Exhibit A

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EXHIBIT A
DRAFT RESOLUTION

Before the Housing and Community Development Chief of Planning in and for the County of Monterey, State of California

In the matter of the application of:
PLN250157 - WARD RICHARD & SARAH TRS
RESOLUTION NO. 25-036
Resolution by the Monterey County HCD Chief of Planning:

1) Finding that the project qualifies for a Class 3 Categorical Exemption pursuant to Section 15303 of the CEQA Guidelines Section and there are no exceptions pursuant to Section 15300.2; and
2) Approving an Administrative Permit and Design Approval for the construction 5,230 square foot two-story single-family dwelling, an attached 861 square foot garage, and a detached 806 home office with associated site improvements. Grading to consist of 1,290 cubic yards of excavation and 930 cubic yards of fill. Colors and Materials to consist of Sonoma Limestone building and landscape walls, exterior wood siding, Broadcast Aggregate roof, roof fascia, wall accents and painted sheet metal (dark grey).

[PLN250157 – WARD; 23 Vasquez Trail, Carmel (Assessor's Parcel Number 239-121-010-000), Greater Monterey Peninsula Area Plan]

The Ward application (PLN250157) came on for an administrative decision hearing before the Monterey County HCD Chief of Planning on August 20, 2025. Having considered all the written and documentary evidence, the administrative record, the staff report, oral testimony, and other evidence presented, including the conditions of approval (Attachment 1) and project plans (Attachment 2), the Monterey County HCD Chief of Planning finds and decides as follows:

FINDINGS

1. FINDING: **CONSISTENCY** – The Project, as conditioned, is consistent with the applicable plans and policies which designate this area as appropriate for development.

EVIDENCE: a) During the course of the review of this application, the project has been reviewed for consistency with the text, policies, and regulations in:
- the 2010 Monterey County General Plan;

- Greater Monterey Peninsula Area Plan (GMPAP); and
- Monterey County Zoning Ordinance (Title 21).

No conflicts were found to exist. No communications were received during the course of the review of the project indicating any inconsistencies with the text, policies, and regulations in these documents.

b) Project. The project proposes to construct 5,230 square foot two-story single-family dwelling, an attached 861 square foot garage, and a detached 806 home office. Associated site improvements include a 15' x 22' pool and site retaining walls measuring 4' in height, and grading of 1,290 cubic yards of excavation and 930 cubic yards of fill. Colors and Materials to consist of Sonoma Limestone building and landscape walls, exterior wood siding, Broadcast Aggregate roof, roof fascia, wall accents and painted sheet metal (dark grey).

c) Allowed Use. The property is located at 23 Vasquez Trail, Carmel in the Greater Monterey Peninsula Area Plan. The parcel is zoned Resource Conservation/ 40 acres per unit with Design Control and Site Plan Review Overlays or "RC/40-D-S". Pursuant to Title 21 section 21.36.030.A, a single-family dwelling is an allowed use. However, the subject property includes "D" and "S" Overlays which required the granting of an Administrative Permit and Design Approval as outlined in Title 21 sections 21.44.030.A and 21.45.040.B. The proposed project is the only dwelling unit proposed on this parcel. A site plan was included in the application showing the location and design of the proposed development and demonstrating that it is appropriate for the site. Therefore, the project is an allowed land use for this site.

d) Lot Legality. The subject 47.58-acre parcel (2,072,584.8 SF), Assessor's Parcel Number 239-121-010-000, is identified in its current configuration in Santa Lucia Preserve Phase C Vol 21 C&T 20 Tract 1353 Lot 253. Therefore, the County recognizes the subject property as a legal lot of record.

e) Design/Neighborhood and Community Character. The zoning of the subject property includes a Design Control overlay ("D) which is intended to regulate the location, size, configuration, materials, and colors of structures to ensure the protection of public viewshed, neighborhood character, and the visual integrity of certain developments without imposing undue restrictions on private property as outlined in Chapter 21.44. Colors and materials to consist of Sonoma Limestone building and landscape walls, exterior wood siding, Broadcast Aggregate roof, roof fascia, wall accents and painted sheet metal (dark grey). The project, as designed, assures the protection of the public viewshed, is consistent with the neighborhood character, and blends in with the surrounding areas. The project design, colors, and materials are consistent with those of other residences and structures in the Santa Lucia Preserve Phase C. Therefore, the project is consistent with the applicable design control regulations.

f) Development Standards. As proposed, the project meets all required development standards. The development standards for the Resource Conservation Zoning District are identified in MCC Section 21.36.020. The minimum setbacks for main structures in the

RC district are 30 feet (front), to a maximum required of 20 feet side and 20 feet rear setback. The maximum allowed height is 30 feet. The proposed project has a maximum height of 14 feet 6 inches and is within the building envelope established for the proposed site. Therefore, setbacks are consistent with the minimum required and meet the height requirement for the zoning district in which it is located.
The allowable maximum site coverage is 25 percent. The subject property is 2,072,584.8 square feet, allowing site coverage of 518,146.2 square feet at the assigned building envelope. The proposed project would result in structural site coverage of 5,785.61 square feet (4.6% percent), therefore meeting the coverage standard.

g) The project planner verified that the project on the subject parcel conforms to the plans listed above.

h) The application, project plans, and related support materials submitted by the project applicant to Monterey County HCD-Planning are found in Project File PLN250157.

2. FINDING: **SITE SUITABILITY –** The site is physically suitable for the proposed development and use.

EVIDENCE:

a) The project has been reviewed for site suitability by the following departments and agencies: HCD-Planning, HCD-Engineering Services, HCD-Environmental Services, Environmental Health Bureau, and Monterey County Regional Fire Protection District. County staff reviewed the application materials and plans to verify that the project on the subject site conforms to the applicable plans and regulations. There has been no indication from these departments/agencies that the site is not suitable for the development.

b) The project planner verified that the site is suitable for this use.

c) The application, project plans, and related support materials submitted by the project applicant to Monterey County HCD-Planning found in Project File PLN250157.

3. FINDING: **HEALTH AND SAFETY –** The establishment, maintenance, or operation of the project applied for will not under the circumstances of this particular case be detrimental to the health, safety, peace, morals, comfort, and general welfare of persons residing or working in the neighborhood of such proposed use or be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the County.

EVIDENCE:

a) The project was reviewed by HCD-Planning, HCD- Engineering Services, HCD-Environmental Services, Environmental Health Bureau, and Monterey County Regional Fire Protection District. There are no project conditions as the staff has ensured that the proposed project will not have an adverse effect on the health, safety, and welfare of persons either residing or working in the neighborhood.

b) Necessary public facilities will be provided. Santa Lucia Community Service District/On-site wastewater treatment will serve the proposed project as the water connection and have a new 1,000-gallon on-site wastewater treatment system.

c) The application, project plans, and related support materials submitted by the project applicant to Monterey County HCD-Planning found in Project File PLN250157.

4. FINDING: **NO VIOLATIONS –** The subject property is in compliance with all rules and regulations pertaining to zoning uses, subdivision, and any other applicable provisions of the County's zoning ordinance. No violations exist on the property.

EVIDENCE:

a) Staff reviewed Monterey County HCD-Planning and HCD-Building Services records and is not aware of any violations existing on subject property.

b) Staff researched County records to assess if any violation exists on the subject property.

c) The application, project plans, and related support materials submitted by the project applicant to Monterey County HCD-Planning found in Project File PLN250157.

5. FINDING: **CEQA (Exempt) –** The project is categorically exempt from environmental review, and no unusual circumstances were identified to exist for the proposed project.

EVIDENCE:

a) California Environmental Quality Act (CEQA) Guidelines Section 15303 categorically exempts the development of the new single-family dwelling and accessory structures within residentially zoned areas.

b) The project consists of a new single-family dwelling. Therefore, the proposed development qualifies as a Class 3 Categorical Exemption pursuant to Section 15303 of the CEQA Guidelines.

c) None of the exceptions under CEQA Guidelines Section 15300.2 apply to this project. The project does not involve a designated historical resource, a hazardous waste site, unusual circumstances that would result in a significant effect, or development that would result in a cumulatively significant impact.

d) No adverse environmental effects were identified during the staff review of the development application.

e) See supporting Findings Nos. 1 and 2. The application, project plans, and related support materials submitted by the project applicant to Monterey County HCD-Planning found in Project File PLN250157.

6. FINDING: **APPEALABILITY –** The decision on this project may be appealed to the Planning Commission.

EVIDENCE:

a) Planning Commission. Pursuant to Section 21.80.040 of the Monterey County Zoning Ordinance (Title 21).

DECISION

NOW, THEREFORE, based on the above findings and evidence, the HCD Chief of Planning does hereby:

1. Find that the project qualifies for a Class 3 Categorical Exemption pursuant to Section 15303 of the CEQA Guidelines Section and there are no exceptions pursuant to Section 15300.2; and
2. Approve an Administrative Permit and Design Approval for the construction 5,230 square foot two-story single-family dwelling, an attached 861 square foot garage, and a detached 806 home office with associated site improvements. Grading to consist of 1,290 cubic yards of excavation and 930 cubic yards of fill. Colors and Materials to consist of Sonoma Limestone building and landscape walls, exterior wood siding, Broadcast Aggregate roof, roof fascia, wall accents and painted sheet metal (dark grey).

All of these are in general conformance with the attached sketch and subject to the attached conditions, all being attached hereto and incorporated herein by reference.

PASSED AND ADOPTED this 20th day of August 2025.

_____

Melanie Beretti, AICP
HCD Chief of Planning

COPY OF THIS DECISION MAILED TO APPLICANT ON _____

THIS APPLICATION IS APPEALABLE TO THE PLANNING COMMISSION.

IF ANYONE WISHES TO APPEAL THIS DECISION, AN APPEAL FORM MUST BE COMPLETED AND SUBMITTED TO THE SECRETARY OF THE PLANNING ALONG WITH THE APPROPRIATE FILING FEE ON OR BEFORE _____.

This decision, if this is the final administrative decision, is subject to judicial review pursuant to California Code of Civil Procedure Sections 1094.5 and 1094.6. Any Petition for Writ of Mandate must be filed with the Court no later than the 90th day following the date on which this decision becomes final.

NOTES

1. You will need a building permit and must comply with the Monterey County Building Ordinance in every respect.

   Additionally, the Zoning Ordinance provides that no building permit shall be issued, nor any use conducted, otherwise than in accordance with the conditions and terms of the permit granted or until ten days after the mailing of notice of the granting of the permit by the appropriate authority, or after granting of the permit by the Board of Supervisors in the event of appeal.

   Do not start any construction or occupy any building until you have obtained the necessary permits and use clearances from Monterey County HCD-Planning and HCD-Building Services Department office in Salinas.

2. This permit expires 3 years after the above date of granting thereof unless construction or use is started within this period.

County of Monterey HCD Planning

DRAFT Conditions of Approval/Implementation Plan/Mitigation Monitoring and Reporting Plan

PLN250157

1. PD001 - SPECIFIC USES ONLY

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: This Administrative Permit and Design Approval (PLN250257) for the construction 5,230 square foot two-story single family dwelling, an attached 861 square foot garage, and a detached 806 home office with associated site improvements. Grading to consist of 1,290 cubic yards of excavation and 930 cubic yards of fill. Colors and Materials to consist of Sonoma Limestone building and landscape walls, exterior wood siding, Broadcast Aggregate roof, roof fascia, wall accents and painted sheet metal (dark grey). The property is located at 23 Vasquez Trail, Carmel (Assessor's Parcel Number 239-121-010-000, Greater Monterey Peninsula Area Plan. This permit was approved in accordance with County ordinances and land use regulations subject to the terms and conditions described in the project file. Neither the uses nor the construction allowed by this permit shall commence unless and until all of the conditions of this permit are met to the satisfaction of the Director of HCD - Planning. Any use or construction not in substantial conformance with the terms and conditions of this permit is a violation of County regulations and may result in modification or revocation of this permit and subsequent legal action. No use or construction other than that specified by this permit is allowed unless additional permits are approved by the appropriate authorities. To the extent that the County has delegated any condition compliance or mitigation monitoring to the Monterey County Water Resources Agency, the Water Resources Agency shall provide all information requested by the County and the County shall bear ultimate responsibility to ensure that conditions and mitigation measures are properly fulfilled. (HCD - Planning)

Compliance or Monitoring Action to be Performed: The Owner/Applicant shall adhere to conditions and uses specified in the permit on an on-going basis unless otherwise stated.

2. PD002 - NOTICE PERMIT APPROVAL

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: The applicant shall record a Permit Approval Notice. This notice shall state:
"An Administrative Permit (Resolution Number _____) was approved by the Chief of Planning for Assessor's Parcel Number 239-121-010-000 on August 20, 2025. The permit was granted subject to three conditions of approval which run with the land. A copy of the permit is on file with Monterey County HCD - Planning."

Proof of recordation of this notice shall be furnished to the Director of HCD - Planning prior to issuance of grading and building permits, Certificates of Compliance, or commencement of use, whichever occurs first and as applicable. (HCD - Planning)

Compliance or Monitoring Action to be Performed: Prior to the issuance of grading and building permits, certificates of compliance, or commencement of use, whichever occurs first and as applicable, the Owner/Applicant shall provide proof of recordation of this notice to the HCD - Planning.

3. PD003(A) - CULTURAL RESOURCES NEGATIVE ARCHAEOLOGICAL REPORT

Responsible Department: Planning

Condition/Mitigation Monitoring Measure: If, during the course of construction, cultural, archaeological, historical or paleontological resources are uncovered at the site (surface or subsurface resources) work shall be halted immediately within 50 meters (165 feet) of the find until a qualified professional archaeologist can evaluate it. Monterey County HCD - Planning and a qualified archaeologist (i.e., an archaeologist registered with the Register of Professional Archaeologists) shall be immediately contacted by the responsible individual present on-site. When contacted, the project planner and the archaeologist shall immediately visit the site to determine the extent of the resources and to develop proper mitigation measures required for recovery.
(HCD - Planning)

Compliance or Monitoring Action to be Performed: The Owner/Applicant shall adhere to this condition on an on-going basis.

Prior to the issuance of grading or building permits and/or prior to the recordation of the final/parcel map, whichever occurs first, the Owner/Applicant shall include requirements of this condition as a note on all grading and building plans. The note shall state "Stop work within 50 meters (165 feet) of uncovered resource and contact Monterey County HCD - Planning and a qualified archaeologist immediately if cultural, archaeological, historical or paleontological resources are uncovered."

When contacted, the project planner and the archaeologist shall immediately visit the site to determine the extent of the resources and to develop proper mitigation measures required for the discovery.

WARD RESIDENCE CARMEL, CA

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L1.21 SECTIONS AND ELEVATIONS
L1.30 MATERIALS DIAGRAM
L2.00 MATERIALS LIST AND GENERAL NOTES
L2.10 DETAILS
L2.20 DETAILS
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L3.00 FUEL MANAGEMENT PLAN
L3.01 PLANTING NOTES
L3.10 HOMELAND PLANTING PLAN
L3.11 ENLARGED PLANTING PLAN
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L4.30 IRRIGATION WATER CALCULATIONS
L5.00 LIGHTING PLAN
L5.10 LIGHTING CUT SHEETS
L6.00 SPA PLAN & SECTION
L6.10 POOL PLAN & SECTION
L6.20 POOL & SPA DETAILS
L6.30 POOL & SPA SPECS
L6.40 POOL SPECIFICATIONS
L6.50 POOL SPECIFICATIONS
L7.00 FOUNTAIN DETAILS
SP1.0 PIER POOL PLAN AND DETAILS
SP1.1 POOL AND SPA PLANS
SP1.2 POOL AND SPA SECTIONS

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JONATHAN FELDMAN
C-28459
11/30/2025
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT NAME
WARD RESIDENCE

PROJECT ADDRESS
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CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

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05.16.2025

HISTORY
△ DESC. DATE

TITLE
COVER SHEET - PERMIT

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VICINITY MAPS

SITE CONTEXT AERIAL

SITE AERIAL

ARCHITECTURAL SYMBOLS

DRAWING SYMBOLS

- NORTH ARROW
- KEYNOTE
- RE: DWG / RE: DWG — SPOT ELEVATION
- RE: DWG — SLOPE (DOWN, UON)
- 12 / 3 — SLOPE DESIGNATION
- DIMENSION
- ALIGN — ALIGN FINISH SURFACES
- CENTERLINE
- PROPERTY LINE
- GRADE CHANGE
- MECHANICAL ARROW
- ARCHITECTURAL ARROWS
- L — LAMINATED GLAZING
- T — TEMPERED GLAZING

REFERENCE SYMBOLS

- 1 / A0.00 — BUILDING SECTION
- A0.00 — BUILDING ELEVATION
- 1 / 4 / A0.00 / 2 / 3 — INTERIOR ELEVATION
- 1 / A0.00 — DETAIL CALLOUT
- 1 / A0.00 — DETAIL REFERENCE
- 0' - 0" — SPOT ELEVATION
- Number — REVISION MARK
- LEVEL
- 1 — GRID LINE
- 1i — PARTITION TAG
- ? — MATERIAL TAG
- 1i — WINDOW TAG
- 1i — DOOR TAG
- x' - x" AFF — CEILING TAG

