photos

Tree #s 2, 10, 12, 13, 14, 15 and 16 should be protected during construction.

All other trees are not protected and can be removed if desired.

Tree Protection Plan

1. The Tree Protection Zone (TPZ) should be defined with protective fencing. This should be cyclone or chain link fencing on 1½" or 2" posts driven at least 2 feet in to the ground standing at least 6 feet tall. Normally a TPZ is defined by the dripline of the tree. I recommend the TPZ's as follows:-

Tree # 2: TPZ should be at 15 feet from the trunk closing on the fence line in accordance with Type I Tree Protection as outlined and illustrated in image 2.15-1 and 2 (6) .

Tree # 10: TPZ should be at 20 feet from the trunk closing on the fence line in accordance with Type I Tree Protection as outlined and illustrated in image 2.15-1 and 2 (6) .

Tree # 12: TPZ should be at 10 feet from the trunk closing on the fence line in accordance with Type I Tree Protection as outlined and illustrated in image 2.15-1 and 2 (6) .

Tree # 13: TPZ should be at 10 feet from the trunk closing on the fence line in accordance with Type I Tree Protection as outlined and illustrated in image 2.15-1 and 2 (6) .

Tree # 14: TPZ should be at 10 feet from the trunk closing on the fence line in accordance with Type I Tree Protection as outlined and illustrated in image 2.15-1 and 2 (6) .

Tree # 15: TPZ should be at 10 feet from the trunk closing on the fence line in accordance with Type I Tree Protection as outlined and illustrated in image 2.15-1 and 2 (6) .

Tree # 16: TPZ should be at 15 feet from the trunk closing on the fence line in accordance with Type I Tree Protection as outlined and illustrated in image 2.15-1 and 2 (6) .

IMAGE 2.15-1
Tree Protection Fence at the Dripline

IMAGE 2.15-2
Tree Protection Fence at the Dripline

• **Type I Tree Protection**
The fences shall enclose the entire area under the **canopy dripline or TPZ** of the tree(s) to be saved throughout the life of the project, or until final improvement work within the area is required, typically near the end of the project (*see Images 2.15-1 and 2.15-2*). Parking Areas: If the fencing must be located on paving or sidewalk that will not be demolished, the posts may be supported by an appropriate grade level concrete base.

2. Any pruning and maintenance of the trees shall be carried out before construction begins. This should allow for any clearance requirements for both the new structure and any construction machinery. This will eliminate the possibility of damage during construction. **The pruning should be carried out by an arborist, not by construction personnel**. No limbs greater than 4" in diameter shall be removed.

3. Any excavation in ground where there is a potential to damage roots of 1" or more in diameter should be carefully hand dug. Where possible, roots should be dug around rather than cut.[(2)]

4. If roots are broken, every effort should be made to remove the damaged area and cut it back to its closest lateral root. A clean cut should be made with a saw or pruners. This will prevent any infection from damaged roots spreading throughout the root system and into the tree.[(2)]

5. **Do Not**:.[(4)]

a. Allow run off or spillage of damaging materials into the area below any tree canopy.
b. Store materials, stockpile soil, park or drive vehicles within the TPZ of the tree.
c. Cut, break, skin or bruise roots, branches or trunk without first obtaining permission from the city arborist.
d. Allow fires under any adjacent trees.
e. Discharge exhaust into foliage.
f. Secure cable, chain or rope to trees or shrubs.
g. Apply soil sterilants under pavement near existing trees.

6. Where roots are exposed, they should be kept covered with the native soil or four layers of wetted, untreated burlap. Roots will dry out and die if left exposed to the air for too long.(4)