ABBREVIATIONS

A	AB	ANCHOR BOLT
	ABV	ABOVE
	ADD'L	ADDITIONAL
	AESS	ARCH EXPOSED STRUCTURAL STEEL
	AC	AIR CONDITIONING
	ACOUST	ACOUSTICAL
	AD	AREA DRAIN
	ADJ	ADJUSTABLE
	AFF	ABOVE FINISHED FLOOR
	AGGR	AGGREGATE
	ALT	ALTERNATE
	ALUM	ALUMINUM
	ANOD	ANODIZED
	APPROX	APPROXIMATE
	ARCH	ARCHITECTURAL
	ASPH	ASPHALT
	AWRB	AIR & WATER RESISTIVE BARRIER
B	BD	BOARD
	BITUM	BITUMINOUS
	BLDG	BUILDING
	BLK	BLOCK
	BLKG	BLOCKING
	BLW	BELOW
	BM	BEAM
	BOT	BOTTOM
	BRKT	BRACKET
	BTWN	BETWEEN
	BUR	BUILT UP ROOFING
C	CB	CATCH BASIN
	CEM	CEMENT
	CI	CAST IRON
	CIP	CAST IN PLACE
	CFWP	COLD FLUID APPLIED WATERPROOFING
	CJ	CONTROL JOINT / CEILING JOIST
	CL	CENTERLINE
	CLG	CEILING
	CLKG	CAULKING
	CLR	CLEAR
	CMU	CONCRETE MASONRY UNIT
	COL	COLUMN
	COMP	COMPOSITION
	CONC	CONCRETE
	CONN	CONNECTION
	CONSTR	CONSTRUCTION
	CONT	CONTINUOUS
	CPT	CARPET
	CT	CERAMIC TILE
	CTR	CENTER
	CTSK	COUNTERSUNK / COUNTERSINK
	CW	COLD WATER
D	DBL	DOUBLE
	DEG	DEGREE
	DEMO	DEMOLITION
	DEPT	DEPARTMENT
	DET / DTL	DETAIL
	DF	DOUGLAS FIR
	DIAG	DIAGONAL
	DIA	DIAMETER
	DIM	DIMENSION
	DN	DOWN
	DR	DOOR
	DS	DOWNSPOUT
	DW	DISHWASHER
	DWG	DRAWING
	DWR	DRAWER
E	(E)	EXISTING
	E	EAST
	EA	EACH
	EB	EXPANSION BOLT
	EF	EXHAUST FAN
	EJ	EXPANSION JOINT
	ELEV	ELEVATION
	ELEC	ELECTRIC / ELECTRICAL
	EL	ELEVATOR
	ELAST	ELASTOMERIC / ELASTIC
	EMER	EMERGENCY
	ENCL	ENCLOSURE
	ENGR	ENGINEER
	EQ	EQUAL
	EQPT	EQUIPMENT
	EXH	EXHAUST
	EXP	EXPANSION / EXPANDED / EXPOSED
	EXT	EXTERIOR
F	(F)	FUTURE
	FA	FIRE ALARM
	FABR	FABRICATE
	F.A.R.	FLOOR AREA RATIO
	FCP	FIBER CEMENT PANELS
	FD	FLOOR DRAIN
	FDC	FIRE DEPARTMENT CONNECTION
	FDN / FND	FOUNDATION
	FE	FIRE EXTINGUISHER
	FEC	FIRE EXTINGUISHER CABINET
	FF	FINISH FLOOR
	FFE	FINISH FLOOR ELEVATION
	FG	FINISH GRADE
	FH	FULL HEIGHT
	FIN	FINISH
	FIXT	FIXTURE
	FLASH	FLASHING
	FLR	FLOOR
	FLUOR	FLUORESCENT
	FO	FINISHED OPENING
	FOC	FACE OF CONCRETE
	FOF	FACE OF FINISH
	FOS	FACE OF STUD
	FR	FIRE RATED / RATING
	FRP	FIBER REINFORCED PLASTIC
	FRPF	FIREPROOFING
	FT	FOOT OR FEET
	FTG	FOOTING
	FURR	FURRING
G	GA	GAUGE
	GALV	GALVANIZED
	GC	GENERAL CONTRACTOR
	GEN	GENERAL
	GFCI	GROUND FAULT CIRCUIT INTERRUPTED
	GFRC	GLASS FIBER REINFORCED CONCRETE
	GL	GLASS
	GLAZ	GLAZED / GLAZING
	GLB	GLUE LAM BEAM
	GND	GROUND
	GSM	GALVANIZED SHEET METAL
	GWB	GYPSUM WALL BOARD
	GYP	GYPSUM
	GYP BD	GYPSUM BOARD
H	HB	HOSE BIB
	H/C	HANDICAPPED
	HC	HOLLOW CORE
	HCWD	HOLLOW CORE WOOD DOOR
	HDPE	HIGH DENSITY POLYETHYLENE
	HDWD	HARDWOOD
	HDWR	HARDWARE
	HM	HOLLOW METAL
	HORIZ	HORIZONTAL
	HR	HOUR
	HSS	HOLLOW STRUCTURAL SECTIONS
	HT	HEIGHT
	HVAC	HEATING VENTILATION & AIR CONDITIONING
	HW	HOT WATER
I	ID	INSIDE DIAMETER
	IN	INCH
	INSUL	INSULATION
	INT	INTERIOR
	INTM	INTUMESCENT
J	J-BOX	JUNCTION BOX
	JH	JOIST HANGER
	JT	JOINT
	JST	JOIST
K	KD	KILN DRIED
	KIT.	KITCHEN
L	L	LONG / LENGTH
	LAF	LIQUID APPLIED FLASHING
	LAM	LAMINATE / LAMINATED
	LAV	LAVATORY
	LAWRB	LIQUID APPLIED WATER RESISTIVE BARRIER
	LB	POUND
	LT	LIGHT
	LTG	LIGHTING
	LVR	LOUVER
M	MACH	MACHINE
	MAT	MATERIAL
	MAX	MAXIMUM
	MECH	MECHANICAL
	MEMB	MEMBRANE
	MEZZ	MEZZANINE
	MFR	MANUFACTURER
	MID	MIDDLE
	MIN	MINIMUM / MINUTE
	MIRR	MIRROR
	MISC	MISCELLANEOUS
	MOD BIT	MODIFIED BITUMEN
	MTD	MOUNTED
	MTG	MOUNTING
	MTL	METAL
	MUL	MULLION
	MW	MICROWAVE
N	(N)	NEW
	N	NORTH
	NIC	NOT IN CONTRACT
	NO.	NUMBER
	NOM	NOMINAL
	NTS	NOT TO SCALE
O	o/	OVER
	OA	OVERALL
	OC	ON CENTER
	OD	OUTSIDE DIMENSION
	OFD	OVERFLOW DRAIN
	OH	OVERHEAD
	OPG	OPENING
	OPP	OPPOSITE
P	PE	POLYETHYLENE
	PERF	PERFORATED
	PERP	PERPENDICULAR
	PL	PROPERTY LINE / PLATE
	PLAM	PLASTIC LAMINATE
	PLAS	PLASTER
	PLYWD	PLYWOOD
	PNT	PAINT
	PTD	PAINTED
	PR	PAIR
	PT	POINT / PRESSURE TREATED
	PV	PHOTOVOLTAIC
	PVC	POLYVINYL CHLORIDE
	PWR	POWER
Q	QTY	QUANTITY
R	(R)	REMODELED
	R	RISER
	RAD	RADIUS
	RCP	REFLECTED CEILING PLAN
	RD	ROOF DRAIN
	RECEP	RECEPTACLE
	RECT	RECTANGULAR
	REF	REFRIGERATOR
	REFR	REFERENCE
	REINF	REINFORCED
	RGTR	REGISTER
	REQD	REQUIRED
	RESIL	RESILIENT
	RET	RETAINING
	REV	REVISION
	RM	ROOM
	RND	ROUND
	RO	ROUGH OPENING
	RR	ROOF RAFTER
	RWL	RAINWATER LEADER
S	S	SOUTH
	SAF	SELF-ADHERED FLASHING
	SAWRB	SELF-ADHERED WATER RESISTIVE BARRIER
	SC	SOLID CORE
	SCD	SEE CIVIL DRAWINGS
	SCHED	SCHEDULE
	SCR	SCREEN
	SCWD	SOLID CORE WOOD DOOR
	SECT	SECTION
	SED	SEE ELECTRICAL DRAWINGS
	SF	SQUARE FOOT / FEET
	SHGC	SOLAR HEAT GAIN COEFFICIENT
	SHT	SHEET
	SHTG	SHEATHING
	SHWR	SHOWER
	SIM	SIMILAR
	SKYLT	SKYLIGHT
	SLD	SEE LANDSCAPE DRAWINGS
	SMD	SEE MECHANICAL DRAWINGS
	SMWP	SHEET MEMBRANE WATERPROOFING
	SOG	SLAB ON GRADE
	SPD	SEE PLUMBING DRAWINGS
	SPEC	SPECIFICATION
	SQ	SQUARE
	SS	STAINLESS STEEL
	SSD	SEE STRUCTURAL DRAWINGS
	STA	STATION
	STD	STANDARD
	STL	STEEL
	STOR	STORAGE
	STRUC	STRUCTURAL
	SUSP	SUSPENDED
	SYM	SYMMETRICAL
T	TR	TREAD
	T&B	TOP AND BOTTOM
	T&G	TONGUE AND GROOVE
	TBD	TO BE DETERMINED
	TEL	TELEPHONE
	TEMP	TEMPERED / TEMPERATURE
	THERM	THERMAL
	THK	THICK
	THRESH	THRESHOLD
	T.O.	TOP OF
	TOC	TOP OF CONCRETE
	T.O.P.	TOP OF PLATE
	TOPO	TOPOGRAPHY
	TOS	TOP OF STEEL
	T.O.W.	TOP OF WALL
	TPO	THERMOPLASTIC POLYOLEFIN
	TS	TUBE STEEL
	TYP	TYPICAL
U	UON	UNLESS OTHERWISE NOTED
	UV	ULTRAVIOLET
V	VCT	VINYL COMPOSITION TILE
	VER	VERIFY
	VERT	VERTICAL
	VEST	VESTIBULE
	VG	VERTICAL GRAIN
	VIF	VERIFY IN FIELD
W	W	WEST / WIDE / WIDTH
	w/	WITH
	WC	WATER CLOSET
	WD	WOOD
	WF	WIDE FLANGE
	WH	WATER HEATER
	WN	WINDOW
	w/o	WITHOUT
	WO	WHERE OCCURS
	WP	WATERPROOF / WATERPROOFING
	WR	WATER RESISTANT
	WRB	WATER RESISTIVE BARRIER
	WT	WEIGHT
	WWF	WELDED WIRE FABRIC
Y	YD	YARD

GENERAL NOTES

1. ALL CONSTRUCTION AND INSTALLATION SHALL CONFORM TO THE FOLLOWING CODES: CURRENT VERSION OF THE CALIFORNIA BUILDING, RESIDENTIAL, PLUMBING, MECHANICAL, ELECTRICAL CODE, STATE ENERGY STANDARDS, AND ANY OTHER GOVERNING CODES AND ORDINANCES.
2. IN THE EVENT OF CONFLICT, THE MOST STRINGENT REQUIREMENTS SHALL APPLY. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS OF BUILDING AND SITE AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION.
3. THE GENERAL CONTRACTOR SHALL VERIFY AND ASSUME RESPONSIBILITY FOR ALL DIMENSIONS AND SITE CONDITIONS. THE GENERAL CONTRACTOR SHALL INSPECT THE EXISTING PREMISES AND TAKE NOTE OF EXISTING CONDITIONS PRIOR TO SUBMITTING PRICES. NO CLAIM SHALL BE ALLOWED FOR DIFFICULTIES ENCOUNTERED WHICH COULD HAVE REASONABLY BEEN INFERRED FROM SUCH AN EXAMINATION.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN ARCHITECTURAL, STRUCTURAL, LANDSCAPE, CIVIL, MECHANICAL, PLUMBING, ELECTRICAL, AND FIRE PROTECTION. THIS INCLUDES REVIEWING REQUIREMENTS OF INDIVIDUAL SYSTEMS BEFORE ORDERING AND INSTALLATION OF ANY WORK. VERIFY ALL ARCHITECTURAL DETAILS AND ALL FINISH CONDITIONS (WHETHER DEPICTED IN DRAWINGS OR NOT) WITH SAME DISCIPLINES.
5. ANY ERRORS, OMISSIONS, OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE OWNER BEFORE PROCEEDING WITH THE WORK.
6. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. ALL CLEAR DIMENSIONS ARE NOT TO BE ADJUSTED WITHOUT APPROVAL OF THE ARCHITECT.
7. WHEN SHOWN IN PLAN, ALL DIMENSIONS ARE TO FACE OF STUD, CONCRETE, CENTERLINE OF COLUMNS, OR CENTERLINE OF STUD WITHIN WALL ASSEMBLIES, UNLESS OTHERWISE NOTED.
8. WHEN SHOWN IN SECTION OR ELEVATION, ALL DIMENSIONS ARE TO TOP OF PLATE OR TOP OF CONCRETE UNLESS OTHERWISE NOTED.
9. DETAILS SHOWN ARE TYPICAL, SIMILAR DETAILS APPLY IN SIMILAR CONDITIONS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR APPLYING AND OBTAINING ALL REQUIRED INSPECTIONS TO CONFORM WITH LOCAL BUILDING AND FIRE CODES.
11. PROVIDE AND INSTALL 2x FLAT WOOD BLOCKING FOR ALL BATH ACCESSORIES, HANDRAILS, CABINETS, TOWEL BARS, WALL MOUNTED FIXTURES AND ANY OTHER ITEMS ATTACHED TO WALLS.
12. ALL CHANGES IN FLOOR MATERIALS OCCUR AT CENTERLINE OF DOOR OR FRAMED OPENINGS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
13. INSTALL ALL FIXTURES, EQUIPMENT, AND MATERIALS PER MANUFACTURER'S RECOMMENDATIONS AND THE REQUIREMENTS OF THE CODES. ALL APPLIANCES, FIXTURES, AND EQUIPMENT ASSOCIATED WITH PLUMBING, ELECTRICAL, AND MECHANICAL SYSTEMS SHALL BE LISTED BY A NATIONALLY RECOGNIZED AND APPROVED AGENCY.
14. VERIFY CLEARANCES FOR FLUES, VENTS, CHASES, SOFFITS, FIXTURES, FIREPLACES, ETC., BEFORE ANY CONSTRUCTION, ORDERING OF, OR INSTALLATION OF ANY ITEM OF WORK.
15. PROVIDE FIRE-BLOCKING @ ALL CONCEALED DRAFT OPENINGS (VERTICAL & HORIZONTAL). AS PER CBC 718.2 & CRC R302.11, FIRE-BLOCKING SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS:
    - A. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AT THE CEILING AND FLOOR LEVELS AND HORIZONTALLY AT MAX. 10 FOOT INTERVALS.
    - B. IN CONCEALED INTERCONNECTIONS SUCH AS SOFFITS, DROP CEILINGS, COVE CEILINGS.
    - C. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN.
    - D. IN OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES, AND WIRES AT CEILING & FLR. LEVEL W/ AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME & PRODUCTS OF COMBUSTION.
16. PROVIDE DRAFT-STOPPING @ ALL CONCEALED DRAFT OPENINGS (VERTICAL & HORIZONTAL). AS PER CBC 718.3-4 & CRC R302.12 DRAFT-STOPS SHALL BE INSTALLED SO THE CONCEALED SPACE DOES NOT EXCEED 1,000 SQ. FT. AND IS BELOW, DRAFT-STOPPING SHOULD BE PROVIDED IN THE FOLLOWING CIRCUMSTANCES:
    - A. SUSPENDED CEILING UNDER FLOOR FRAMING
    - B. OPEN WEB TRUSS OR PERFORATED FLOOR FRAMING MEMBERS.
17. PRESSURE TREATED LUMBER TO BE USED IF IN DIRECT CONTACT WITH CONCRETE WALLS IF THERE IS NO PROVIDED AIR GAP.
18. ALL EARTHWORK AND SITE DRAINAGE INCLUDING BASEMENT AND PIER EXCAVATION, PREPARATION OF THE SUBGRADE BENEATH HARDSCAPE, PLACEMENT AND COMPACTION OF ENGINEERED FILL BENEATH HARDSCAPE, BASEMENT RETAINING WALL BACKFILL, AND FINAL SURFACE DRAINAGE INSTALLATION SHOULD BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. THE GEOTECHNICAL ENGINEER SHOULD BE PRESENT TO OBSERVE AND TEST, AS NECESSARY, THE EARTHWORK AND FOUNDATION INSTALLATION PHASES OF THE PROJECT.
19. ARCHITECTURAL PAINTS AND COATINGS, ADHESIVES, CULKS AND SEALANTS SHALL COMPLY WITH THE VOLATILE ORGANIC COMPOUND (VOC) LIMITS LISTED IN 2022 CALGREEN TABLES 4.504.1-4.504.3.
20. STRUCTURAL OBSERVATION SHALL BE REQUIRED BY THE ENGINEER FOR STRUCTURAL CONFORMANCE TO THE APPROVED PLANS.

APPLICABLE CODES

THIS PROJECT SHALL COMPLY WITH THE FOLLOWING CODES:

2022 CALIFORNIA RESIDENTIAL CODE
2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA ENERGY CODE (TITLE-24)
2022 CALIFORNIA FIRE CODE
2022 CALIFORNIA GREEN BUILDING CODE
ALL OTHER APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.

IN THE EVENT OF CONFLICTS IN CODE REQUIREMENTS, THE MOST STRINGENT REQUIREMENTS SHALL APPLY. ANY CONFLICTS BETWEEN THE CONSTRUCTION DOCUMENTS AND THE ABOVE LISTED CODES AND ORDINANCES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND OWNER FOR RESOLUTION BEFORE COMMENCING WITH THE WORK.

PROJECT DATA

WORK DESCRIPTION: NEW 5,230 SF SINGLE-FAMILY RESIDENCE WITH 1,010 SF BASEMENT, 861 SF GARAGE, AND 806 SF HOME OFFICE. 15' X 27' POOL, LANDSCAPE TERRACES AND WALKWAYS, HARDSCAPE, SITE RETAINING WALLS LESS THAN 4' TALL. BUILDINGS TO BE EQUIPPED WITH FIRE ALARM AND TO BE FULLY SPRINKLERED.

APN:	239-121-010 (LOT 253)
OCCUPANCY GROUP:	R-3/U
CONSTRUCTION TYPE:	V-B
ZONING DISTRICT:	RC/40-D-S
FIRE ZONE:	HIGH SEVERITY; WUI COMPLIANCE REQUIRED
COSTAL: NO	NO
LANDSCAPE ZONE:	GRASSLAND
PARKING SPACES:	(3) COVERED & (2) UNCOVERED
SQUARE FOOTAGE (SEE AREA PLAN SHEET A0.09):	
MAIN RESIDENCE	
MAIN LEVEL:	4220 SF
LOWER LEVEL:	1010 SF
TOTAL:	5230 SF
ACCESSORY STRUCTURES	
GARAGE:	861 SF
HOME OFFICES:	806 SF
TOTAL:	1667 SF
TOTAL (ALL STRUCTURES):	6896 SF
HOMELAND SETBACK:	5'
BUILDING HEIGHT (SEE ELEVATIONS SHEETS A3-00 - A3-05):	
PERMITTED:	18'-30'
PROPOSED:	14'-6" MAX
PERMITTED # OF STORIES:	1+
PROPOSED # OF STORIES:	1
LOT SIZE:	
NET LOT SIZE:	47.58 ACRES (2,072,584.8 SF)
HOMELAND SIZE:	2.88 ACRES (125,452.8 SF)
PROPOSED BUILDING FOOTPRINT:	5,785.61 SF
MAX LOT COVERAGE:	25%
PROPOSED LOT COVERAGE:	4.6%
TREE REMOVAL:	NO TREES TO BE REMOVED
SITE GRADE CUT:	1290 CY
SITE GRADE FILL:	930 CY

SPECIAL INSPECTIONS

GEOTECHNICAL OBSERVATIONS & TESTING:
THE GEOTECHNICAL ASPECTS OF THE CONSTRUCTIONS, INCLUDING FOUNDATION EXCAVATIONS, SUBGRADE PREPARATION BENEATH HARDSCAPE, PLACEMENT AND COMPACTION OF ENGINEERED FILL BENEATH HARDSCAPE, AND THE INSTALLATION SURFACE DRAINAGE CONTROL SYSTEMS SHOULD BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS PRESENTED IN THE GEOTECHNICAL REPORT PREPARED BY XXXX DATED XXXX. MURRAY ENGINEERS SHOULD BE PRESENT TO OBSERVE AND TEST, AS NECESSARY, THE EARTHWORK, FOUNDATION, AND DRAINAGE INSTALLATION PHASES OF THE PROJECT.

STRUCTURAL OBSERVATIONS:
REFER TO STRUCTURAL DRAWINGS, SHEET S0.1

SPECIAL INSPECTIONS:
THE FOLLOWING WORK REQUIRE SPECIAL INSPECTION PER CBC SECTION 1701:

STRUCTURAL STEEL/WELDING
SHEAR WALL NAILING
REINFORCED CONCRETE

ROOF:
FINISHED ROOFING MATERIAL SHALL BE INSTALLED AND COMPLETED PRIOR TO FRAME INSPECTION.

DEFERRED SUBMITTALS

DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND APPROVED BY THE ARCHITECT AND BUILDING OFFICIAL.

1. RESIDENTIAL FIRE SPRINKLER SYSTEM INSTALLED IN ACCORDANCE TO NFPA 13D & STATE & LOCAL REQUIREMENTS.

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LICENSED ARCHITECT
JONATHAN FELDMAN
C-28459
11/30/2025
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT NAME
WARD RESIDENCE

PROJECT ADDRESS
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CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

HISTORY

△	DESC.	DATE

TITLE
PROJECT INFO

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WILD URBAN INTERFACE CHECKLIST

SECTION R337.3
STANDARDS OF QUALITY

R337.3.1 GENERAL. BUILDING MATERIAL, SYSTEMS, ASSEMBLIES, AND METHODS OF CONSTRUCTION USED IN THIS CHAPTER SHALL BE IN ACCORDANCE WITH SECTION R337.3.

R337.3.2 QUALIFICATION BY TESTING. MATERIAL AND MATERIAL ASSEMBLIES TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION R337.3 SHALL BE ACCEPTED FOR USE WHEN THE RESULTS AND CONDITIONS OF THOSE TESTS ARE MET. PRODUCT EVALUATION TESTING OF MATERIAL AND MATERIAL ASSEMBLIES SHALL BE APPROVED OF LISTED BY THE STATE FIRE MARSHAL, OR IDENTIFIED IN A CURRENT REPORT ISSUED BY AN APPROVED AGENCY.

R337.3.3 APPROVED AGENCY. PRODUCT EVALUATION TESTING SHALL BE PERFORMED BY AN APPROVED AGENCY AS DEFINED IN SECTION 1702 OF THE CALIFORNIA BUILDING CODE. THE SCOPE OF ACCREDITATION FOR THE APPROVED AGENCY SHALL INCLUDE BUILDING PRODUCT COMPLIANCE WITH CODE.

R337.3.4 LABELING. MATERIAL AND MATERIAL ASSEMBLIES TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION. R337.3 SHALL BEAR AN IDENTIFICATION LABEL SHOWING THE FIRE TEST RESULTS. THAT IDENTIFICATION LABEL SHALL BE ISSUED BY A TESTING AND/OR INSPECTING AGENCY APPROVED BY THE STATE FIRE MARSHAL.

1. IDENTIFICATION MARK OF THE APPROVED TESTING AND/OR INSPECTING AGENCY.
2. CONTACT AND IDENTIFICATION INFORMATION OF THE MANUFACTURER.
3. MODEL NUMBER OR IDENTIFICATION OF THE PRODUCT OR MATERIAL.
4. PRE-TEST WEATHERING SPECIFIED IN THIS CHAPTER.
5. COMPLIANCE STANDARD AS DESCRIBED UNDER SECTION R337.3.7.

R337.3.5 WEATHERING AND SURFACE TREATMENT PROTECTION

R337.3.5.1 GENERAL. MATERIAL AND MATERIAL ASSEMBLIES TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 8337.3 SHALL MAINTAIN THEIR FIRE TEST PERFORMANCE UNDER CONDITIONS OF USE WHEN INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.

R337.3.5.2 WEATHERING. FIRE-RETARDANT-TREATED WOOD AND FIRE-RETARDANT-TREATED WOOD SHINGLES AND SHAKES SHALL MEET THE FIRE TEST PERFORMANCE REQUIREMENTS OF THIS CHAPTER AFTER BEING SUBJECTED TO THE WEATHERING CONDITIONS CONTAINED IN THE FOLLOWING STANDARDS, AS APPLICABLE TO THE MATERIALS AND THE CONDITIONS OF USE.

R337.3.5.2.1 FIRE-RETARDANT-TREATED WOOD. FIRE-RETARDANT-TREATED WOOD SHAFT BE TESTED IN ACCORDANCE WITH ASTM D2898. "STANDARD PRACTICE FOR ACCELERATED WEATHERING OF FIRE-RETARDANT TREATED WOOD FOR FIRE TESTING (METHOD A)" AND THE REQUIREMENTS OF SECTION 23012 OF THE CALIFORNIA BUILDING CODE.

R337.3.5.2.2 FIRE-RETARDANT-TREATED WOOD SHINGLES AND SHAKES. FIRE-RETARDANT-TREATED WOOD SHINGLES AND SHAKES. HALL BE APPROVED AND LISTED BY THE STATE FIRE MARSHAL IN ACCORDANCE WITH SECTION 208(C), TITLE 19 CALIFORNIA CODE OF REGULATIONS.

R337.3.5.3 SURFACE TREATMENT PROTECTION . THE USE OF PAINTS, COATINGS, STAINS, OR OTHER SURFACE TREATMENTS ARE NOT AN APPROVED METHOD OF PROTECTION AS REQUIRED IN THIS SECTION. R337.3.6 ALTERNATES FOR MATERIALS, DESIGN, TESTS AND METHODS OF CONSTRUCTION. THE ENFORCING AGENCY IS PERMITTED TO MODIFY THE PROVISIONS OF THIS CHAPTER FOR SITE-SPECIFIC CONDITIONS IN ACCORDANCE WITH SECTION 1.11.2.4. WHEN REQUIRED BY THE ENFORCING AGENCY FOR THE PURPOSES OF GRANTING MODIFICATIONS. A FIRE PROTECTION PLAN SHALL BE SUB-MITTED IN ACCORDANCE WITH THE CALIFORNIA FIRE CODE. CHAPTER 49.

R337.3.6 ALTERNATES FOR MATERIALS, DESIGN, TESTS AND METHODS OF CONSTRUCTION. THE ENFORCING AGENCY IS PERMITTED TO MODIFY THE PROVISIONS OF THIS CHAPTER FOR SITE-SPECIFIC CONDITIONS IN ACCORDANCE WITH SECTION 1.11.2.4. WHEN REQUIRED BY THE ENFORCING AGENCY FOR THE PURPOSES OF GRANTING MODIFICATIONS, A FIRE PROTECTION PLAN SHALL BE SUBMITTED IN ACCORDANCE WITH THE CALIFORNIA FIRE CODE, CHAPTER 49.

R337.3.7 STANDARDS OF QUALITY. THE STATE FIRE MARSHAL STANDARDS FOR EXTERIOR WILDFIRE EXPOSURE PROTECTION LISTED BELOW AND AS REFERENCED IN THIS CHAPTER ARE LOCATED IN THE CALIFORNIA REFERENCED STANDARDS CODE, PART 12 AND CHAPTER 35 OF THIS CODE.

SFM STANDARD 12-7A-1, EXTERIOR WALL SIDING AND SHEATHING. A FIRE RESISTANCE TEST STANDARD CONSISTING OF A 150 KW INTENSITY- DIRECT FLAME EXPOSURE FOR A 10 MINUTES DURATION.

SFM STANDARD 12-7A-2, EXTERIOR WINDOWS. A FIRE RESISTANCE TEST STANDARD CONSISTING OF A 150 KW INTENSITY DIRECT FLAME EXPOSURE FOR A 8 MINUTES DURATION.
SFM STANDARD 12-7A-3, HORIZONTAL PROJECTION UNDER-SIDE A FIRE RESISTANCE TEST STANDARD CONSISTING OF A 300 KW INTENSITY DIRECT FLAME EXPOSURE FOR A 10 MINUTE DURATION.

SFM STANDARD 12-7A-4, DECKING. A TWO-PART TEST CONSISTING OF A HEAT RELEASE RATE (PART ALDECK ASSEMBLY COMBUSTION TEST WITH AN UNDER DECK EXPOSURE OF W KW INTENSITY DIRECT FLAME FOR A 3 MINUTE DURATION, AND A (PAN B) SUSTAINED DECK ASSEMBLY COMBUSTION TEST CONSISTING OF A DECK UPPER SURFACE BURNING EMBER EXPOSURE WITH A 12 MPH WIND FOR 40 MINUTES USING A 2.2 LB (1 KG) BURNING "CLASS A" SIZE 12" X 12"X 2.25" (300 MM X 300 MM X 57 MM) ROOF TEST BRAND.

SFM STANDARD 12-7A-4A, DECKING ALTERNATE METHOD A. A HEAT RELEASE RATE DECK ASSEMBLY COMBUSTION TEST WITH AN UNDER DECK EXPOSURE OF 80 KW INTENSITY DIRECT FLAME FOR A 3 MINUTE DURATION.

SFW STANDARD 12-7A-5, IGNITION-RESISTANT MATERIAL. A GENERIC BUILDING MATERIAL SURFACE BURNING FLAME SPREAD TEST STANDARD CONSISTING OF AN EXTENDED 30 MINUTE ASTM E84 OR U1. 723 TEST METHOD AS IS USED FOR FIRE-RETARDANT-TREATED WOOD.

SECTION R337.4
IGNITION RESISTANT CONSTRUCTION

R337.4.1 GENERAL. THE MATERIALS PRESCRIBED HEREIN FOR IGNITION RESISTANCE SHALL CONFORM TO THE REQUIREMENTS OF THIS CHAPTER.

R337.4.2 IGNITION-RESISTANT MATERIAL IGNITION-RESISTANT MATERIAL SHALL BE DETERMINED IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN SFM STANDARD 12-7A-5 "IGNITION-RESISTANT MATERIAL" OR IN ACCORDANCE WITH THIS SECTION.

R337.4.3 ALTERNATIVE METHODS FOR DETERMINING IGNITION-RESISTANT MATERIAL. ANY ONE OF THE FOLLOWING SHALL BE ACCEPTED AS MEETING THE DEFINITION OF IGNITION-RESISTANT MATERIAL:

1. NONCOMBUSTIBLE MATERIAL. MATERIAL THAT COMPLIES WITH THE DEFINITION FOR NONCOMBUSTIBLE MATERIALS IN SECTION 202.
2. FIRE-RETARDANT-TREATED WOOD. FIRE-RETARDANT-TREATED WOOD IDENTIFIED FOR EXTERIOR USE THAT COMPLIES WITH THE REQUIREMENTS OF SECTION 2303.2 OF THE CALIFORNIA BUILDING CODE.
3. FIRE-RETARDANT-TREATED WOOD SHINGLES AND SHAKES. FIRE-RETARDANT-TREATED WOOD SHINGLES AND SHAKES, AS DEFINED IN SECTION 1505.6 OF THE CALIFORNIA BUILDING CODE AND LISTED BY STATE FIRE MARSHAL FOR USE AS "CLASS B" ROOF COVERING, SHALL BE ACCEPTED AS AN IGNITION-RESISTANT WALL COVERING MATERIAL WHEN INSTALLED OVER SOLID SHEATHING.

SECTION R337.5
ROOFING

ROOF COMPLIANCE SHOWN IN ASSEMBLIES SHEET A7.11

R337.5.1 GENERAL. ROOFS SHALL COMPLY WITH THE REQUIREMENTS OF SECTIONS R337 AND R902. ROOFS SHALL HAVE A ROOFING ASSEMBLY INSTALLED IN ACCORDANCE WITH ITS LISTING AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

R337.5.2 ROOF COVERINGS. WHERE THE ROOF PROFILE ALLOWS A SPACE BETWEEN THE ROOF COVERING AND ROOF DECKING. THE SPACES SHALL BE CONSTRUCTED TO PREVENT THE INTRUSION OF FLAMES AND EMBERS, BE FIRESTOPPED WITH APPROVED MATERIALS OR HAVE ONE LAYER OF MINIMUM 72 POUND (32.4 KG) MINERAL-SURFACED NONPERFORATED CAP SHEET COMPLYING WITH ASTM D3909 INSTALLED OVER THE COMBUSTIBLE DECKING.

R337.5.3 ROOF VALLEYS. WHERE VALLEY FLASHING IS INSTALLED, THE FLASHING SHALL BE NOT LESS THAN 0.019-INCH (0.48 MM) NO. 26 GAGE GALVANIZED SHEET CORROSION-RESISTANT METAL INSTALLED OVER NOT LESS THAN ONE LAYER OF MINIMUM 72-POUND (32.4 KG) MINERAL-SURFACED NONPERFORATED CAP SHEET COMPLYING WITH ASTM D3909, AT LEAST 36-INCH-WIDE (914 MM) RUNNING THE FULL LENGTH OF THE VALLEY.

R337.5.4 ROOF GUTTERS. ROOF GUTTERS SHALL BE PROVIDED WITH THE MEANS TO PREVENT THE ACCUMULATION OF LEAVES AND DEBRIS IN THE GUTTER.

SECTION R337.6
VENTS

VENT COMPLIANCE SHOWN IN ASSEMBLIES SHEET B3/7.10 AND SPEC SHEET A0.12

R337.6.1 GENERAL WHERE PROVIDED, VENTILATION OPENINGS FOR ENCLOSED ATTICS, ENCLOSED EAVE SOFFIT SPACES, ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, AND UNDERFLOOR VENTILATION SHALL BE IN ACCORDANCE WITH SECTION 1203 OF THE CALIFORNIA BUILDING CODE AND SECTIONS R337.6.1 THROUGH R337.6.3 OF THIS SECTION TO RESIST BUILDING IGNITION FROM THE INTRUSION OF BURNING EMBERS AND FLAME THROUGH THE VENTILATION OPENING.

R337.6.2 REQUIREMENTS. VENTILATION OPENINGS FOR ENCLOSED ATTICS, ENCLOSED CAVE SOFFIT SPACES, ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, AND UNDERFLOOR VENTILATION OPENINGS SHALL BE FULLY COVERED WITH METAL WIRE MESH, VENTS, OTHER MATERIALS, OR OTHER DEVICES THAT MEET ONE OF THE FOLLOWING REQUIREMENTS:

1. LISTED VENTS COMPLYING WITH ASTM E2886 WITH THE FOLLOWING TEST RESULTS:
   - 1.1. THE EMBER INTRUSION TEST SHALL HAVE NO FLAMING IGNITION OF THE COTTON MATERIAL.
   - 1.2. THERE SHALL BE NO FLAMING IGNITION DURING THE INTEGRITY TEST PORTION OF THE FLAME INTRUSION TEST. THE MAXIMUM TEMPERATURE OF THE UNEXPOSED SIDE OF THE VENT SHALL NOT EXCEED 662°F (350°C).
2. VENTS COMPLYING WITH ALL OF THE FOLLOWING:
   - 2.1. THE DIMENSIONS OF THE OPENINGS THEREIN SHALL BE A MINIMUM OF 1/16 INCH (1.6 MM) AND SHALL NOT EXCEED 1/8 INCH (3.2 MM).
   - 2.2. THE MATERIALS USED SHALL BE NONCOMBUSTIBLE. EXCEPTION: VENTS LOCATED UNDER THE ROOF COVERING, ALONG THE RIDGE OF ROOFS, WITH THE EXPOSED SURFACE OF THE VENT COVERED BY NON-COMBUSTIBLE WIRE MESH MAY BE OF COMBUSTIBLE MATERIALS.
   - 2.3 THE MATERIALS USED SHALL BE CORROSION RESISTANT.

R337.6.3 VENTILATION OPENINGS ON THE UNDERSIDE OF EAVES AND CORNICES. VENTS SHALL NOT BE INSTALLED ON THE UNDERSIDE OF EAVES AND CORNICES. EXCEPTIONS:

1. LISTED VENTS COMPLYING WITH ASTM E2886 WITH THE FOLLOWING TEST RESULTS:
   - 1.1. THE EMBER INTRUSION TEST SHALL HAVE NO FLAMING IGNITION OF THE COTTON MATERIAL.
   - 1.2. THERE SHALL BE NO FLAMING IGNITION DURING THE INTEGRITY TEST PORTION OF THE FLAME INTRUSION TEST. THE MAXIMUM TEMPERATURE OF THE UNEXPOSED SIDE OF THE VENT SHALL NOT EXCEED 662°F (350°C).
2. THE ENFORCING AGENCY MAY ACCEPT OR APPROVE SPECIAL EAVE AND CORNICE VENTS THAT RESIST THE INTRUSION OF FLAME AND BURNING EMBERS.
3. VENTS COMPLYING WITH THE REQUIREMENTS OF SECTION R337.6.2 MAY BE INSTALLED ON THE UNDERSIDE OF EAVES AND CORNICES IN ACCORDANCE WITH EITHER ONE OF THE FOLLOWING CONDITIONS:
   - 3.1 THE ATTIC SPACE BEING VENTILATED IS FULLY PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.1 F.1 OF THE CALIFORNIA BUILDING CODE OR,
   - 3.2 THE EXTERIOR WALL COVERING AND EXPOSED UNDERSIDE OF THE EAVE ARE OF NONCOMBUSTIBLE MATERIAL, OR IGNITION-RESISTANT-MATERIALS AS DETERMINED IN ACCORDANCE WITH SFM STANDARD 12-7A-5 IGNITION-RESISTANT MATERIAL AND THE VENT IS LOCATED MORE THAN 12 FEET FROM THE GROUND OR WALKING SURFACE OF A DECK, PORCH, PATIO, OR SIMILAR SURFACE.

SECTION R337.7
EXTERIOR COVERING

R337.7.1 SCOPE. THE PROVISIONS OF THIS SECTION SHALL GOVERN THE MATERIALS AND CONSTRUCTION METHODS USED TO RESIST BUILDING IGNITION AND/OR SAFEGUARD AGAINST THE INTRUSION OF FLAMES RESULTING FROM SMALL EMBER AND SHORT-TERM DIRECT FLAME CONTACT EXPOSURE.

R337.7.2 GENERAL. THE FOLLOWING EXTERIOR COVERING MATERIALS AND/OR ASSEMBLIES SHALL COMPLY WITH THIS SECTION:

1. EXTERIOR WALL COVERING MATERIAL.
2. EXTERIOR WALL ASSEMBLY.
3. EXTERIOR EXPOSED UNDERSIDE OF ROOF EAVE OVERHANGS.
4. EXTERIOR EXPOSED UNDERSIDE OF ROOF EAVE SOFFITS.
5. EXPOSED UNDERSIDE OF EXTERIOR PORCH CEILINGS.
6. EXTERIOR EXPOSED UNDERSIDE OF FLOOR PROJECTIONS.
7. EXTERIOR UNDERFLOOR AREAS.

EXCEPTIONS:

1. EXTERIOR WALL ARCHITECTURAL TRIM, EMBELLISHMENTS, FASCIAS AND GUTTERS.
2. ROOF OR WALL TOP CORNICE PROJECTIONS AND SIMILAR ASSEMBLIES
3. ROOF ASSEMBLY PROJECTIONS OVER GABLE END WALLS.
4. SOLID WOOD RAFTER TAILS AND SOLID WOOD BLOCKING INSTALLED BETWEEN RAFTERS HAVING MINIMUM DIMENSION 2 INCH (50.8 MM) NOMINAL.
5. DECK WALKING SURFACES SHALL COMPLY WITH SECTION R337.9 ONLY.

R337.7.3 EXTERIOR WALLS. THE EXTERIOR WALL COVERING OR WALL ASSEMBLY SHALL COMPLY WITH ONE OF THE FOLLOWING REQUIREMENTS:

WALL COMPLIANCE SHOWN IN ASSEMBLIES SHEET A7.00

1. NONCOMBUSTIBLE MATERIAL.
2. IGNITION-RESISTANT MATERIAL.
3. HEAVY TIMBER EXTERIOR WALL ASSEMBLY.
4. LOG WALL CONSTRUCTION ASSEMBLY.
5. WALL ASSEMBLIES THAT MEET THE PERFORMANCE CRITERIA IN ACCORDANCE WITH THE TEST PROCEDURES FOR A 10-MINUTE DIRECT FLAME CONTACT EXPOSURE TEST SET FORTH IN SFM STANDARD 12-7A-1.

EXCEPTION: ANY OF THE FOLLOWING SHALL BE DEEMED TO MEET THE ASSEMBLY PERFORMANCE CRITERIA AND INTENT OF THIS SECTION:

1. ONE LAYER OF 5/8 INCH TYPE X GYPSUM SHEATHING APPLIED BEHIND THE EXTERIOR COVERING OR CLADDING ON THE EXTERIOR SIDE OF THE FRAMING.
2. THE EXTERIOR PORTION OF A 1-HOUR FIRE RESISTIVE EXTERIOR WALL ASSEMBLY DESIGNED FOR EXTERIOR FIRE EXPOSURE INCLUDING ASSEMBLIES USING THE GYPSUM PANEL AND SHEATHING PRODUCTS LISTED IN THE GYP-SUM ASSOCIATION FIRE RESISTANCE DESIGN MANUAL.

R337.7.3.1 EXTENT OF EXTERIOR WALL COVERING. EXTERIOR WALL COVERINGS SHALL EXTEND FROM THE TOP OF THE FOUNDATION TO THE ROOF AND TERMINATE AT 2 INCH (50.8 MM) NOMINAL SOLID WOOD BLOCKING BETWEEN RAFTERS AT ALL ROOF OVERHANGS, OR IN THE CASE OF ENCLOSED EAVES, TERMINATE AT THE ENCLOSURE.

R337.7.4 OPEN ROOF EAVES. THE EXPOSED ROOF DECK ON THE UNDERSIDE OF UNENCLOSED ROOF EAVES SHALL CONSIST OF ONE OF THE FOLLOWING:

N/A

1. NONCOMBUSTIBLE MATERIAL.
2. IGNITION-RESISTANT MATERIAL.
3. ONE LAYER OF 5/8-INCH TYPE X GYPSUM SHEATHING APPLIED BEHIND AN EXTERIOR COVERING ON THE UNDER-SIDE EXTERIOR OF THE ROOF DECK
4. THE EXTERIOR PORTION OF A 1-HOUR FIRE RESISTIVE EXTERIOR WALL ASSEMBLY APPLIED TO THE UNDERSIDE OF THE ROOF DECK DESIGNED FOR EXTERIOR FIRE EXPOSURE INCLUDING ASSEMBLIES USING THE GYPSUM PANEL AND SHEATHING PRODUCTS LISTED IN THE GYPSUM ASSOCIATION FIRE RESISTANCE DESIGN MANUAL.

EXCEPTIONS: THE FOLLOWING MATERIALS DO NOT REQUIRE PROTECTION:

1. SOLID WOOD RAFTER TAILS ON THE EXPOSED UNDERSIDE OF OPEN ROOF EAVES HAVING A MINIMUM NOMINAL DIMENSION OF 2 INCH (50.8 MM 1.
2. SOLID WOOD BLOCKING INSTALLED BETWEEN RAFTER TAILS ON THE EXPOSED UNDERSIDE OF OPEN ROOF EAVES HAVING A MINIMUM NOMINAL DIMENSION OF 2 INCH (50.8 MM).
3. GABLE END OVERHANGS AND ROOF ASSEMBLY PROJECTIONS BEYOND AN EXTERIOR WALL OTHER THAN AT THE LOWER END OF THE RAFTER TAILS. 4. FASCIA AND OTHER ARCHITECTURAL TRIM BOARDS.