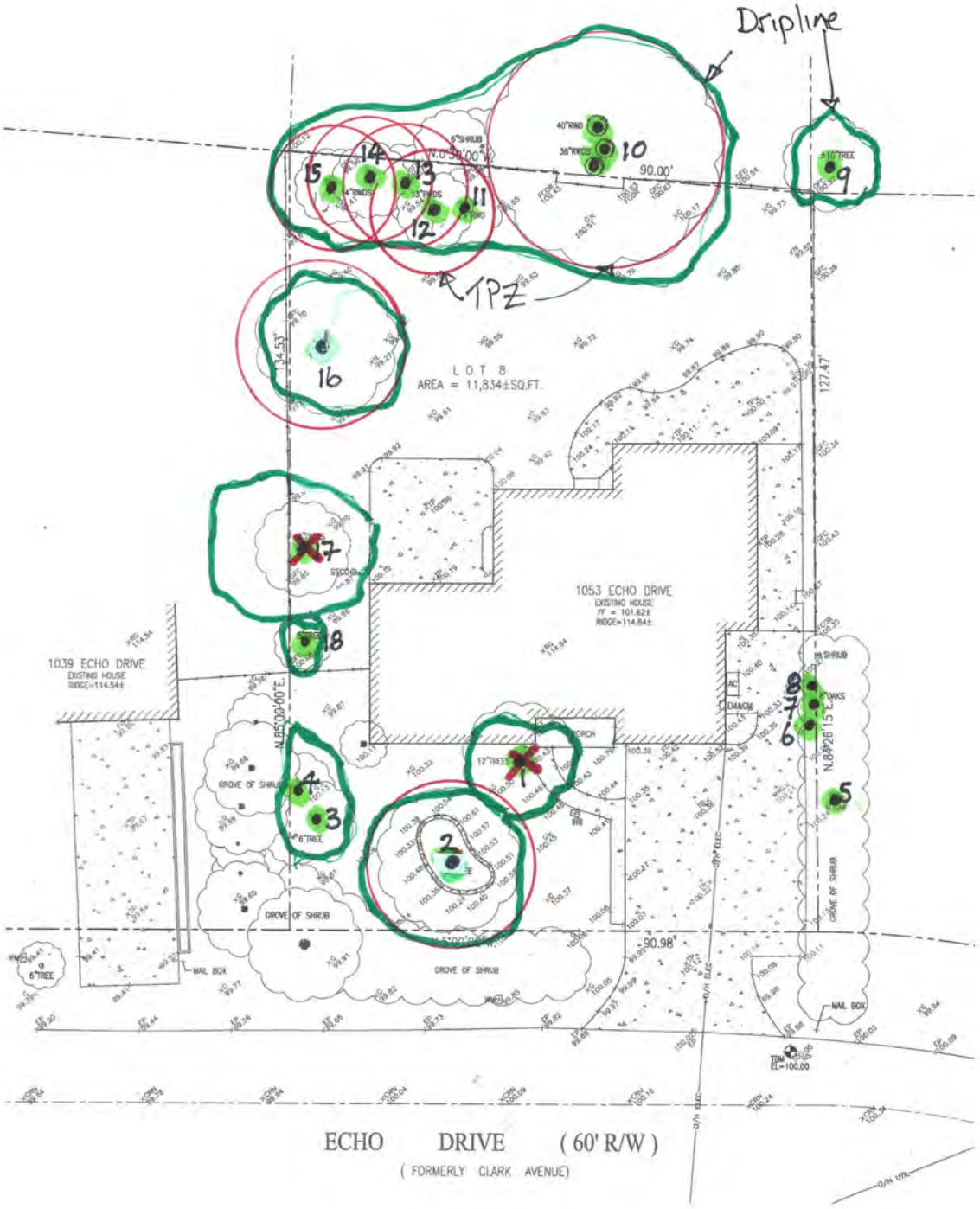
7. Route pipes into alternate locations to avoid conflict with roots.(4)

8. Where it is not possible to reroute pipes or trenches, the contractor is to bore beneath the dripline of the tree. The boring shall take place no less than 3 feet below the surface of the soil in order to avoid encountering “feeder” roots.(4)

9. Compaction of the soil within the dripline shall be kept to a minimum.(2) If access is required to go through the TPZ of a protected tree, the area within the TPZ should be protected from compaction either with steel plates or with 4” of wood chip overlayed with plywood.

10. Any damage due to construction activities shall be reported to the project arborist or city arborist within 6 hours so that remedial action can be taken.

11. Ensure upon completion of the project that the original ground level is restored



Location of existing home, trees requested for removal, protected trees, their driplines and their Tree Protection Zones

Glossary

Canopy	The part of the crown composed of leaves and small twigs.(2)
Cavities	An open wound, characterized by the presence of extensive decay and resulting in a hollow.(1)
Decay	Process of degradation of woody tissues by fungi and bacteria through the decomposition of cellulose and lignin(1)
Dripline	The width of the crown as measured by the lateral extent of the foliage.(1)
Genus	A classification of plants showing similar characteristics.
Root crown	The point at which the trunk flares out at the base of the tree to become the root system.
Species	A Classification that identifies a particular plant.
Standard height	Height at which the girth of the tree is measured. Typically 4 1/2 feet above ground level

References

(1) Matheny, N.P., and Clark, J.P. Evaluation of Hazard Trees in Urban Areas. International Society of Arboriculture,1994.

(2) Harris, R.W., Matheny, N.P. and Clark, J.R.. Arboriculture: Integrated Management of Landscape Trees, Shrubs and Vines. Prentice Hall, 1999.

(3) Carlson, Russell E. Paulownia on The Green: An Assessment of Tree Health and Structural Condition. Tree Tech Consulting, 1998.

(4) Extracted from a copy of Tree Protection guidelines. Anon

(5) T. D. Sydnor, Arboricultural Glossary. School of Natural Resources, 2000

(6) D Dockter, Tree Technical Manual. City of Palo Alto, June, 2001

Certification of Performance [3]

I, Robert Weatherill certify:

* That I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation and appraisal is stated in the attached report and the Terms and Conditions;

* That I have no current or prospective interest in the vegetation or the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved;

* That the analysis, opinions and conclusions stated herein are my own, and are based on current scientific procedures and facts;

* That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party, nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events;

* That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted Arboricultural practices;

* That no one provided significant professional assistance to the consultant, except as indicated within the report.

I further certify that I am a member of the International Society of Arboriculture and a Certified Arborist. I have been involved in the practice of arboriculture and the care and study of trees for over 20 years.

Signed

Robert Weatherill
Certified Arborist WE 1936a
Date: 3/14/25

Terms and Conditions(3)

The following terms and conditions apply to all oral and written reports and correspondence pertaining to consultations, inspections and activities of Advanced Tree Care :

1. All property lines and ownership of property, trees, and landscape plants and fixtures are assumed to be accurate and reliable as presented and described to the consultant, either verbally or in writing. The consultant assumes no responsibility for verification of ownership or locations of property lines, or for results of any actions or recommendations based on inaccurate information.
2. It is assumed that any property referred to in any report or in conjunction with any services performed by Advanced Tree Care, is not in violation of any applicable codes, ordinances, statutes, or other governmental regulations, and that any titles and ownership to any property are assumed to be good and marketable. Any existing liens and encumbrances have been disregarded.
3. All reports and other correspondence are confidential, and are the property of Advanced Tree Care and it's named clients and their assignees or agents. Possession of this report or a copy thereof does not imply any right of publication or use for any purpose, without the express permission of the consultant and the client to whom the report was issued. Loss, removal or alteration of any part of a report invalidates the entire appraisal/evaluation.
4. The scope of any report or other correspondence is limited to the trees and conditions specifically mentioned in those reports and correspondence. Advanced Tree Care and the consultant assume no liability for the failure of trees or parts of trees, either inspected or otherwise. The consultant assumes no responsibility to report on the condition of any tree or landscape feature not specifically requested by the named client.
5. All inspections are limited to visual examination of accessible parts, without dissection, excavation, probing, boring or other invasive procedures, unless otherwise noted in the report. No warrantee or guarantee is made, expressed or implied, that problems or deficiencies of the plants or the property will not occur in the future, from any cause. The consultant shall not be responsible for damages caused by any tree defects, and assumes no responsibility for the correction of defects or tree related problems.
6. The consultant shall not be required to provide further documentation, give testimony, be deposed, or attend court by reason of this appraisal/report unless subsequent contractual arrangements are made, including payment of additional fees for such services as described by the consultant or in the fee schedules or contract.
7. Advanced Tree Care has no warrantee, either expressed or implied, as to the suitability of the information contained in the reports for any purpose. It remains the responsibility of the client to determine applicability to his/her particular case.
8. Any report and the values, observations, and recommendations expressed therein represent the professional opinion of the consultants, and the fee for services is in no manner contingent upon the reporting of a specified value nor upon any particular finding to be reported.
9. Any photographs, diagrams, graphs, sketches, or other graphic material included in any report, being intended solely as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys, unless otherwise noted in the report. Any reproductions of graphs material or the work product of any other persons is intended solely for the purpose of clarification and ease of reference. Inclusion of said information does not constitute a representation by Advanced Tree Care or the consultant as to the sufficiency or accuracy of that information.