R337.7.5 ENCLOSED ROOF EAVES AND ROOF EAVE SOFFITS. THE EXPOSED UNDERSIDE OF ENCLOSED ROOF EAVES HAVING EITHER A BOXED-IN ROOF EAVE SOFFIT WITH A HORIZONTAL UNDERSIDE, OR SLOPING RAFTER TAILS WITH AN EXTERIOR COVERING APPLIED TO THE UNDERSIDE OF THE RAFTER TAILS, SHALL BE PROTECTED BY ONE OF THE FOLLOWING:

EAVE COMPLIANCE SHOWN IN ASSEMBLIES SHEET A7.11 & DETAIL SHEET A8.20

1. NONCOMBUSTIBLE MATERIAL.
2. IGNITION-RESISTANT MATERIAL.
3. ONE LAYER OF 5/8-INCH TYPE X GYPSUM SHEATHING APPLIED BEHIND AN EXTERIOR COVERING ON THE UNDER-SIDE OF THE RAFTER TAILS OR SOFFIT.
4. THE EXTERIOR PORTION OF A 1-HOUR FIRE RESISTIVE EXTERIOR WALL ASSEMBLY APPLIED TO THE UNDERSIDE OF THE RAFTER TAILS OR SOFFIT INCLUDING ASSEMBLIES USING THE GYPSUM PANEL AND SHEATHING PRODUCTS LISTED IN THE GYPSUM ASSOCIATION FIRE RESISTANCE DESIGN MANUAL.
5. BOXED-IN ROOF EAVE SOFFIT ASSEMBLIES WITH A HORIZONTAL UNDERSIDE THAT MEET THE PERFORMANCE CRITERIA IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN EITHER OF THE FOLLOWING:
   - 5.1. SFM STANDARD 12-7A-3: OR
   - 5.2. ASTM E2957

EXCEPTIONS: THE FOLLOWING MATERIALS DO NOT REQUIRE PROTECTION:

1. OTHER THAN AT THE LOWER END OF THE RAFTER TAILS.
2. FASCIA AND OTHER ARCHITECTURAL TRIM BOARDS.

R337.7.6 EXTERIOR PORCH CEILINGS. THE EXPOSED UNDERSIDE OF EXTERIOR PORCH CEILINGS SHALL BE PROTECTED BY ONE OF THE FOLLOWING:

FLOOR COMPLIANCE SHOWN IN ASSEMBLIES SHEET A7.11

1. NONCOMBUSTIBLE MATERIAL.
2. IGNITION-RESISTANT MATERIAL.
3. ONE LAYER OF 5/8 INCH TYPE X GYPSUM SHEATHING APPLIED BEHIND THE EXTERIOR COVERING ON THE UNDER-SIDE OF THE CEILING.
4. THE EXTERIOR PORTION OF A 1-HOUR FIRE RESISTIVE EXTERIOR WALL ASSEMBLY APPLIED TO THE UNDERSIDE OF THE CEILING ASSEMBLY INCLUDING ASSEMBLIES USING THE GYPSUM PANEL AND SHEATHING PRODUCTS LISTED IN THE GYPSUM ASSOCIATION FIRE RESISTANCE DESIGN MANUAL.
5. PORCH CEILING ASSEMBLIES WITH A HORIZONTAL UNDER-SIDE THAT MEET THE PERFORMANCE CRITERIA IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN EITHER OF THE FOLLOWING:
   - 5.1. SFM STANDARD 12-7A-3: OR
   - 5.2. ASTM E2957

EXCEPTION: ARCHITECTURAL TRIM BOARDS.

R337.7.7 FLOOR PROJECTIONS. THE EXPOSED UNDERSIDE OF A CANTILEVERED FLOOR PROJECTION WHERE A FLOOR ASSEMBLY EXTENDS OVER AN EXTERIOR WALL SHALL BE PROTECTED BY ONE OF THE FOLLOWING:

FLOOR COMPLIANCE SHOWN IN ASSEMBLIES SHEET B3/A7.10

1. NONCOMBUSTIBLE MATERIAL.
2. IGNITION-RESISTANT MATERIAL.
3. ONE LAYER OF 5/8 INCH TYPE X GYPSUM SHEATHING APPLIED BEHIND AN EXTERIOR COVERING ON THE UNDER-SIDE OF THE FLOOR PROJECTION.
4. THE EXTERIOR PORTION OF A 1-HOUR FIRE RESISTIVE EXTERIOR WALL ASSEMBLY APPLIED TO THE UNDERSIDE OF THE FLOOR PROJECTION INCLUDING ASSEMBLIES USING THE GYP-SUM PANEL AND SHEATHING PRODUCTS LISTED IN SHE GYP-SUM ASSOCIATION FIRE RESISTANCE DESIGN MANUAL.
5. THE UNDERSIDE OF A FLOOR PROJECTION ASSEMBLY THAT MEET THE PERFORMANCE CRITERIA IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN EITHER OF THE FOLLOWING:
   - 5.1. SFM STANDARD 12-7A-3: OR
   - 5.2. ASTM E2957

EXCEPTION: ARCHITECTURAL TRIM BOARDS.

R337.7.8 UNDERFLOOR PROTECTION. THE UNDERFLOOR AREA OF ELEVATED OR OVERHANGING BUILDINGS SHALL BE ENCLOSED TO GRADE IN ACCORDANCE WITH THE REQUIREMENTS OF THIS CHAPTER OR THE UNDERSIDE OF THE EXPOSED UNDERFLOOR SHALL CONSIST OF ONE OF THE FOLLOWING:

1. NONCOMBUSTIBLE MATERIAL.
2. IGNITION-RESISTANT MATERIAL.
3. ONE LAYER OF 5/8 INCH TYPE X GYPSUM SHEATHING APPLIED BEHIND AN EXTERIOR COVERING ON THE UNDER-SIDE OF THE FLOOR PROJECTION.
4. THE EXTERIOR PORTION OF A 1-HOUR FIRE RESISTIVE EXTERIOR WALL ASSEMBLY APPLIED TO THE UNDERSIDE OF THE FLOOR INCLUDING ASSEMBLIES USING THE GYPSUM PANEL AND SHEATHING PRODUCTS LISTED IN THE GYPSUM ASSOCIATION FIRE RESISTANCE DESIGN MANUAL.
5. THE UNDERSIDE OF A FLOOR ASSEMBLY THAT MEETS THE PERFORMANCE CRITERIA IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN EITHER OF THE FOLLOWING:
   - 5.1. SFM STANDARD 12-7A-3: OR
   - 5.2. ASTM E2957

EXCEPTION: HEAVY-TIMBER STRUCTURAL COLUMNS AND BEAMS DO NOT REQUIRE PROTECTION.

R337.7.9 UNDERSIDE OF APPENDAGES. WHEN REQUIRED BY THE ENFORCING AGENCY THE UNDERSIDE OF OVERHANGING APPENDAGES SHALL BE ENCLOSED TO GRADE IN ACCORDANCE WITH THE REQUIREMENTS OF THIS CHAPTER OR THE UNDERSIDE OF THE EXPOSED UNDERFLOOR SHALL CONSIST OF ONE OF THE FOLLOWING:

1. NONCOMBUSTIBLE MATERIAL.
2. IGNITION-RESISTANT MATERIAL
3. ONE LAYER OF 5/8 INCH TYPE X GYPSUM SHEATHING APPLIED BEHIND AN EXTERIOR COVERING ON THE UNDER-SIDE OF THE FLOOR PROJECTION.
4. THE EXTERIOR PORTION OF A 1-HOUR FIRE RESISTIVE EXTERIOR WALL ASSEMBLY APPLIED TO THE UNDERSIDE OF THE FLOOR INCLUDING ASSEMBLIES USING THE GYPSUM PANEL AND SHEATHING PRODUCTS LISTED IN THE GYPSUM ASSOCIATION FIRE RESISTANCE DESIGN MANUAL.
5. THE UNDERSIDE OF A FLOOR ASSEMBLY THAT MEETS THE PERFORMANCE CRITERIA IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN EITHER OF THE FOLLOWING:
   - 5.1. SFM STANDARD 12-7A-3: OR
   - 5.2. ASTM §2957

EXCEPTION: HEALY-TIMBER STRUCTURAL COLUMNS AND BEAMS DO NOT REQUIRE PROTECTION.

SECTION R337.8
EXTERIOR WINDOWS AND DOORS

COMPLIANCE SHOWN IN WUI NOTES ON SHEET A7.20 & A7.40

R337.8.1 GENERAL.

R337.8.2 EXTERIOR GLAZING. THE FOLLOWING EXTERIOR GLAZING MATERIALS AND/OR ASSEMBLIES SHALL COMPLY WITH THIS SECTION:

1. EXTERIOR WINDOWS.
2. EXTERIOR GLAZED DOORS.
3. GLAZED OPENINGS WITHIN EXTERIOR DOORS.
4. GLAZED OPENINGS WITHIN EXTERIOR GARAGE DOORS.
5. EXTERIOR STRUCTURAL GLASS VENEER.

R337.8.2.1 EXTERIOR WINDOWS AND EXTERIOR GLAZED DOOR ASSEMBLY REQUIREMENTS. EXTERIOR WINDOWS AND EXTERIOR GLAZED DOOR ASSEMBLIES SHALL COMPLY WITH ONE OF THE FOLLOWING REQUIREMENTS:

1. BE CONSTRUCTED OF MULTIPANE GLAZING WITH A MINI-MUM OF ONE TEMPERED PANE MEETING THE REQUIREMENTS OF SECTION R308 SAFELY GLAZING, OR
2. BE CONSTRUCTED OF GLASS BLOCK UNITS, OR
3. HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED ACCORDING TO NFPA 257, OR
4. BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-2.

R337.8.2.2 STRUCTURAL GLASS VENEER. THE WALL ASSEMBLY BEHIND STRUCTURAL GLASS VENEER SHALL COMPLY WITH SECTION R.337.7.1

R337.8.3 EXTERIOR DOORS. EXTERIOR DOORS SHALL COMPLY WITH ONE OF THE FOLLOWING:

1. THE EXTERIOR SURFACE OR CLADDING SHALL BE OF NONCOMBUSTIBLE OR IGNITION-RESISTANT MATERIAL, OR
2. SHALL BE CONSTRUCTED OF SOLID CORE WOOD THAT COMPLY WITH THE FOLLOWING REQUIREMENTS:
   - 2.1. STILES AND RAILS SHALL NOT BE LESS THAN 1-3/8 INCHES THICK
   - 2.2. RAISED PANELS SHALL NOT BE LESS THAN 1-1/4 INCHES THICK EXCEPT FOR THE EXTERIOR PERIMETER OF THE RAISED PANEL THAT MAY TAPER TO A TONGUE NOT LESS THAN 3/8 INCH THICK.
3. SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED ACCORDING TO NFPA 252.
4. SHALL BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-1

R337.8.3.1 EXTERIOR DOOR GLAZING. GLAZING IN EXTERIOR DOORS SHALL COMPLY WITH SECTION 8337.8.2.1.

SECTION R337.9
DECKING

N/A

R337.9.1 GENERAL. THE WALKING SURFACE MATERIAL OF DECKS, PORCHES, BALCONIES AND STAIRS SHALL COMPLY WITH THE REQUIREMENTS OF THIS SECTION.

R337.9.2 WHERE REQUIRED. THE WALKING SURFACE MATERIAL OF DECKS, PORCHES, BALCONIES AND STAIRS SHALL COMPLY WITH THE REQUIREMENTS OF THIS SECTION WHEN ANY PORTION OF SUCH SURFACE IS WITHIN 10FEET (3048 MM) OF THE BUILDING.

R337.9.3 DECKING SURFACES. THE WALKING SURFACE MATERIAL OF DECKS, PORCHES, BALCONIES AND STAIRS SHALL BE CONSTRUCTED WITH ONE OF THE FOLLOWING MATERIALS:

1. IGNITION-RESISTANT MATERIAL THAT COMPLIES WITH THE PERFORMANCE REQUIREMENTS OF BOTH SEM STANDARD 12-7A-4 AND SFM STANDARD 12-7A-5.
2. EXTERIOR FIRE RETARDANT TREATED WOOD.
3. NONCOMBUSTIBLE MATERIAL.
4. ANY MATERIAL THAT COMPLIES WITH THE PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-4A WHEN ATTACHED EXTERIOR WALL COVERING IS ALSO EITHER NON-COMBUSTIBLE OR IGNITION-RESISTANT MATERIAL.
   EXCEPTION: WALL MATERIAL MAY BE OF ANY MATERIAL THAT OTHERWISE COMPLIES WITH THIS CHAPTER WHEN THE DECKING SURFACE MATERIAL COMPLIES WITH THE PERFORMANCE REQUIREMENTS ASTM E84 WITH A CLASS B FLAME SPREAD RATING.

SECTION R337.10
ACCESSORY STRUCTURES

R337.10.1 GENERAL. ACCESSORY AND MISCELLANEOUS STRUCTURES, OTHER THAN BUILDINGS COVERED BY SECTION 8337.1.3, WHICH POSE A SIGNIFICANT EXTERIOR EXPOSURE HAZARD TO APPLICABLE BUILDINGS DURING WILDFIRES SHALL BE CONSTRUCTED TO CONFORM TO THE IGNITION RESISTANCE REQUIREMENTS OF THIS SECTION.

R337.10.2 APPLICABILITY. THE PROVISIONS OF THIS SECTION SHALL APPLY TO TRELLISES, ARBORS, PATIO COVERS, CARPORTS, GAZEBOS AND SIMILAR STRUCTURES OF AN ACCESSORY OR MISCELLANEOUS CHARACTER.

EXCEPTIONS:

1. DECKS SHALL COMPLY WITH THE REQUIREMENTS OF SECTION R337.9.
2. AWNINGS AND CANOPIES SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 3105 OF THE CALIFORNIA BUILDING CODE.

R337.I0.3 WHERE REQUIRED. ACCESSORY STRUCTURES SHALL COMPLY WITH THE REQUIREMENTS OF THIS SECTION.

R337.10.3.1. ATTACHED ACCESSORY STRUCTURES SHALL COM-PLY WITH THE REQUIREMENTS OF THIS SECTION.

R337.10.3.2. WHEN REQUIRED BY THE ENFORCING AGENCY, DETACHED ACCESSORY STRUCTURES WITHIN 50 FEET OF AN APPLICABLE BUILDING SHALL COMPLY WITH THE REQUIREMENTS OF THIS SECTION.

R337.10.4 REQUIREMENTS. WHEN REQUIRED BY THE ENFORCING AGENCY ACCESSORY STRUCTURES SHALL BE CONSTRUCTED OF NON-COMBUSTIBLE OR IGNITION-RESISTANT.

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apn #
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client
SARAH AND RICHARD WARD

fa job #
24-010

issue
COMBO PERMIT SET

date
05.16.2025

history
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2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
RESIDENTIAL MANDATORY MEASURES, SHEET 1 (July 2024 Supplement)

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.

The mandatory provision of Section 4.106.4.2 may apply to additions or alterations of existing parking facilities or the addition of new parking facilities serving existing multifamily buildings. See Section 4.106.4.3 for application.

Note: Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing lighting fixtures are not considered alterations for the purpose of this section.

Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to 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 noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.
Exceptions:
1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable.
2. [HCD] For purposes of CALGreen, live/work units, complying with Section 419 of the *California Building Code*, shall not be considered mixed occupancies. Live/Work units shall comply with Chapter 4 and Appendix A4, as applicable.

DIVISION 4.1 PLANNING AND DESIGN

ABBREVIATION DEFINITIONS:

HCD	Department of Housing and Community Development
BSC	California Building Standards Commission
DSA-SS	Division of the State Architect, Structural Safety
OSHPD	Office of Statewide Health Planning and Development
LR	Low Rise
HR	High Rise
AA	Additions and Alterations
N	New

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES

SECTION 4.102 DEFINITIONS
4.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.

WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.

4.106 SITE DEVELOPMENT
LANDSCAPE — **4.106.1 GENERAL.** Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.

CIVIL — **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.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)

CIVIL — **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.

ARCH — **4.106.4 Electric vehicle (EV) charging for new construction.** New construction shall comply with Section 4.106.4.1 or 4.106.4.2. Electric vehicle supply equipment (EVSE) shall comply with the *California Electrical Code*.

Exceptions:
1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:
   1.1 Where there is no local utility power supply or the local utility is unable to supply adequate power.
   1.2 Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 4.106.4, may adversely impact the construction cost of the project.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

4.106.4.1 New one- and two-family dwellings and townhouses 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 208/240-volt 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*.

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

4.106.4.2 New multifamily dwellings, hotels and motels and new residential parking facilities.
When parking is provided, parking spaces for new multifamily dwellings, hotels and motels shall meet the requirements of Section 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest whole number. A parking space served by electric vehicle supply equipment or designed as an EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 for further details.

4.106.4.2.1 Reserved.

4.106.4.2.2 Multifamily dwellings, hotels and motels

1. EV ready parking spaces with receptacles.

a. Hotels and motels. Forty (40) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles.

b. Multifamily parking facilities. Forty (40) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. EV charging receptacles required by this section shall be located in at least one assigned parking space per dwelling unit where assigned parking is provided but need not exceed forty (40) percent of the total number of assigned parking spaces provided on the site.

Exception: Areas of parking facilities served by parking lifts, including but not limited to automated mechanical-access open parking garages as defined in the *California Building Code*; or parking facilities otherwise incapable of supporting electric vehicle charging.

c. Receptacle power source. EV charging receptacles in multifamily parking facilities shall be provided with a dedicated branch circuit connected to the dwelling unit's electrical panel, unless determined as infeasible by the project builder or designer and subject to concurrence of the local enforcing agency.

Exception: Areas of parking facilities served by parking lifts, including but not limited to automated mechanical-access open parking garages as defined in the *California Building Code*; or parking facilities otherwise incapable of supporting electric vehicle charging.

d. Receptacle configurations. 208/240V EV charging receptacles shall comply with one of the following configurations:

1. For 20-ampere receptacles, NEMA 6-20R
2. For 30-ampere receptacles, NEMA 14-30R
3. For 50-ampere receptacles, NEMA 14-50R

2. EV ready parking spaces with EV chargers.

a. Hotels and motels. Ten (10) percent of the total number of parking spaces shall be equipped with Level 2 EV chargers. At least fifty (50) percent of the required EV chargers shall be equipped with J1772 connectors.

b. Multifamily parking facilities. Ten (10) percent of the total number of parking spaces shall be equipped with Level 2 EV chargers. At least fifty (50) percent of the required EV chargers shall be equipped with J1772 connectors. Where common use parking or unassigned parking is provided, EV chargers shall be located in common use or unassigned parking areas and shall be available for use by all residents or guests.

Where low power Level 2 EV charging receptacles or Level 2 EV chargers are installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes, and installed EV chargers shall have a capacity of not less than 30 amperes.

4.106.4.2.2.1 Electric vehicle charging stations (EVCS).
Electric vehicle charging stations required by Section 4.106.4.2.2, Item 2, with EV chargers installed shall comply with Section 4.106.4.2.2.1.1.

Exception: Electric vehicle charging stations serving public accommodations, public housing, motels and hotels shall not be required to comply with this section. See *California Building Code*, Chapter 11B, for applicable requirements.

4.106.4.2.2.1.1 Electric vehicle charging stations (EVCS) spaces with EV chargers installed; dimensions and location.

EVCS spaces shall be designed to comply with the following:

1. The minimum length of each EVCS space shall be 18 feet (5486 mm).
2. The minimum width of each EVCS space shall be 9 feet (2743 mm).
3. One in every 25 EVCS spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EVCS space is 12 feet (3658 mm). Surface slope for this EVCS space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction. These EVCS spaces shall also comply with at least one of the following:

   a. The EVCS space shall be located adjacent to an accessible parking space meeting the requirements of the *California Building Code*, Chapter 11A, to allow use of the EV charger from the accessible parking space.
   b. The EVCS space shall be located on an accessible route, as defined in the *California Building Code*, Chapter 2, to the building.
   Exception: Electric vehicle charging stations designed and constructed in compliance with the *California Building Code*, Chapter 11B, are not required to comply with Section 4.106.4.2.2.1.1.

4.106.4.2.2.1.2 Accessible electric vehicle charging station spaces.
In addition to the requirements in Section 4.106.4.2.2.1.1, all EV chargers, where installed, shall comply with the accessibility provisions for EV chargers in the *California Building Code*, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with *California Building Code*, Chapter 11A, Section 1109A.

4.106.4.2.3 Reserved.

4.106.4.2.4 Reserved.

4.106.4.2.5 Electric vehicle ready space signage.
Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multi-family buildings.
Where new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or altered shall be EV capable spaces to support future Level 2 electric vehicle supply equipment. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE."

Notes:

1.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

2.There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

ARCH — **4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS.** Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the 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 to 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 noncompliant 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 the 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 only allow one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

4.303.1.4 Faucets.

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.

4.303.1.4.5 Pre-rinse spray valves.
When installed, shall meet the requirements in the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Sections 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7) and shall be equipped with an integral automatic shutoff.

FOR REFERENCE ONLY: The following table and code section have been reprinted from the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations),Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).

TABLE H-2

STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALUES MANUFACTURED ON OR AFTER JANUARY 28, 2019

PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)
Product Class 1 (≤ 5.0 ozf)	1.00
Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20
Product Class 3 (> 8.0 ozf)	1.28

Title 20 Section 1605.3 (h)(4)(A): Commercial prerinse spray values manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf)[113 grams-force(gf)]

4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used residential/commercial buildings.
Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the *California Plumbing Code*.

ARCH — **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*.

NOTE:
THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER.

TABLE - MAXIMUM FIXTURE WATER USE

FIXTURE TYPE	FLOW RATE
SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI
LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	0.2 GAL/CYCLE
WATER CLOSET	1.28 GAL/FLUSH
URINALS	0.125 GAL/FLUSH

DIVISION 4.2 ENERGY EFFICIENCY

4.201 GENERAL
4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

4.303 INDOOR WATER USE

LANDSCAPE — CONTRACTOR — CONTRACTOR — CONTRACTOR — CONTRACTOR — CONTRACTOR — CONTRACTOR — ARCH

4.304 OUTDOOR WATER USE
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:

1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the *California Code Regulations,* Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are available at: https://www.water.ca.gov/

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE
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 a similar method acceptable to the enforcing agency.

4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING
4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous 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 collected 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.

4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

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..

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section.
2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

4.410 BUILDING MAINTENANCE AND OPERATION
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 inspections 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 are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waster, 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.

DIVISION 4.5 ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL
4.501.1 Scope
The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.

SECTION 4.502 DEFINITIONS
5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 93120.1.

DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

DISCLAIMER: *THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.*

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CALGREEN RESIDENTIAL MANDATORY MEASURES

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2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
RESIDENTIAL MANDATORY MEASURES, SHEET 2 (July 2024 Supplement)

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g O³/g ROC).
Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).
Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

4.503 FIREPLACES

☐ ☒ **4.503.1 GENERAL.** 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 POLLUTANT CONTROL

☒ ☐ CONTRACTOR **4.504.1 COVERING OF DUCT OPENINGS & 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, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system.

☒ ☐ CONTRACTOR **4.504.2 FINISH MATERIAL POLLUTANT CONTROL.** Finish materials shall comply with this section.

☒ ☐ CONTRACTOR **4.504.2.1 Adhesives, Sealants and Caulks.** Adhesives, sealant 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.

☒ ☐ CONTRACTOR **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.

☒ ☐ CONTRACTOR **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.

☒ ☐ CONTRACTOR **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.

TABLE 4.504.1 - ADHESIVE VOC LIMIT[1,2]

(Less Water and Less Exempt Compounds in Grams per Liter)

ARCHITECTURAL APPLICATIONS	VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVE	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT 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 & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.
2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

TABLE 4.504.2 - SEALANT VOC LIMIT

(Less Water and Less Exempt Compounds in Grams per Liter)

SEALANTS	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

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[1,2,3]

GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT 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 COATINGS[1]	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS
2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.
3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

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
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD[2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.
2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

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.

☐ ☒ **4.504.3.1 Carpet cushion.** All carpet cushion 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.

☐ ☒ **4.504.3.2 Carpet adhesive.** All carpet adhesive shall meet the requirements of Table 4.504.1.

☐ ☒ **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.

hhttps://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

☒ ☐ CONTRACTOR **4.504.5 COMPOSITE WOOD PRODUCTS.** Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings 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

☒ ☐ CONTRACTOR **4.504.5.1 Documentation.** Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269, European 636 3S standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards.
5. Other methods acceptable to the enforcing agency.

4.505 INTERIOR MOISTURE CONTROL

4.505.1 General. Buildings shall meet or exceed the provisions of the *California Building Standards Code*.

☒ ☐ CONTRACTOR **4.505.2 CONCRETE SLAB FOUNDATIONS.** Concrete slab foundations required to have a vapor retarder by 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.

☒ ☐ CONTRACTOR **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 1/2 inch (12.7mm) or larger clean aggregate shall be provided with a vapor barrier 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.

☒ ☐ CONTRACTOR **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 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 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 INDOOR AIR QUALITY AND EXHAUST

☒ ☐ MECH **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 less than or equal to 50% to a maximum of 80%. 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 ENVIRONMENTAL COMFORT

☒ ☐ MECH **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 - 2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods.
2. Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Dust 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 system functions are acceptable.

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

☒ ☐ CONTRACTOR **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.

☒ ☐ CONTRACTOR **702.2 SPECIAL INSPECTION [HCD].** 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 other 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 qualifications 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.

Notes:

1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC] 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 other 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, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

703 VERIFICATIONS

☒ ☐ ARCH & CONTRACTOR **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 applicable checklist.

DISCLAIMER: *THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.*

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apn #
239-121-010 (LOT 253)

client
SARAH AND RICHARD WARD

fa job #
24-010

issue
COMBO PERMIT SET

date
05.16.2025

history
△ DESC. DATE

title
CALGREEN RESIDENTIAL MANDATORY MEASURES

A0.04
sheet

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: Ward Residence
Calculation Description: Title 24 Analysis
Calculation Date/Time: 2025-05-14T10:48:37-07:00 (Page 1 of 20)
Input File Name: 25068-MA New v93.ribd22x

GENERAL INFORMATION					
01	Project Name	Ward Residence			
02	Run Title	Title 24 Analysis			
03	Project Location	23 Vasquez Trail			
04	City	Carmel	05	Standards Version	2022
06	Zip code	93923	07	Software Version	EnergyPro 9.3
08	Climate Zone	3	09	Front Orientation (deg/ Cardinal)	270
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Newly Constructed	13	Number of Bedrooms	3
14	Addition Cond. Floor Area (ft^2)	0	15	Number of Stories	2
16	Existing Cond. Floor Area (ft^2)	n/a	17	Fenestration Average U-factor	0.3
18	Total Cond. Floor Area (ft^2)	4946	19	Glazing Percentage (%)	45.17%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
22	Fuel Type	All electric	23	No Dwelling Unit	No

COMPLIANCE RESULTS	
01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: Ward Residence
Calculation Description: Title 24 Analysis
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ENERGY DESIGN RATINGS						
	Energy Design Ratings			Compliance Margins		
	Source Energy (EDR1)	Efficiency[1] EDR (EDR2efficiency)	Total[2] EDR (EDR2total)	Source Energy (EDR1)	Efficiency[1] EDR (EDR2efficiency)	Total[2] EDR (EDR2total)
Standard Design	44.2	56.3	36.1			
Proposed Design	19.7	41.3	27.1	24.5	15	9
RESULT[3]: PASS						

[1]Efficiency EDR includes improvements like a better building envelope and more efficient equipment
[2]Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries
[3]Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded

- Standard Design PV Capacity: 3.40 kWdc

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: Ward Residence
Calculation Description: Title 24 Analysis
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ENERGY USE SUMMARY							
Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Standard Design TDV Energy (EDR2) (kTOY/ft^2 -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Proposed Design TDV Energy (EDR2) (kTOY/ft^2 -yr)	Margin (EDR1)	Margin (EDR2)
Space Heating	9.03	39.55	2.49	18.48	6.54	21.07
Space Cooling	0	0	0.15	8.89	-0.15	-8.89
IAQ Ventilation	0.44	4.72	0.44	4.76	0	-0.04
Water Heating	0.65	7.1	0.47	5.59	0.18	1.51
Self Utilization/Flexibility Credit			0	0	0	0
Efficiency Compliance Total	10.12	51.37	3.55	37.72	6.57	13.65
Photovoltaics	-0.59	-18.38	-0.62	-19.32		
Battery			0	0		
Flexibility			0			
Indoor Lighting	0.55	5.7	0.55	5.7		
Appl. & Cooking	0.51	6	0.53	6.15		
Plug Loads	1.1	11.7	1.1	11.7		
Outdoor Lighting	0.15	1.44	0.15	1.44		
TOTAL COMPLIANCE	11.84	57.83	5.26	43.39		

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: Ward Residence
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Calculation Date/Time: 2025-05-14T10:48:37-07:00 (Page 4 of 20)
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ENERGY USE INTENSITY	Standard Design (kBtu/ft^2 - yr)	Proposed Design (kBtu/ft^2 - yr)	Margin (kBtu/ft^2 - yr)	Margin Percentage
Gross EUI[1]	14.66	6.73	7.93	54.09
Net EUI[2]	11.04	3.03	8.01	72.55

Notes
1. Gross EUI is Energy Use Total (not including PV) / Total Building Area.
2. Net EUI is Energy Use Total (including PV) / Total Building Area.

REQUIRED PV SYSTEMS											
01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff (%)	Annual Solar Access (%)
1.6	NA	Standard (14-17%)	Fixed	none	false	190	Degrees	15	3.22	96	97
2	NA	Standard (14-17%)	Fixed	none	false	222	Degrees	15	3.22	96	97

REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.

- Indoor air quality, balanced fan
- IAQ Ventilation System: as low as 0.454545 W/CFM
- IAQ Ventilation System Heat Recovery: minimum 67 SRE and 70 ASRE
- IAQ Ventilation System: supply outside air inlet, filter, and H/ERV cores accessible per RACM Reference Manual
- Ducts with high level of insulation
- Non-standard duct location (any location other than attic)
- Slab Edge Insulation
- Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: Ward Residence
Calculation Description: Title 24 Analysis
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Input File Name: 25068-MA New v93.ribd22x

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry

- Indoor air quality ventilation
- Kitchen range hood
- Minimum Airflow
- Verified EER/EER2
- Verified SEER/SEER2
- Fan Efficacy Watts/CFM
- Verified HSPF2
- Verified heat pump rated heating capacity
- Duct leakage testing
- Recirculation, Demand Control Push Button

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft^2)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Ward Residence	4946	1	3	5	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft^2)	Avg. Ceiling Height	Water Heating System 1	Status
Primary Suite	Conditioned	1 New HVAC Primary Suite1	1468	10	DHW Sys 1	New
Kitchen/ Living	Conditioned	2 & 3 New HVAC Kitchen/2	2279	12.5	DHW Sys 1	New
Lower Mech	Conditioned	2 & 3 New HVAC Kitchen/2	429	9	DHW Sys 1	New
IT/AV	Conditioned	6 New HVAC IT/AV3	336	8.75	DHW Sys 1	New
Bedrooms	Conditioned	4 New HVAC Bedroom4	434	9.75	DHW Sys 1	New

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: Ward Residence
Calculation Description: Title 24 Analysis
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OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)
1 N - 48 D Wall: New	Primary Suite	D 2x8 R-25 Wall	10	n/a	352.5	147.2	90
2 E - 10 A Wall: New	Primary Suite	A R-8 +8 Cotcrete Wall	100	n/a	25.3	0	90
2 E - 10 D Wall: New	Primary Suite	A R-8 +8 Cotcrete Wall	100	n/a	176.4	27.6	90
2 E -12 A Wall: New 2	Primary Suite	A R-8 +8 Cotcrete Wall	78	n/a	10	0	90
2 E -12 A Wall: New 2	Primary Suite	D 2x8 R-25 Wall	78	n/a	69.8	37	90
3 S +10 A Wall: New	Primary Suite	A R-8 +8 Cotcrete Wall	190	n/a	1.9	0	90
3 S +10 D Wall: New	Primary Suite	D 2x8 R-25 Wall	190	n/a	11.1	0	90
3 S +10 D Wall: New	Primary Suite	D 2x8 R-25 Wall	190	n/a	228.5	187.2	90
4 W +10 D Wall: New	Primary Suite	D 2x8 R-25 Wall	280	n/a	369	263.2	90
4 W -13 A Wall: New	Primary Suite	A R-8 +8 Cotcrete Wall	257	n/a	9	0	90
4 W -13 D Wall: New	Primary Suite	D 2x8 R-25 Wall	257	n/a	189.4	153	90
1 N -48 D Wall: New	Kitchen/ Living	D 2x8 R-25 Wall	312	n/a	273.75	208.2	90
2 E -48 A Wall: New	Kitchen/ Living	A R-8 +8 Cotcrete Wall	42	n/a	44.1	0	90
2 E -48 D Wall: New	Kitchen/ Living	D 2x8 R-25 Wall	42	n/a	374.5	64.4	90
3 S -48 D Wall: New	Kitchen/ Living	D 2x8 R-25 Wall	132	n/a	438.75	194.45	90
4 W -48 D Wall: New	Kitchen/ Living	D 2x8 R-25 Wall	222	n/a	810.6	650.5	90
1 W +6 D Wall: New	Bedrooms	D 2x8 R-25 Wall	284	n/a	213	95.7	90
2 N + 14 D Wall: New	Bedrooms	D 2x8 R-25 Wall	14	n/a	285.2	79.2	90
3 E +14 D Wall: New	Bedrooms	D 2x8 R-25 Wall	94	n/a	213	69.3	90
4 S + 14 D Wall: New	Bedrooms	D 2x8 R-25 Wall	194	n/a	285.2	144.6	90
Wall to Cellar	Lower Mech>>__Garage__	R-21 Wall	n/a	n/a	80	0	n/a
Wall to IT/AV	Lower Mech>>IT/AV	R-21 Wall	n/a	n/a	80	0	n/a
Wall to Mec	__Garage__>>Lower Mech	R-21 Wall	n/a	n/a	80	0	n/a
Underground Wall 52	Primary Suite	A Under 8 Concrete Wal	n/a	n/a	170.3	n/a	n/a

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)
Underground Wall 64	Primary Suite	A Under 8 Concrete Wal	n/a	n/a	67.2	n/a	n/a
Underground Wall 64 2	Primary Suite	A Under 8 Concrete Wal	n/a	n/a	15	n/a	n/a
Underground Wall 24	Primary Suite	A Under 8 Concrete Wal	n/a	n/a	50.5	n/a	n/a
Underground Wall 45	Kitchen/ Living	A Under 8 Concrete Wal	n/a	n/a	329	n/a	n/a
Underground Wall 105	Lower Mech	A Basement 8 Concrete Wa	n/a	n/a	201.25	n/a	n/a
Underground Wall 105 2	Lower Mech	A Basement 12 Concrete W	n/a	n/a	114.6	n/a	n/a
Underground Wall 105 3	Lower Mech	A Basement 8 Concrete Wa	n/a	n/a	71.5	n/a	n/a
Underground Wall 105 4	IT/AV	A Basement 8 Concrete Wa	n/a	n/a	105	n/a	n/a
Underground Wall 105 5	IT/AV	A Basement 8 Concrete Wa	n/a	n/a	105	n/a	n/a
Underground Wall 105 6	IT/AV	A Basement 8 Concrete Wa	n/a	n/a	252	n/a	n/a
Floor to IT	Kitchen/ Living	Concrete Raised- R-0	n/a	n/a	336	n/a	n/a
Floor to Mec	Kitchen/ Living	Concrete Raised- R-0	n/a	n/a	429	n/a	n/a
Floor to Cellar	Kitchen/ Living	Concrete Raised- R-0	n/a	n/a	231	n/a	n/a
1 W + 6 D Wall: New	__Garage__	D Garage 2x8 R-25 Wall	276	n/a	119	27.7	90
1 W + 6 A Wall: New	__Garage__	A Garage 8 Concrete W	276	n/a	0	0	90
2 N + 6 D Wall: New	__Garage__	A Garage 8 Concrete W	6	n/a	37	0	90
3 E + 6 A Wall: New	__Garage__	A Garage 8 Concrete W	96	n/a	15	0	90
3 E + 6 D Wall: New	__Garage__	D Garage 2x8 R-25 Wall	96	n/a	60	0	90
4 S + 6 DG Wall: New	__Garage__	D Garage 2x8 R-25 Wall	186	n/a	337.5	231.7	90

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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OPAQUE SURFACES - CATHEDRAL CEILINGS

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Area (ft^2)	Skylight Area (ft^2)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof
Roof	Primary Suite	C -R-23 2x6 + R 12 ARD	0	Left	1468	0	0	0.1	0.85	No
Roof 2	Kitchen/ Living	C -R-23 2x6 + R 12 ARD	0	Left	2279	0	0	0.1	0.85	No
Roof 3	Bedrooms	C -R-23 2x6 + R 12 ARD	0	Left	434	18	0	0.1	0.85	No
Roof 4	__Garage__	C -Garage 2x6 + R 12 AR	0	Left	858	0	0	0.1	0.85	No

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
103 Glass Door New sw	Window	1 N + 10 D Wall: New		10			1	29.4	0.3	NFRC	0.33	NFRC	Bug Screen
D Window: New fx	Window	1 N + 10 D Wall: New		10			1	18	0.29	NFRC	0.36	NFRC	Bug Screen
E Glass Door New sw	Window	1 N + 10 D Wall: New		10			1	21.75	0.3	NFRC	0.33	NFRC	Bug Screen
E Window: New fx	Window	1 N + 10 D Wall: New		10			1	6.75	0.29	NFRC	0.36	NFRC	Bug Screen
E Window: New fx 2	Window	1 N + 10 D Wall: New		10			1	37.5	0.29	NFRC	0.36	NFRC	Bug Screen
F Window: New fx	Window	1 N + 10 D Wall: New		10			1	33.8	0.29	NFRC	0.36	NFRC	Bug Screen

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
S8 Window: New op	Window	2 E + 10 D Wall: New		100			1	9.2	0.3	NFRC	0.32	NFRC	Bug Screen
S10 Window: New op	Window	2 E + 10 D Wall: New		100			1	9.2	0.3	NFRC	0.32	NFRC	Bug Screen
S23 Window: New op	Window	2 E + 10 D Wall: New		100			1	9.2	0.3	NFRC	0.32	NFRC	Bug Screen
C Window: New fx	Window	2 E -12 A Wall: New 2		78			1	18.5	0.29	NFRC	0.36	NFRC	Bug Screen
C Window: New op	Window	2 E -12 A Wall: New 2		78			1	18.5	0.3	NFRC	0.32	NFRC	Bug Screen
J Window: New op	Window	3 S +10 D Wall: New		190			1	16.9	0.3	NFRC	0.32	NFRC	Bug Screen
J Window: New fx	Window	3 S +10 D Wall: New		190			1	135.1	0.29	NFRC	0.36	NFRC	Bug Screen
H Window: New fx	Window	3 S +10 D Wall: New		190			1	35.2	0.29	NFRC	0.36	NFRC	Bug Screen
G Window: New op	Window	4 W +10 D Wall: New		280			1	25.3	0.3	NFRC	0.32	NFRC	Bug Screen
G Window: New fx	Window	4 W +10 D Wall: New		280			1	237.9	0.29	NFRC	0.36	NFRC	Bug Screen
K Window: New fx	Window	4 W -13 D Wall: New		257			1	50.5	0.29	NFRC	0.36	NFRC	Bug Screen
L Window: New fx	Window	4 W -13 D Wall: New		257			1	52	0.29	NFRC	0.36	NFRC	Bug Screen

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
M Window: New fx	Window	4 W -13 D Wall: New		257			1	50.5	0.29	NFRC	0.36	NFRC	Bug Screen
N Window: New op	Window	1 N -48 D Wall: New		312			1	19.2	0.3	NFRC	0.32	NFRC	Bug Screen
N Window: New fx	Window	1 N -48 D Wall: New		312			1	54.4	0.29	NFRC	0.36	NFRC	Bug Screen
P Window: New fx	Window	1 N -48 D Wall: New		312			1	92	0.29	NFRC	0.36	NFRC	Bug Screen
Q Window: New fx	Window	1 N -48 D Wall: New		312			1	42.6	0.29	NFRC	0.36	NFRC	Bug Screen
B Window: New op	Window	2 E -48 D Wall: New		42			1	36.8	0.3	NFRC	0.32	NFRC	Bug Screen
B Window: New fx	Window	2 E -48 D Wall: New		42			1	27.6	0.29	NFRC	0.36	NFRC	Bug Screen
102 Glass Door New sw	Window	3 S -48 D Wall: New		132			1	24.8	0.3	NFRC	0.33	NFRC	Bug Screen
101 Glass Door New sw	Window	3 S -48 D Wall: New		132			1	52.3	0.3	NFRC	0.33	NFRC	Bug Screen
A1 Window: New fx	Window	3 S -48 D Wall: New		132			1	17.5	0.29	NFRC	0.36	NFRC	Bug Screen
A Window: New fx	Window	3 S -48 D Wall: New		132			1	26.25	0.29	NFRC	0.36	NFRC	Bug Screen
T Window: New op	Window	3 S -48 D Wall: New		132			1	9	0.3	NFRC	0.32	NFRC	Bug Screen