Appendix

Summary of Trees on Site

	Summary of Trees at 1053 Echo Dr, Los Altos. Date: 1/14/25					
Tree #	**Species**	**DBH inches**	**Condition Rating**	**Regulated y/n**	**Suitability for Preservation**	
1	*Juniperus 'Hollywood'*	10/12/2012	60	y	Remove	
2	*Morus alba*	17.3	60	y	Preserve	
3	*Pyracantha*	5/4/2/2	30	n		
4	*Prunus duclis*	5/4/3/	40	n		
5	*Quercus agrifolia*	8	20	n		
6	*Quercus agrifolia*	6	20	n		
7	*Ligustrum lucidum*	6	20	n		
8	*Quercus agrifolia*	10	20	n		
9	*Juglans nigra*	24/28/32	40	n		
10	*Sequoia sempervirens*	9	55	y	Preserve	
11	*Sequoia sempervirens*	13	60	n		
12	*Sequoia sempervirens*	15	70	y	Preserve	
13	*Sequoia sempervirens*	13	70	y	Preserve	
14	*Sequoia sempervirens*	15	70	y	Preserve	
15	*Sequoia sempervirens*	15.5/	70	y	Preserve	
16	*Arbutus unedo*	9/5/8/5	70	y	Preserve	
17	*Photinia*	9/5/8/5	45	y	Remove	
18	*Quercus lobata*	6	80	n		

Photos of trees requested for removal

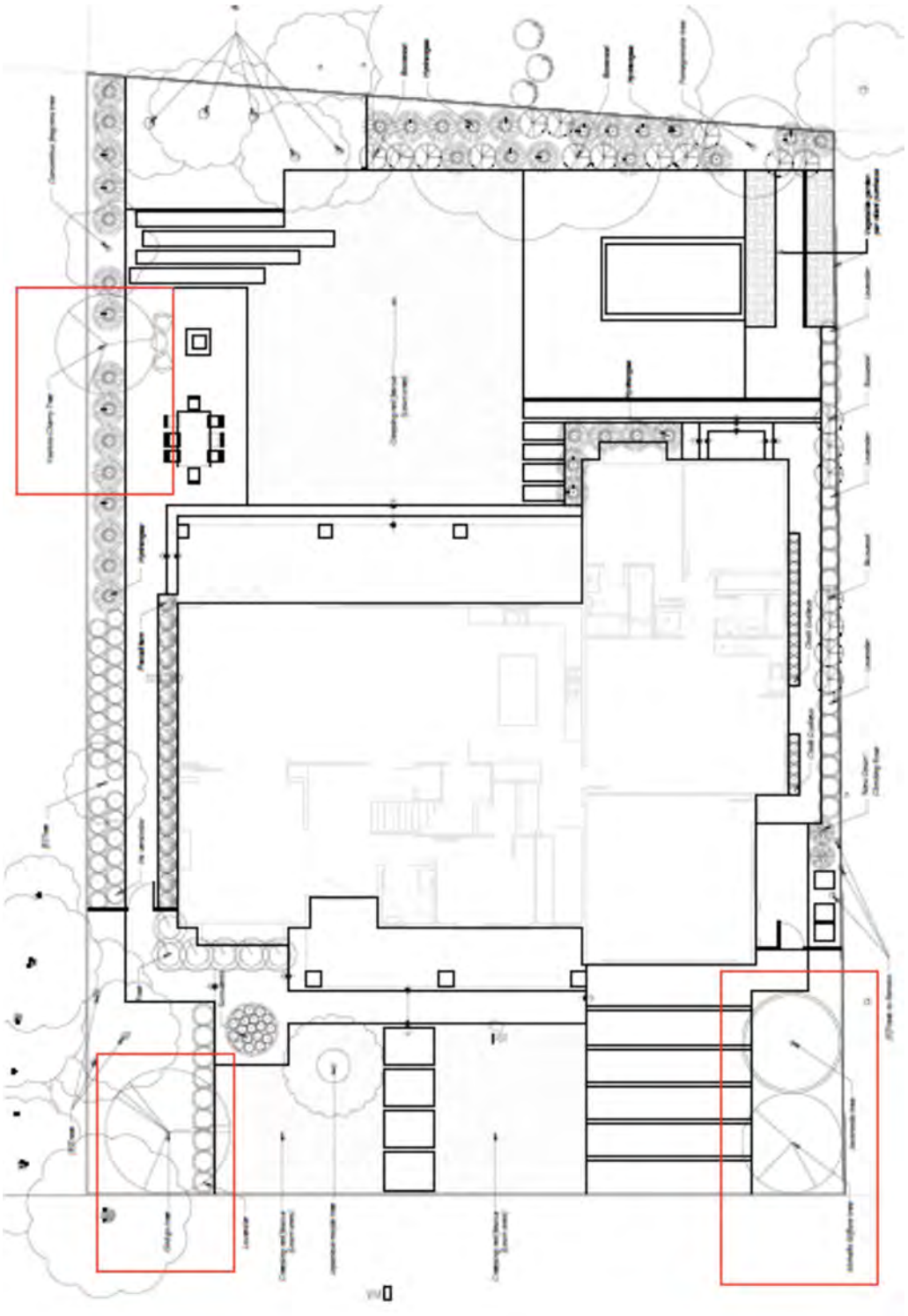
Tree # 1

Tree # 17

Landscape Plan showing replacement trees

PLANTING SCHEDULE							
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPREAD	HEIGHT	WATER USE(based on WUCOLS IV)	COUNTS
TREE							
	Ginkgo biloba	Ginkgo	24" BOX	15-30 ft	15-40 ft	MODERATE	1
	Jacaranda mimosifolia	Jacaranda Tree	24" BOX	15-30 ft	20-30 ft	MODERATE	1
	Prunus x yedoensis	Cherry blossom	24" BOX	10-30 ft	15-40 ft	MODERATE	1
	Magnolia liliiflora	Lily magnolia	24" BOX	10-20 ft	10-15 ft	MODERATE	1
	Osmanthus fragrans	Sweet Osmanthus	24" BOX	10-15 ft	10-20 ft	MODERATE	1
	Punica granatum	Pomegranate tree	24" BOX	6-12 ft	8-12 ft	MODERATE	1
	Acer palmatum	Japanese maple	15 GAL	10-15 ft	10-20 ft	MODERATE	1
SHRUB AND GROUNDCOVER							
	Buxus 'Green Velvet'	Great Velvet Boxwood	5 GAL	2-4 ft	2-4 ft	LOW	20
	Hydrangea macrophylla 'Bailmer'	Reblooming Hydrangea	5 GAL	4-6 ft	3-4 ft	MODERATE	38
	Rosa floribunda 'St. Tropez'	St. Tropez Rose Tree	5 GAL	2-3 ft	4-5 ft	LOW	6
	Lavandula angustifolia	English lavender	1 GAL	1 ft	1 ft	LOW	24
	Iris versicolor L.	Large Blue Iris	1 GAL	1 ft	2 ft	LOW	29
	Asparagus aethiopicus	Foxtail Fern	1 GAL	2 ft	2 ft	LOW	17
	Festuca rubra	Creeping red fescue	1 GAL	1-2 ft	1-2 ft	LOW	2,200 sf

Planting Schedule



Planting Plan