5/19/2025 5:33:00 PM

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project name
WARD RESIDENCE

project address
23 VASQUEZ TRAIL,
CARMEL, CA 93923

apn #
239-121-010 (LOT 253)

client
SARAH AND RICHARD WARD

fa job #
24-010

issue
COMBO PERMIT SET

date
05.16.2025

history
△ DESC. DATE

title
TITLE 24 REPORT - MAIN RESIDENCE

A0.05
sheet

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01-E**

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FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
T Window: New fx	Window	3 5 -4B D Wall: New		132			1	27	0.29	NFRC	0.36	NFRC	Bug Screen
S Window: New op	Window	3 5 -4B D Wall: New		132			1	7.5	0.3	NFRC	0.32	NFRC	Bug Screen
S Window: New fx	Window	3 5 -4B D Wall: New		132			1	30.1	0.29	NFRC	0.36	NFRC	Bug Screen
S Window: New op 2	Window	4 W -4B D Wall: New		222			1	15	0.3	NFRC	0.32	NFRC	Bug Screen
S Window: New fx 2	Window	4 W -4B D Wall: New		222			1	90.3	0.29	NFRC	0.36	NFRC	Bug Screen
106 Glass Door New sw	Window	4 W -4B D Wall: New		222			1	45.2	0.3	NFRC	0.33	NFRC	Bug Screen
105 Glass Door New sl	Window	4 W -4B D Wall: New		222			1	273.4	0.3	NFRC	0.33	NFRC	Bug Screen
R Window: New op	Window	4 W -4B D Wall: New		222			1	38.4	0.3	NFRC	0.32	NFRC	Bug Screen
R Window: New fx	Window	4 W -4B D Wall: New		222			1	188.2	0.29	NFRC	0.36	NFRC	Bug Screen
T Window: New op 2	Window	1 W +14 D Wall: New		284			1	9	0.3	NFRC	0.32	NFRC	Bug Screen
T Window: New fx 2	Window	1 W +14 D Wall: New		284			1	27	0.29	NFRC	0.36	NFRC	Bug Screen
U Window: New fx	Window	1 W +14 D Wall: New		284			1	33.3	0.29	NFRC	0.36	NFRC	Bug Screen

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FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
W Window: New op	Window	3 E +14 D Wall: New		94			1	9	0.3	NFRC	0.32	NFRC	Bug Screen
W Window: New fx	Window	3 E +14 D Wall: New		94			1	27	0.29	NFRC	0.36	NFRC	Bug Screen
V Window: New fx	Window	3 E +14 D Wall: New		94			1	33.3	0.29	NFRC	0.36	NFRC	Bug Screen
108 Glass Door New sl	Window	4 S + 14 D Wall: New		194			1	72.3	0.3	NFRC	0.33	NFRC	Bug Screen
107 Glass Door New sl	Window	4 S + 14 D Wall: New		194			1	72.3	0.3	NFRC	0.33	NFRC	Bug Screen
56 Skylight	Skylight	Roof 3	Left	0			1	18	0.48	NFRC	0.33	NFRC	

OPAQUE DOORS

01	02	03	04
Name	Side of Building	Area (ft^2)	U-factor
110 Door	1 W +14 D Wall: New	26.4	0.5
112 Door	2 N + 14 D Wall: New	26.4	0.5
111 Door	2 N + 14 D Wall: New	26.4	0.5
109 Door	2 N + 14 D Wall: New	26.4	0.5
113 Door	1 W + 6 D Wall: New	27.7	0.5
117 Door	4 S + 6 DG Wall: New	68	0.5
116 Door	4 S + 6 DG Wall: New	68	0.5
115 Door	4 S + 6 DG Wall: New	68	0.5
114 Door	4 S + 6 DG Wall: New	27.7	0.5

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SLAB FLOORS

01	02	03	04	05	06	07	08
Name	Zone	Area (ft^2)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated
Slab-on-Grade	Primary Suite	1468	187	R-10	16	80%	No
Slab-on-Grade 2	Kitchen/ Living	1283	0.1	R-10	16	80%	No
Slab-on-Grade 3	Lower Mech	429	45	R-10	16	80%	No
Slab-on-Grade 4	IT/AV	336	53	R-10	16	80%	No
Slab-on-Grade 5	Bedrooms	434	104	R-10	16	80%	No
Slab-on-Grade-exposed	__Garage__	231	20	R-10	16	0%	No
Slab-on-Grade-exposed 2	__Garage__	858	0.1	none	0	0%	No

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
D Garage 2x8 R-25 Wall	Exterior Walls	Wood Framed Wall	2x8 @ 16 in. O. C.	R-0	None / None	0.34	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x8 Exterior Finish: 3 Coat Stucco
A Garage 8 Concrete W	Exterior Walls	Concrete / ICF / Brick	None	n/a	None / None	0.466	Inside Finish: Gypsum Board Mass Layer: 8 in. Concrete Exterior Finish: 3 Coat Stucco
D 2x8 R-25 Wall	Exterior Walls	Wood Framed Wall	2x8 @ 16 in. O. C.	R-25	None / None	0.056	Inside Finish: Gypsum Board Cavity / Frame: R-25 / 2x8 Exterior Finish: 3 Coat Stucco

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OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
A R-8 +8 Concrete Wall	Exterior Walls	Concrete / ICF / Brick	None	n/a	None / None	0.466	Inside Finish: Gypsum Board Mass Layer: 8 in. Concrete Exterior Finish: 3 Coat Stucco
C -Garage 2x6 + R 12 AR	Cathedral Ceilings	Wood Framed Ceiling	2x6 @ 16 in. O. C.	R-0	None / 12	0.07	Roofing: Light Roof (Asphalt Shingle) Above Deck Insulation: R-12 Sheathing Roof Deck: Wood Siding/Sheathing/decking Cavity / Frame: no insul. / 2x6 Inside Finish: Gypsum Board
C -R-23 2x6 + R 12 ARD	Cathedral Ceilings	Wood Framed Ceiling	2x6 @ 16 in. O. C.	R-23	None / 12	0.029	Roofing: Light Roof (Asphalt Shingle) Above Deck Insulation: R-12 Sheathing Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-23 / 2x6 Inside Finish: Gypsum Board
R-21 Wall	Interior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-21	None / None	0.064	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Other Side Finish: Gypsum Board
Concrete Raised- R-0	Interior Floors	Concrete / ICF / Brick	2x12 Other	R-0	None / None	0.227	Floor Surface: Carpeted Mass Layer: 4 in. Concrete Ceiling Below Finish: Gypsum Board
A Under 8 Concrete Wal	Underground Walls	Concrete / ICF / Brick	None	n/a	None / 8	0.11	Inside Finish: Gypsum Board Mass Layer: 8 in. Concrete Insulation/Furring: R-8 / no furring
A Basement 8 Concrete Wa	Underground Walls	Concrete / ICF / Brick	None	n/a	None / None	0.892	Inside Finish: Gypsum Board Mass Layer: 8 in. Concrete
A Basement 12 Concrete W	Underground Walls	Concrete / ICF / Brick	None	n/a	None / None	0.688	Inside Finish: Gypsum Board Mass Layer: 12 in. Concrete

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BUILDING ENVELOPE - HERS VERIFICATION

01	02	03	04	05
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50	CFM50
Not Required	Not Required	N/A	n/a	n/a

WATER HEATING SYSTEMS

01	02	03	04	05	06	07	08	09
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (#)
DHW Sys 1	Domestic Hot Water (DHW)	HERS Verified Demand Recirculation Manual Control	DHW Heater 1 DHW Heater 1-2	1 1	n/a	None	DHW Sys 1-hers-dhw	DHW Heater 1 (1)DHW Heater 1-2 (1)

WATER HEATERS - NEEA HEAT PUMP

01	02	03	04	05	06	07	08
Name	# of Units	Tank Vol. (gal)	NEEA Heat Pump Brand	NEEA Heat Pump Model	Tank Location	Duct Inlet Air Source	Duct Outlet Air Source
DHW Heater 1	1	80	Rheem	PROPH80 T2 RH375D0 (80 gal, JA13)	TankZone	__Garage__	__Garage__
DHW Heater 1-2	1	50	Rheem	PROPH50 T2 RH375D0 (50 gal, JA13)	TankZone	__Garage__	__Garage__

WATER HEATING - HERS VERIFICATION

01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Shower Drain Water Heat Recovery
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required

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WATER HEATING - HERS VERIFICATION

01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Shower Drain Water Heat Recovery
DHW Sys 1 - 2/1	Not Required	Not Required	Not Required	None	Not Required	Not Required

SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06	07	08	09
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type
1 New HVAC Primary Suite1	Heat pump heating cooling	Heat Pump System 1	1	Heat Pump System 1	1	HVAC Fan 1	Air Distribution System 1	Setback
2 & 3 New HVAC Kitchen2	Heat pump heating cooling	Heat Pump System 2	2	Heat Pump System 2	2	HVAC Fan 2	Air Distribution System 2	Setback
6 New HVAC IT/AV3	Heat pump heating cooling	Heat Pump System 3	1	Heat Pump System 3	1	n/a	n/a	Setback
4 New HVAC Bedroom4	Heat pump heating cooling	Heat Pump System 4	1	Heat Pump System 4	1	HVAC Fan 4	Air Distribution System 4	Setback

HVAC - HEAT PUMPS

01	02	03	04	05	06	07	08	09	10	11	12	13
			Heating				Cooling					
Name	System Type	Number of Units	Heating Efficiency Type	HSPF/HS PF2/COP	Cap 47	Cap 17	Cooling Efficiency Type	SEER/SEER2	EER/EER 2/CEER	Zonally Controlled	Compressor Type	HERS Verification
Heat Pump System 1	Central split HP	1	HSPF2	8.7	54000	32200	EER2SEER2	18.7	11.4	Not Zonal	Single Speed	Heat Pump System 2-hers-htpump
Heat Pump System 2	Central split HP	2	HSPF2	9.2	40000	23600	EER2SEER2	19.5	12.1	Not Zonal	Single Speed	Heat Pump System 1-hers-htpump

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01-E**

Project Name: Ward Residence **Calculation Date/Time:** 2025-05-14T10:48:37-07:00 **(Page 17 of 20)**

Calculation Description: Title 24 Analysis **Input File Name:** 25068-MA New v93.ribd22x

HVAC - HEAT PUMPS

01	02	03	04	05	06	07	08	09	10	11	12	13
			Heating				Cooling					
Name	System Type	Number of Units	Heating Efficiency Type	HSPF/HS PF2/COP	Cap 47	Cap 17	Cooling Efficiency Type	SEER/SEER2	EER/EER 2/CEER	Zonally Controlled	Compressor Type	HERS Verification
Heat Pump System 3	Ductless MiniSplit HP	1	HSPF2	8.9	22000	11700	EER2SEER2	19.5	11	Not Zonal	Single Speed	Heat Pump System 3-hers-htpump
Heat Pump System 4	Central split HP	1	HSPF2	8.9	28000	15200	EER2SEER2	19.2	12	Not Zonal	Single Speed	Heat Pump System 4-hers-htpump

HVAC HEAT PUMPS - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Verified Airflow	Airflow Target	Verified EER/EER2	Verified SEER/SEER2	Verified Refrigerant Charge	Verified HSPF/HSPF2	Verified Heating Cap 47	Verified Heating Cap 17
Heat Pump System 1-hers-htpump	Required	350	Required	Required	No	Yes	Yes	Yes
Heat Pump System 2-hers-htpump	Required	350	Not Required	Required	No	Yes	Yes	Yes
Heat Pump System 3-hers-htpump	Not Required	0	Not Required	Not Required	No	No	Yes	Yes
Heat Pump System 4-hers-htpump	Required	350	Required	Required	No	Yes	Yes	Yes

HVAC - DISTRIBUTION SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
Name	Type	Design Type	Duct Ins. R-value		Duct Location		Surface Area		Bypass Duct	Duct Leakage	HERS Verification
			Supply	Return	Supply	Return	Supply	Return			
Air Distribution System 1	Outdoor locations	Non-Verified	R-8	R-8	Outside	Outside	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 1-hers-dist

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01-E**

Project Name: Ward Residence **Calculation Date/Time:** 2025-05-14T10:48:37-07:00 **(Page 18 of 20)**

Calculation Description: Title 24 Analysis **Input File Name:** 25068-MA New v93.ribd22x

HVAC - DISTRIBUTION SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
Name	Type	Design Type	Duct Ins. R-value		Duct Location		Surface Area		Bypass Duct	Duct Leakage	HERS Verification
			Supply	Return	Supply	Return	Supply	Return			
Air Distribution System 2	Outdoor locations	Non-Verified	R-8	R-8	Outside	Outside	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 2-hers-dist
Air Distribution System 4	Outdoor locations	Non-Verified	R-8	R-8	Outside	Outside	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 4-hers-dist

HVAC DISTRIBUTION - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space
Air Distribution System 1-hers-dist	Yes	5.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No
Air Distribution System 2-hers-dist	Yes	5.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No
Air Distribution System 4-hers-dist	Yes	5.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No

HVAC - FAN SYSTEMS

01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.58	HVAC Fan 1-hers-fan
HVAC Fan 2	HVAC Fan	0.58	HVAC Fan 2-hers-fan
HVAC Fan 4	HVAC Fan	0.58	HVAC Fan 4-hers-fan

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01-E**

Project Name: Ward Residence **Calculation Date/Time:** 2025-05-14T10:48:37-07:00 **(Page 19 of 20)**

Calculation Description: Title 24 Analysis **Input File Name:** 25068-MA New v93.ribd22x

HVAC FAN SYSTEMS - HERS VERIFICATION

01	02	03
Name	Verified Fan Watt Draw	Required Fan Efficacy (Watts/CFM)
HVAC Fan 1-hers-fan	Required	0.58
HVAC Fan 2-hers-fan	Required	0.58
HVAC Fan 4-hers-fan	Required	0.58

INDOOR AIR QUALITY (IAQ) FANS

01	02	03	04	05	06	07	08	09
Dwelling Unit	Airflow (CFM)	Fan Efficacy (W/CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - SRE/ASRE	Includes Fault Indicator Display?	HERS Verification	Status
SFam IAQVentRpt 1-1	66	0.454545	Balanced	Yes	67 / 70	No	Yes	
SFam IAQVentRpt 2-1	66	0.454545	Balanced	Yes	67 / 70	No	Yes	
SFam IAQVentRpt 3-1	66	0.454545	Balanced	Yes	67 / 70	No	Yes	

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD **CF1R-PRF-01-E**

Project Name: Ward Residence **Calculation Date/Time:** 2025-05-14T10:48:37-07:00 **(Page 20 of 20)**

Calculation Description: Title 24 Analysis **Input File Name:** 25068-MA New v93.ribd22x

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I, I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Michelle Austin	Documentation Author Signature: Michelle Austin
Company: Gabel Energy	Signature Date: 05/14/2025
Address: 20825 Nunes Avenue Suite A	CEA / HERS Certification Identification (if applicable): R22-15-40014
City/State/Zip: Castro Valley, CA 94546	Phone: 510-428-0803

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: Arman Hadilou	Responsible Designer Signature: Arman Hadilou
Company: Feldman Architecture	Date Signed: 05/14/2025
Address: 1648 Pacific Ave, Suite B	License:
City/State/Zip: San Francisco, CA 94109	Phone: (415) 252-1441

Digitally signed by California Home Energy Efficiency Rating Services (CHEERS). This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

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Feldman Architecture

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project name
WARD RESIDENCE

project address
23 VASQUEZ TRAIL,
CARMEL, CA 93923

apn #
239-121-010 (LOT 253)

client
SARAH AND RICHARD WARD

fa job #
24-010

issue
COMBO PERMIT SET

date
05.16.2025

history

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title
TITLE 24 REPORT - MAIN RESIDENCE

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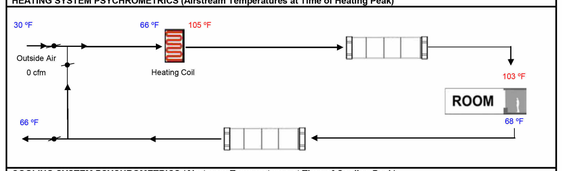
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

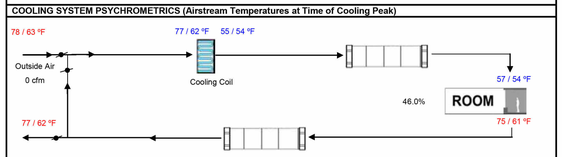
Project Name: Ward Residence
Date: 5/14/2025
System Name: 1 New HVAC Primary Suite
Floor Area: 1,468

ENGINEERING CHECKS		SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
			CFM	Sensible	Latent	CFM	Sensible
Number of Systems	1						
Heating System							
Output per System	40,000	**Total Room Loads**	1,590	31,533	611	697	26,658
Total Output (Btuh)	40,000	**Return Vented Lighting**		0			
Output (Btuh/sqft)	27.2	**Return Air Ducts**		1,281			1,232
Cooling System		**Return Fan**		0			0
Output per System	36,000	**Ventilation**	0	0	0	0	0
Total Output (Btuh)	36,000	**Supply Fan**		0			0
Total Output (Tons)	3.0	**Supply Air Ducts**		1,281			1,232
Total Output (Btuh/sqft)	24.5						
Total Output (sqft/Ton)	489.3	**TOTAL SYSTEM LOAD**		34,096	611		29,121
Air System							
CFM per System	0	**HVAC EQUIPMENT SELECTION**					
Airflow (cfm)	0	duct puz 36		36,075	0		27,758
Airflow (cfm/sqft)	0.00						
Airflow (cfm/Ton)	0.0						
Outside Air (%)	0.0%	**Total Adjusted System Output** (Adjusted for Peak Design conditions)		36,075	0		27,758
Outside Air (cfm/sqft)	0.00						
Note: values above given at ARI conditions		**TIME OF SYSTEM PEAK**		Aug 3 PM			Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)

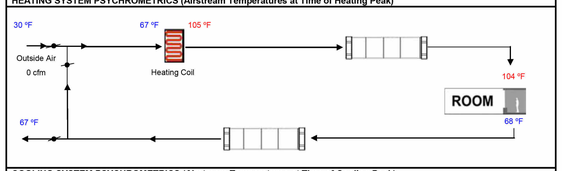


HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

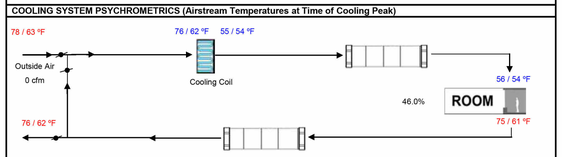
Project Name: Ward Residence
Date: 5/14/2025
System Name: 2 & 3 New HVAC Kitchen/ Living Lower Mech
Floor Area: 2,708

ENGINEERING CHECKS		SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
			CFM	Sensible	Latent	CFM	Sensible
Number of Systems	2						
Heating System							
Output per System	54,000	**Total Room Loads**	2,057	41,813	1,127	809	31,449
Total Output (Btuh)	108,000	**Return Vented Lighting**		0			
Output (Btuh/sqft)	39.9	**Return Air Ducts**		1,699			1,453
Cooling System		**Return Fan**		0			0
Output per System	42,000	**Ventilation**	0	0	0	0	0
Total Output (Btuh)	84,000	**Supply Fan**		0			0
Total Output (Tons)	7.0	**Supply Air Ducts**		1,699			1,453
Total Output (Btuh/sqft)	31.0						
Total Output (sqft/Ton)	386.9	**TOTAL SYSTEM LOAD**		45,211	1,127		34,355
Air System							
CFM per System	0	**HVAC EQUIPMENT SELECTION**					
Airflow (cfm)	0	duct puz 42		84,011	0		74,946
Airflow (cfm/sqft)	0.00						
Airflow (cfm/Ton)	0.0						
Outside Air (%)	0.0%	**Total Adjusted System Output** (Adjusted for Peak Design conditions)		84,011	0		74,946
Outside Air (cfm/sqft)	0.00						
Note: values above given at ARI conditions		**TIME OF SYSTEM PEAK**		Aug 3 PM			Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)

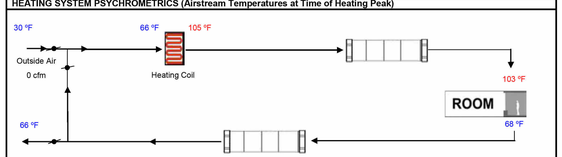


HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

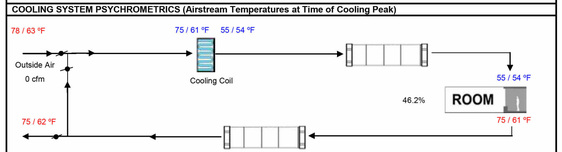
Project Name: Ward Residence
Date: 5/14/2025
System Name: 6 New HVAC IT/AV
Floor Area: 336

ENGINEERING CHECKS		SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
			CFM	Sensible	Latent	CFM	Sensible
Number of Systems	1						
Heating System							
Output per System	22,000	**Total Room Loads**	40	849	140	170	6,425
Total Output (Btuh)	22,000	**Return Vented Lighting**		0			
Output (Btuh/sqft)	65.5	**Return Air Ducts**		40			348
Cooling System		**Return Fan**		0			0
Output per System	18,000	**Ventilation**	0	0	0	0	0
Total Output (Btuh)	18,000	**Supply Fan**		0			0
Total Output (Tons)	1.5	**Supply Air Ducts**		40			348
Total Output (Btuh/sqft)	53.6						
Total Output (sqft/Ton)	224.0	**TOTAL SYSTEM LOAD**		929	140		7,120
Air System							
CFM per System	0	**HVAC EQUIPMENT SELECTION**					
Airflow (cfm)	0	Ductless puz 18		16,996	934		15,267
Airflow (cfm/sqft)	0.00						
Airflow (cfm/Ton)	0.0						
Outside Air (%)	0.0%	**Total Adjusted System Output** (Adjusted for Peak Design conditions)		16,996	934		15,267
Outside Air (cfm/sqft)	0.00						
Note: values above given at ARI conditions		**TIME OF SYSTEM PEAK**		Aug 3 PM			Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)

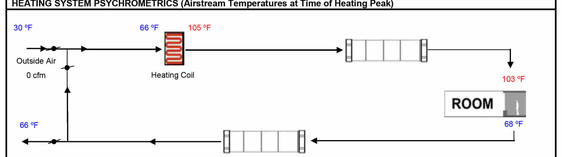


HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

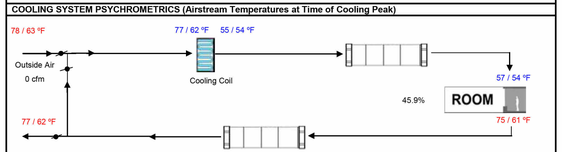
Project Name: Ward Residence
Date: 5/14/2025
System Name: 4 New HVAC Berdroom
Floor Area: 434

ENGINEERING CHECKS		SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
			CFM	Sensible	Latent	CFM	Sensible
Number of Systems	1						
Heating System							
Output per System	28,000	**Total Room Loads**	588	11,440	181	274	10,343
Total Output (Btuh)	28,000	**Return Vented Lighting**		0			
Output (Btuh/sqft)	64.5	**Return Air Ducts**		465			478
Cooling System		**Return Fan**		0			0
Output per System	23,400	**Ventilation**	0	0	0	0	0
Total Output (Btuh)	23,400	**Supply Fan**		0			0
Total Output (Tons)	2.0	**Supply Air Ducts**		465			478
Total Output (Btuh/sqft)	53.9						
Total Output (sqft/Ton)	222.6	**TOTAL SYSTEM LOAD**		12,370	181		11,299
Air System							
CFM per System	0	**HVAC EQUIPMENT SELECTION**					
Airflow (cfm)	0	duct puz 24		23,485	0		19,431
Airflow (cfm/sqft)	0.00						
Airflow (cfm/Ton)	0.0						
Outside Air (%)	0.0%	**Total Adjusted System Output** (Adjusted for Peak Design conditions)		23,485	0		19,431
Outside Air (cfm/sqft)	0.00						
Note: values above given at ARI conditions		**TIME OF SYSTEM PEAK**		Aug 3 PM			Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



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Feldman Architecture

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project name
WARD RESIDENCE

project address
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CARMEL, CA 93923

apn #
239-121-010 (LOT 253)

client
SARAH AND RICHARD WARD

fa job #
24-010

issue
COMBO PERMIT SET

date
05.16.2025

history

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title
TITLE 24 REPORT -
MAIN RESIDENCE

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: Ward Office Residence
Calculation Description: Title 24 Analysis
Calculation Date/Time: 2025-05-14T11:10:10-07:00
Input File Name: 25068-MA hOME oFFICE New v93.ribd22x
(Page 1 of 12)

GENERAL INFORMATION					
01	Project Name	Ward Office Residence			
02	Run Title	Title 24 Analysis			
03	Project Location	23 Vasquez Trail			
04	City	Carmel	05	Standards Version	2022
06	Zip code	93923	07	Software Version	EnergyPro 9.3
08	Climate Zone	3	09	Front Orientation (deg/ Cardinal)	270
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Newly Constructed	13	Number of Bedrooms	0
14	Addition Cond. Floor Area (ft^2)	0	15	Number of Stories	1
16	Existing Cond. Floor Area (ft^2)	n/a	17	Fenestration Average U-factor	0.37
18	Total Cond. Floor Area (ft^2)	797	19	Glazing Percentage (%)	48.28%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
22	Fuel Type	All electric	23	No Dwelling Unit	No

COMPLIANCE RESULTS	
01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: Ward Office Residence
Calculation Description: Title 24 Analysis
Calculation Date/Time: 2025-05-14T11:10:10-07:00
Input File Name: 25068-MA hOME oFFICE New v93.ribd22x
(Page 2 of 12)

ENERGY DESIGN RATINGS	Energy Design Ratings			Compliance Margins		
	Source Energy (EDR1)	Efficiency[1] EDR (EDR2Efficiency)	Total[2] EDR (EDR2total)	Source Energy (EDR1)	Efficiency[1] EDR (EDR2Efficiency)	Total[2] EDR (EDR2total)
Standard Design	33.4	48.3	34.1			
Proposed Design	15.3	47.4	14	18.1	0.9	20.1

RESULT[3]: PASS

[1]Efficiency EDR includes improvements like a better building envelope and more efficient equipment
[2]Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries
[3]Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded

- Standard Design PV Capacity: 1.40 kWdc

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: Ward Office Residence
Calculation Description: Title 24 Analysis
Calculation Date/Time: 2025-05-14T11:10:10-07:00
Input File Name: 25068-MA hOME oFFICE New v93.ribd22x
(Page 3 of 12)

ENERGY USE SUMMARY	Standard Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Standard Design TDV Energy (EDR2) (kTOV/ft^2 -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft^2 -yr)	Proposed Design TDV Energy (EDR2) (kTOV/ft^2 -yr)	Margin (EDR1)	Margin (EDR2)
Space Heating	6.51	28.66	4.89	36.17	1.62	-7.51
Space Cooling	0	0	0.02	1.84	-0.02	-1.84
IAQ Ventilation	0.8	8.58	0.91	9.85	-0.11	-1.27
Water Heating	2.83	31.93	2.36	27.76	0.47	4.17
Self Utilization/Flexibility Credit			-1.73	-7.61	1.73	7.61
Efficiency Compliance Total	10.14	69.17	6.45	68.01	3.69	1.16
Photovoltaics	-1.51	-47.58	-2.61	-86.66		
Battery			-3.46	-15.25		
Flexibility			0			
Indoor Lighting	0.93	9.68	0.93	9.68		
Appl. & Cooking	2.14	25.01	2.13	25.02		
Plug Loads	3.35	35.6	3.35	35.6		
Outdoor Lighting	0.21	1.97	0.21	1.97		
TOTAL COMPLIANCE	15.26	93.85	7	38.37		

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: Ward Office Residence
Calculation Description: Title 24 Analysis
Calculation Date/Time: 2025-05-14T11:10:10-07:00
Input File Name: 25068-MA hOME oFFICE New v93.ribd22x
(Page 4 of 12)

ENERGY USE INTENSITY	Standard Design (kBtu/ft^2 - yr)	Proposed Design (kBtu/ft^2 - yr)	Margin (kBtu/ft^2 - yr)	Margin Percentage
Gross EUI[1]	20.95	18.45	2.5	11.93
Net EUI[2]	11.69	-2.58	9.11	77.93

Notes
1. Gross EUI is Energy Use Total (not including PV) / Total Building Area.
2. Net EUI is Energy Use Total (including PV) / Total Building Area.

REQUIRED PV SYSTEMS											
01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff (%)	Annual Solar Access (%)
1.2	NA	Standard (14-17%)	Fixed	none	false	194	Degrees	15	3.22	96	97
1.2	NA	Standard (14-17%)	Fixed	none	false	196	Degrees	15	3.22	96	100

BATTERY SYSTEMS						
01	02	03	04	05	06	07
Control	Capacity (kWh)	Charging		Discharging		Round Trip Efficiency
		Charging Efficiency	Charging Rate (kW)	Discharging Efficiency	Discharging Rate (kW)	
Basic	10	0.95	n/a	0.95	n/a	0.9

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

CF1R-PRF-01-E

Project Name: Ward Office Residence
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Input File Name: 25068-MA hOME oFFICE New v93.ribd22x
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REQUIRED SPECIAL FEATURES
The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.
• Battery System: 10 kWh (Self Utilization Credit taken)
• Indoor air quality, balanced fan
• IAQ Ventilation System: as low as 0.454545 W/CFM
• IAQ Ventilation System Heat Recovery: minimum 67 SRE and 70 ASRE
• IAQ Ventilation System: supply outside air inlet, filter, and MERV corex accessible per RACM Reference Manual
• Ducts with high level of insulation
• Non-standard duct location (any location other than attic)
• Slab Edge Insulation
• Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed

HERS FEATURE SUMMARY
The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry
• Indoor air quality ventilation
• Minimum Airflow
• Verified SEER/SEER2
• Fan Efficacy Watts/CFM
• Verified HSPF2
• Verified heat pump rated heating capacity
• Duct leakage testing
• Recirculation, Demand Control Push Button

BUILDING - FEATURES INFORMATION						
01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft^2)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Ward Office Residence	797	1	0	1	0	1

ZONE INFORMATION						
01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft^2)	Avg. Ceiling Height	Water Heating System 1	Status
Home Office	Conditioned	1 New HVAC Home Office1	797	9	DHW Sys 1	New

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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OPAQUE SURFACES							
01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)
1 W -32 D Wall: New	Home Office	D 2x8 R-25 Wall	238	n/a	221.4	52	90
2 N -32 D Wall: New	Home Office	D 2x8 R-25 Wall	328	n/a	291.2	94.1	90
3 E -32 D Wall: New	Home Office	D 2x8 R-25 Wall	58	n/a	228.5	144.6	90
4 S -32 D Wall: New	Home Office	D 2x8 R-25 Wall	148	n/a	369	94.1	90

OPAQUE SURFACES - CATHEDRAL CEILINGS										
01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Area (ft^2)	Skylight Area (ft^2)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof
Roof	Home Office	C -R-23 2x6 + R 12 ARD	0	Left	797	0	0	0.1	0.85	No

FENESTRATION / GLAZING													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
118 Glass Door New sw	Window	1 W -32 D Wall: New		238			1	31	0.3	NFRC	0.33	NFRC	Bug Screen
X Window: New fx	Window	1 W -32 D Wall: New		238			1	21	0.48	NFRC	0.33	NFRC	Bug Screen
AA Window: New op	Window	2 N -32 D Wall: New		328			1	12.4	0.3	NFRC	0.32	NFRC	Bug Screen
AA Window: New fx	Window	2 N -32 D Wall: New		328			1	12.4	0.48	NFRC	0.33	NFRC	Bug Screen

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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FENESTRATION / GLAZING														
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
Z Window: New op	Window	2 N -32 D Wall: New		328			1	9	0.3	NFRC	0.32	NFRC	Bug Screen
Z Window: New fx	Window	2 N -32 D Wall: New		328			1	27	0.48	NFRC	0.33	NFRC	Bug Screen
Y Window: New fx	Window	2 N -32 D Wall: New		328			1	33.3	0.48	NFRC	0.33	NFRC	Bug Screen
120 Glass Door New sL	Window	3 E -32 D Wall: New		58			1	72.3	0.29	NFRC	0.37	NFRC	Bug Screen
119 Glass Door New sL	Window	3 E -32 D Wall: New		58			1	72.3	0.29	NFRC	0.37	NFRC	Bug Screen
DD Window: New fx	Window	4 S -32 D Wall: New		148			1	33.3	0.48	NFRC	0.33	NFRC	Bug Screen
CC Window: New op	Window	4 S -32 D Wall: New		148			1	9	0.3	NFRC	0.32	NFRC	Bug Screen
CC Window: New fx	Window	4 S -32 D Wall: New		148			1	27	0.48	NFRC	0.33	NFRC	Bug Screen
BB Window: New op	Window	4 S -32 D Wall: New		148			1	12.4	0.3	NFRC	0.32	NFRC	Bug Screen
BB Window: New fx	Window	4 S -32 D Wall: New		148			1	12.4	0.48	NFRC	0.33	NFRC	Bug Screen

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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SLAB FLOORS							
01	02	03	04	05	06	07	08
Name	Zone	Area (ft^2)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated
Slab-on-Grade	Home Office	797	114	R-10	16	80%	No

OPAQUE SURFACE CONSTRUCTIONS							
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
D 2x8 R-25 Wall	Exterior Walls	Wood Framed Wall	2x8 @ 16 in. O. C.	R-25	None / None	0.056	Inside Finish: Gypsum Board Cavity / Frame: R-25 / 2x8 Exterior Finish: 3 Coat Stucco
C -R-23 2x6 + R 12 ARD	Cathedral Ceilings	Wood Framed Ceiling	2x6 @ 16 in. O. C.	R-23	None / 12	0.029	Roofing: Light Roof (Asphalt Shingle) Above Deck Insulation: R-12 Sheathing Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-23 / 2x6 Inside Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION				
01	02	03	04	05
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50	CFM50
Not Required	Not Required	N/A	n/a	n/a

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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WATER HEATING SYSTEMS								
01	02	03	04	05	06	07	08	09
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (#)
DHW Sys 1	Domestic Hot Water (DHW)	HERS Verified Demand Recirculation Manual Control	DHW Heater 1 DHW Heater 1-2	1 1	n/a	None	DHW Sys 1-hers dhw	DHW Heater 1 (1)DHW Heater 1-2 (1)

WATER HEATERS - NEEA HEAT PUMP							
01	02	03	04	05	06	07	08
Name	# of Units	Tank Vol. (gal)	NEEA Heat Pump Brand	NEEA Heat Pump Model	Tank Location	Duct Inlet Air Source	Duct Outlet Air Source
DHW Heater 1	1	80	Rheem	PROPH80 T2 RH37550 (80 gal, JA13)	Outside	Home Office	Home Office
DHW Heater 1-2	1	50	Rheem	PROPH50 T2 RH37530 (50 gal, JA13)	Outside	Home Office	Home Office

WATER HEATING - HERS VERIFICATION							
01	02	03	04	05	06	07	
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Shower Drain Water Heat Recovery	
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required	
DHW Sys 1 - 2/1	Not Required	Not Required	Not Required	None	Not Required	Not Required	

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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SPACE CONDITIONING SYSTEMS							
01	02	03	04	05	06	07	08
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type
1 New HVAC Home Office1	Heat pump heating cooling	Heat Pump System 1	1	Heat Pump System 1	1	HVAC Fan 1	Air Distribution System 1	Setback

HVAC - HEAT PUMPS												
01	02	03	04	05	06	07	08	09	10	11	12	13
Name	System Type	Number of Units	Heating				Cooling					
			Heating Efficiency Type	HSPF/HS PF2/COP	Cap 47	Cap 17	Cooling Efficiency Type	SEER/SEER2	EER/EER2/CEER	Zonally Controlled	Compressor Type	HERS Verification
Heat Pump System 1	Central split HP	1	HSPF2	8.6	23000	12100	EER2SEER2	18.6	11.7	Not Zonal	Single Speed	Heat Pump System 1-hers-htpump

HVAC HEAT PUMPS - HERS VERIFICATION								
01	02	03	04	05	06	07	08	09
Name	Verified Airflow	Airflow Target	Verified EER/EER2	Verified SEER/SEER2	Verified Refrigerant Charge	Verified HSPF/HSPF2	Verified Heating Cap 47	Verified Heating Cap 17
Heat Pump System 1-hers-htpump	Required	350	Not Required	Required	No	Yes	Yes	Yes

HVAC - DISTRIBUTION SYSTEMS											
01	02	03	04	05	06	07	08	09	10	11	12
Name	Type	Design Type	Duct Ins. R-value		Duct Location		Surface Area		Bypass Duct	Duct Leakage	HERS Verification
			Supply	Return	Supply	Return	Supply	Return			
Air Distribution System 1	Outdoor locations	Non-Verified	R-8	R-8	Outside	Outside	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 1-hers-dist

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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HVAC DISTRIBUTION - HERS VERIFICATION								
01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space
Air Distribution System 1-hers-dist	Yes	5.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No

HVAC - FAN SYSTEMS			
01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.58	HVAC Fan 1-hers-fan

HVAC FAN SYSTEMS - HERS VERIFICATION		
01	02	03
Name	Verified Fan Watt Draw	Required Fan Efficacy (Watts/CFM)
HVAC Fan 1-hers-fan	Required	0.58

INDOOR AIR QUALITY (IAQ) FANS								
01	02	03	04	05	06	07	08	09
Dwelling Unit	Airflow (CFM)	Fan Efficacy (W/CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - SRE/ASRE	Includes Fault Indicator Display?	HERS Verification	Status
SFam IAQVentRgt 1-1	66	0.454545	Balanced	Yes	67 / 70	No	Yes	

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Michelle Austin	Documentation Author Signature: Michelle Austin
Company: Gabel Energy	Signature Date: 05/14/2025
Address: 20825 Nunes Avenue Suite A	CEA/ HERS Certification Identification (if applicable): 822-15-40014
City/State/Zip: Castro Valley, CA 94546	Phone: 510-428-0803

CABEC CERTIFIED ENERGY ANALYST

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: Arman Hadilou	Responsible Designer Signature: Arman Hadilou
Company: Feldman Architecture	Date Signed: 05/14/2025
Address: 1648 Pacific Ave, Suite B	License:
City/State/Zip: San Francisco, CA 94109	Phone: (415) 252-1441

Digitally signed by California Home Energy Efficiency Rating Services (CHEERS). This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

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Feldman Architecture

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project name
WARD RESIDENCE

project address
23 VASQUEZ TRAIL,
CARMEL, CA 93923

apn #
239-121-010 (LOT 253)

client
SARAH AND RICHARD WARD

fa job #
24-010

issue
COMBO PERMIT SET

date
05.16.2025

history
△ DESC. DATE

title
TITLE 24 REPORT - HOME OFFICES

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sheet

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name: Ward Office Residence	Date: 5/14/2025
System Name: 1 New HVAC Home Office	Floor Area: 797

ENGINEERING CHECKS	
Number of Systems	1
Heating System	
Output per System	23,000
Total Output (Btuh)	23,000
Output (Btuh/sqft)	28.9
Cooling System	
Output per System	18,000
Total Output (Btuh)	18,000
Total Output (Tons)	1.5
Total Output (Btuh/sqft)	22.6
Total Output (sqft/Ton)	531.3
Air System	
CFM per System	0
Airflow (cfm)	0
Airflow (cfm/sqft)	0.00
Airflow (cfm/Ton)	0.0
Outside Air (%)	0.0%
Outside Air (cfm/sqft)	0.00
Note: values above given at ARI conditions	

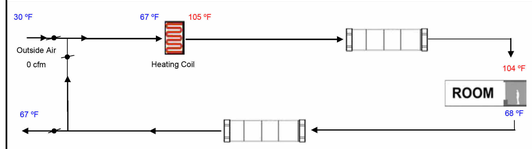
SYSTEM LOAD

	COIL COOLING PEAK			COIL HTG. PEAK	
	CFM	**Sensible**	**Latent**	**CFM**	**Sensible**
Total Room Loads	696	14,027	339	302	11,655
Return Vented Lighting		0			
Return Air Ducts		570			539
Return Fan		0			0
Ventilation	0	0	0	0	0
Supply Fan		0			0
Supply Air Ducts		570			539
TOTAL SYSTEM LOAD		15,167	339		12,732

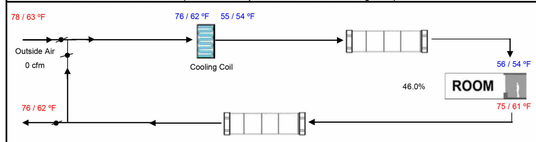
HVAC EQUIPMENT SELECTION

duct puz 18	14,217	3,799		15,961
Total Adjusted System Output (Adjusted for Peak Design conditions)	14,217	3,799		15,961
TIME OF SYSTEM PEAK	Aug 3 PM			Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



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TITLE 24 REPORT -
HOME OFFICES

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2022 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information.
(04/2022)

Building Envelope:

§ 110.6(a)1:	**Air Leakage**. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 101/I.S.2/A440-2011. *
§ 110.6(a)5:	**Labeling**. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.
§ 110.7:	**Air Leakage**. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers**. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors**. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier**. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**Roof Deck, Ceiling and Rafter Roof Insulation.** Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling. *
§ 150.0(b):	**Loose-fill Insulation**. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation**. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *
§ 150.0(f):	**Slab Edge Insulation**. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder**. In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d).
§ 150.0(g)2:	**Vapor Retarder**. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	**Fenestration Products**. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45. *

Fireplaces, Decorative Gas Appliances, and Gas Log:

§ 110.5(e)	**Pilot Light**. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.
§ 150.0(e)3:	**Flue Damper**. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *

Space Conditioning, Water Heating, and Plumbing System:

§ 110.0-§ 110.3:	**Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission. *
§ 110.2(a):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. *
§ 110.2(b):	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating. *
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.3(c)3:	**Insulation.** Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour), and pool and spa heaters. *
§ 150.0(h)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(h)3A:	**Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)3B:	**Liquid Line Drier**. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	**Water Piping**, **Solar Water-heating System Piping**, **and Space Conditioning System Line Insulation**. All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code. *
§ 150.0(j)2:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment' maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2' higher than the base of the water heater
§ 150.0(n)3:	**Solar Water-heating Systems**. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.

Ducts and Fans:

§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼". If mastic or tape is used. Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed. *
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test**. When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter. *

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2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. *

Ventilation and Indoor Air Quality:

§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality**. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	**Central Fan Integrated (CFI) Ventilation Systems**. Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed andcontrolled per §150.0(o)1Biii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	**Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses** . Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1Ci-iii.
§ 150.0(o)1G:	**Local Mechanical Exhaust**. Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of §150.0(o)1Giii,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	**Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G

Pool and Spa Systems and Equipment:

§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	**Piping**. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	**Directional Inlets and Time Switches for Pools**. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	**Pilot Light**. Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. *

Lighting:

§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9. *
§ 150.0(k)1A:	**Luminaire Efficacy**. All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
§ 150.0(k)1B:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	**Light Sources in Enclosed or Recessed Luminaires**. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1E:	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).

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2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires**. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	**Light Sources in Drawers**, **Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	**Accessible Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	**Multiple Controls**. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	**Mandatory Requirements.** Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	**Energy Management Control Systems**. An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	**Automatic Shutoff Controls.** In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	**Dimmers**. Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	**Independent controls**. Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	**Internally illuminated address signs.** Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

Solar Readiness:

§ 110.10(a)1:	**Single-family Residences.** Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§110.10(b)1A:	**Minimum Solar Zone Area**. The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. *
§ 110.10(b)2:	**Azimuth**. All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

Electric and Energy Storage Ready:

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2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(s)	**Energy Storage System (ESS) Ready.** All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(t)	**Heat Pump Space Heater Ready**. Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u)	**Electric Cooktop Ready**. Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(v)	**Electric Clothes Dryer Ready**. Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

*Exceptions may apply.

5/6/22

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project name
WARD RESIDENCE

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CARMEL, CA 93923

apn #
239-121-010 (LOT 253)

client
SARAH AND RICHARD WARD

fa job #
24-010

issue
COMBO PERMIT SET

date
05.16.2025

history
△ DESC. DATE

title
TITLE 24 REPORT - MANDATORY REQUIREMENTS

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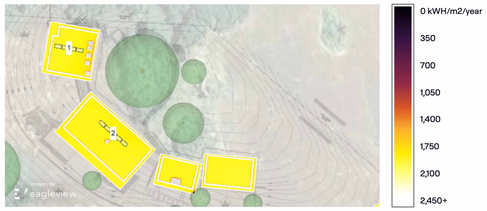
Shade Report - 25068_Ward Residence

Customer	Designer	Organization
Sarah & Richard Ward	Gabel Energy	Gabel Energy
Address	**Coordinates**	**Date**
23 E Vasquez, Carmel-By-The-Sea, CA 93923, USA	36.46957382531269, -121.7627776939679	May 12, 2025

Annual irradiance



Summary

Array ID	Panel count	Azimuth	Pitch	Annual TOF	Annual solar access	Annual TSRF
1	4	190°	15°	96%	98%	94%
2	5	222°	15°	94%	99%	93%
				Weighted average by panel count:	98.6%	93.4%

Monthly solar access % across arrays

Array ID	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	96	96	97	99	99	99	99	99	98	97	96	97
2	99	98	97	99	99	99	99	100	99	96	98	99

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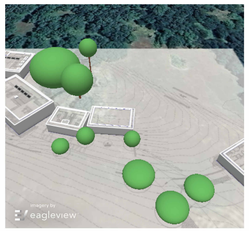
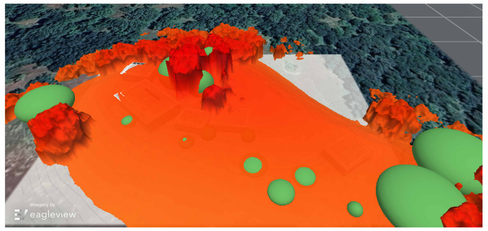
Zoomed out satellite view

3D model



3D model with LIDAR overlay



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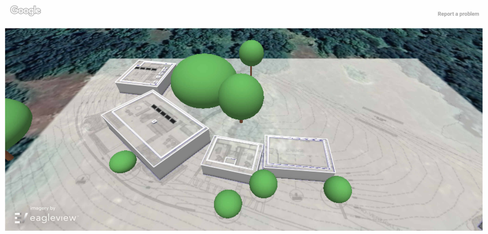
Street view with corresponding 3D model



I, **Gabel Energy**, certify that I have generated this shading report to the best of my abilities, and I believe its contents to be accurate.

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Shade Report - 25068_Ward Residence

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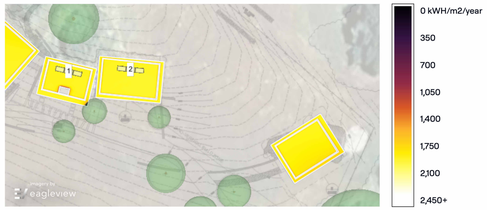
Annual irradiance



Summary

Array ID	Panel count	Azimuth	Pitch	Annual TOF	Annual solar access	Annual TSRF
1	3	194°	15°	96%	99%	95%
2	3	186°	15°	96%	99%	95%
				Weighted average by panel count:	99%	95%

Monthly solar access % across arrays

Array ID	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	99	99	98	99	99	99	99	99	99	99	99	99
2	99	99	99	99	99	99	99	100	99	99	99	99

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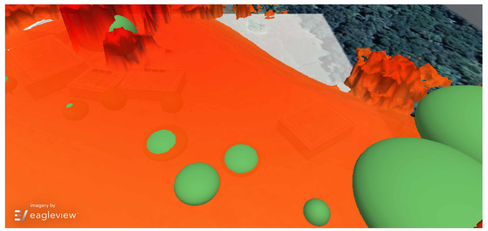
Zoomed out satellite view

3D model

3D model with LIDAR overlay



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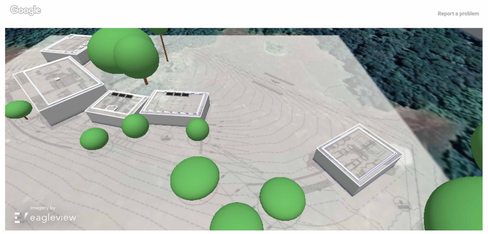

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project name
WARD RESIDENCE

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23 VASQUEZ TRAIL, CARMEL, CA 93923

apn #
239-121-010 (LOT 253)

client
SARAH AND RICHARD WARD

fa job #
24-010

issue
COMBO PERMIT SET

date
05.16.2025

history

△	DESC.	DATE

title
TITLE 24 REPORT - SHADE REPORT

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Construction And Demolition (C&D) Diversion Requirements Instructions

1. Complete, sign and submit the attached C& D Waste Reduction and Recycling Plan.

2. If you plan to self-haul your C&D debris, use the attached list to locate facilities that will recycle your materials. Inform the recycling facilities that the material is generated in unincorporated Monterey County so origin codes on the weight tickets can be recorded correctly. **Always ask the recycling facility for all your weight tickets and receipts.**

3. Once your project is complete, you must submit the attached C&D Waste Reduction and Recycling Report (Pages 2 through 4). **Make sure to keep and submit all weight tickets and receipts for all your recycled and disposed materials.**

4. **Submittal Requirements:** Your final Waste Reduction and Recycling Report should include the following information and be provided via email to HCDRecycleVerification@countyofmonterey.gov prior to scheduling for final inspection:
   a. Identify the types and quantities (tons) of materials recycled, reused, salvaged and/or disposed,
   b. Identify how the materials were handled: "source separated" or "mixed",
   c. Identify the method of transport for debris materials (self-haul, hauler),
   d. Identify where the materials were taken for recycling or disposal.

Failure To File Recycling Reports With The County Of Monterey May Result In Non-Compliance Fees And/or Delay Issuance Of The Certificate Of Occupancy Or Final Inspection.

Construction And Demolition (C&D) Diversion Requirements

County of Monterey requires all Construction and Demolition (C&D) projects to divert at least 65% of the C&D debris and 100% of inert materials generated by the project. In addition, all building and demolition permit applicants must prepare and submit a C&D Waste Reduction and Recycling Plan at the time of the permit application (prior to permit issuance), and a final C&D Waste Reduction and Recycling Report. **Failure to file recycling reports with the County of Monterey may result in non-compliance fees and/or delay issuance of the Certificate of Occupancy or final inspection.**

County of Monterey helps to implement this State law through its construction permitting services. Under this program, administered through a partnership between the County of Monterey Environmental Health Bureau and the County of Monterey Housing and Community Development Department, construction permit recipients document how their C&D debris is recycled in order to get their building permit finalize, closed and/or approved for occupancy. Construction and demolition debris, or C&D debris, comprises nearly 30% of the solid waste stream. Also under State law, all permitted new building construction (residential and non-residential), demolition, and certain additions and alteration projects are required to recycle and/or salvage for reuse a minimum 65% of the nonhazardous C&D debris generated during the project (California Green Building Standards Code Sections 4.408, 5.408, 301.1.1 and 301.3).

How will you meet the requirement to recycle or salvage a minimum 65% of non-hazardous C&D debris? Mark one option clearly:

	Option 1A	I will contract with Waste Management, the franchise hauler for unincorporated Monterey County. Under this option, building permit recipients contract with Waste Management, the franchise hauler for unincorporated Monterey County. This means only Waste Management may independently deliver debris boxes and/or bins to a job site and haul them away when full.
	Option 1B	I will contract with Green Waste, the franchise hauler for the Pebble Beach Community Services District. Under this option, the area of operations is in the Pebble Beach Community Services District. The permit recipients shall use the franchise hauler for this district [GreenWaste]
	Option 2A ✓	I (includes all subcontractors and clean up contractors) will self-haul the materials. Under this option, building receipts haul C&D debris from project directly to recycling and disposal facility. You may self-haul materials to any C&D Recycling Facility to meet the 65% recycling requirement. Contact the Environmental Health Bureau at (831) 755-4500 for information on C&D Recycling Facilities. *Cost savings may apply for source separated materials such as concrete, metal, etc.
	Option 2B	I will self-haul the materials to a location outside of Monterey County and follow all applicable laws and regulations. List Location: _____ Under this option, the permit recipients haul out of county and recycle or disposed of according to all of the destination's laws and regulations. NOTE: Contractors may self-haul debris from their job sites as an incidental part of their services, only when the equipment, vehicles and/or trailers being used is owned and operated by the Contractor performing the service at the job site(s). Contractors may not hire a third-party to provide hauling services.

See page 1 for submittal requirement and submit all required documents to:
HCDRecycleVerification@countyofmonterey.gov

Construction & Demolition (C&D) – Waste Reduction And Recycling Plan

Permit #_____ Date 4/29/25
Site Address: 23 Vasquez Trail Carmel, CA Zip Code 93923
Company/Owner Name: True Build Construction, Inc.
Mailing Address: 2096 Sunset Drive Contact Phone: 415-272-8621
City, State and Zip: Pacific Grove, CA 93950 E-mail: mike@truebuild.co
Type of Project: ■ New Construction ☐ Alteration ☐ Demolition ☐ Roofing ☐ Other
Project Description: Residential construction of Main House, Garage and ADU

1. **What materials will be generated by your project?**

	Asphalt		Bricks/Rock	X	Cardboard
	Concrete/Cement		Dirt/Clean Fill	X	Drywall/Sheetrock
	Glass/Windows	X	Lumber/Wood	X	Metals
X	Mixed C&D		Roofing Materials		Salvaged Items
	Other (Specify)				

2. **How will the C&D debris be handled during your project? (Please check all that apply)**
   Source Separation – Materials are separated on-site and placed in material-specific bins.
   Mixed Loads – Clean recyclable C&D materials are comingled into one bin and delivered to a processing facility. Trash is collected in a separate bin and delivered to an authorized disposal facility.
3. **How do you plan to dispose of the C&D debris that you will generate with your project?**
   ☐ I will hire the exclusive franchise hauler. Save And Submit Invoices
   ☒ I will self-haul C&D debris using the owner/contractor's equipment and vehicles.
   SAVE AND SUBMIT ALL RECEIPTS
4. **ATTEST: By signing below I am affirming:**
   - I am the owner/agent for this permit application and have read the requirements of the ordinance.
   - I will submit a Waste Reduction & Recycling Plan with the permit application, and, to the best of my ability, I agree to recycle, divert and/or salvage the materials listed above.
   - I will submit a Waste Reduction & Recycling Report describing diversion activities and showing actual tonnage data for all diverted and disposed materials.
   - I understand that failure to comply with the County of Monterey C&D recycling and reporting requirements may result in legal enforcement and penalties and may delay issuance of permits, the Certificate of Occupancy or approval of the final inspection.

Applicant's Signature	Date	Print Name/Title (owner, contractor, agent)
	4/30/25	Michael Geissberger, Project Manager for True Build Construction, Inc.

See page 1 for submittal requirement and submit all required documents to: HCDRecycleVerification@countyofmonterey.gov

COUNTY OF MONTEREY
Housing and Community Development

1441 Schilling Place, South 2nd Floor
Salinas, California 93901-4527
(831) 755-5025

Construction & Demolition - Waste Reduction and Recycling Report

Complete this recycling report, *ALWAYS keep invoices, weight tickets and receipts*. Use the attached conversion table for help with calculations and attach additional sheets if necessary.

Address: _____ Permit Number _____

MATERIAL TYPE	RECYCLED, REUSED, SALVAGED (in tons)	DISPOSAL	SOURCE SEPARATED	MIXED	HAULER	MATERIAL DESTINATION
Inert Materials						
Example: Concrete	*18.43*	*N/A*	*X*		*Self-Haul*	*Johnson Canyon Landfill*
Asphalt		N/A				
Brick / Rock		N/A				
Concrete / Cement		N/A				
Dirt / Clean fill		N/A				
Roofing materials		N/A				
Other:		N/A				
Other:		N/A				
INERT TOTAL		100% Diversion				
	A	B				
C&D Debris						
Cardboard						
Drywall / Sheetrock						
Glass / Windows						
Lumber / Wood (clean)						
Metal						
Mixed C&D materials*						
Plastic						
Trash						
Yard waste / Landscaping						
Other:						
Other:						
C&D DEBRIS TOTAL			C&D Debris Diversion Rate (percentage) (A)/(A+B) x 100			Over 65% = C&D DEBRIS COMPLIANCE

*If C&D materials are mixed, please list recyclable materials in the space below and enter the total tons in the *Mixed C&D Materials* section.

Mixed C&D Materials:

Explanation /Comments:

I have accurately reported all diverted and dispose materials above. Failure to file recycling reports with the County of Monterey may result in non-compliance fees and/or delay issuance of the Certificate of Occupancy or final inspection.

Signature:_____ **Date:** _____

See page 1 for submittal requirement and submit all required documents to: HCDRecycleVerification@countyofmonterey.gov

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CONVERSION CALCULATIONS

To calculate the percentage of materials recycled and/or reused:

To determine the percentage of diverted materials, divide the number of tons which were recycled, reused and/or salvaged by the TOTAL tonnage generated.

$$\text{Percent Diverted (tons)} = \frac{\text{recycling + reused + salvaged}}{\text{recycling + reused + salvaged + disposed}}$$

How to convert pounds to tons:

To convert pounds to tons, divide the number of pounds by 2000 pounds. **1 Ton = 2,000 Pounds**

How to convert cubic yards to tons:

Select the type of material recycled/reused from the conversion table below. Multiply the corresponding number by the total number of cubic yards recycled/reused. **1 cubic yard of mixed C&D debris = 0.45 tons**

Conversion Table

MATERIAL	Volume - EQUIVALENT - Weight	
Asphalt – paving	1 cubic yard	0.69 tons
Asphalt – roofing shingles	1 cubic yard	0.21 tons
Brick	1 cubic yard	1.51 tons
Cardboard	1 cubic yard	0.05 tons
Carpet/carpet padding	1 cubic yard	0.04 tons
Ceramic tile	1 cubic yard	0.61 tons
Concrete	1 cubic yard	0.93 tons
Dirt – clean fill	1 cubic yard	1.00 tons
Fiberglass insulation	1 cubic yard	0.01 tons
Glass	1 cubic yard	1.08 tons
Green waste – yard trimmings	1 cubic yard	0.05 tons
Metals	1 cubic yard	0.45 tons
Mixed C&D debris	1 cubic yard	0.45 tons
Plastic	1 cubic yard	0.01 tons
Sheetrock – drywall	1 cubic yard	0.20 tons
Wood – clean lumber	1 cubic yard	0.16 tons
Wood – pallets	one	0.14 tons

For more conversion factors for recyclable materials visit: www.calrecycle.ca.gov/FacIT/Conversion1.pdf
For more conversion factors for C&D materials visit:
http://www.calrecycle.ca.gov/LGCentral/Library/DSG/ICandD.htm For additional information regarding County of Monterey Construction & Demolition Recycling visit:
https://www.co.monterey.ca.us/government/departments-a-h/health/environmental-health/recycling/construction-and-demolition-recycling

West Monterey County Construction and Demolition Recycling

Waste Management Can Help Builders Meet Recycling Requirements for Monterey County Building Permits

Proper separation of recyclable & non-recyclable construction & demolition (C&D) material will help you reach the required 65% diversion goal of the state of California's Green Building Standards Code (CalGreen) and help Monterey County meet State waste reduction and recycling mandates.

Waste Management is Monterey County's exclusive waste hauler. We offer 20, 30 and 40-yard containers for both recyclable and non-recyclable C&D materials. When ordering construction containers for your job site, our helpful staff will guide you on the optimal sorting methods and container types and sizes for your construction site based on the kind of materials generated. To keep your disposal costs to a minimum, place all recyclable materials in separate containers from non-recyclable materials at the job site. It is your responsibility to instruct workers, vendors and subcontractors on proper use of the various container types.

Recyclable materials vary depending on the location of your project in the County; this flyer is specific to construction projects located in the areas of Moss Landing, Castroville, Marina, Monterey-Salinas Highway, unincorporated Carmel, Carmel Valley, Carmel Highlands and Big Sur.

On site source separation is the best way to achieve the highest diversion rate.

RECYCLABLE CONSTRUCTION AND DEMOLITION MATERIALS

Wood: Untreated/painted Pallets, Dimensional Lumber & Crates
Tree Debris: Trunks, Branches, Stumps & Trimmings
Metal: Ductwork, Rebar, Other Ferrous & Non-Ferrous Metals
Inerts: Concrete, Asphalt, Bricks, Rocks, Gravel, Tile, Roofing Tiles & Other Aggregates
Fines: Sand
Consumer Recyclables: Aluminum, Plastic & Glass Bottles/Cans, Cardboard & Paper
Clean Drywall

SPECIAL HANDLING

These materials should be collected separately and can be self-hauled to a disposal site near you.

Appliances
Electronics
Mattresses and Box Springs
Tires
Pressure Treated Wood
Yard Waste

HAZARDOUS MATERIALS

Call your local household hazardous waste collection site for disposal information:

Adhesives
Batteries
Chemicals
Paint Products
Sealers
Roofing Cement
Mercury-containing products (Fluorescent bulbs, thermostats)

Follow these recommendations to maximize diversion and minimize cost.
www.mrwmd.org/programs-services/recycling/construction-demolition-recycling

Please retain all waste related invoices and weight receipts for all waste materials generated at your job site.
Monterey County Building Services will require these for the permitting process.
If you have any questions, contact us at 1-800-321-8226

Feldman Architecture
P 1 (415) 252 1441
E info@feldmanarch.com
W feldmanarchitecture.com

project name
WARD RESIDENCE

project address
23 VASQUEZ TRAIL, CARMEL, CA 93923

apn #
239-121-010 (LOT 253)

client
SARAH AND RICHARD WARD

fa job #
24-010

issue
COMBO PERMIT SET

date
05.16.2025

history
△ DESC. DATE

title
WASTE MANAGEMENT

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sheet

Materials Recovery Facility
Construction Project Closure Notice

Mixed Loads Requiring 65% Diversion

The Monterey Regional Waste Management District can transfer all mixed loads requiring 65 percent diversion to Zanker's facility in San Jose.

The cost of this transfer will be $90 per ton.

Customers utilizing this service will receive an extra LEED (Leadership in Energy and Environmental Design) point.

Once MRWMD's MRF upgrade is completed, the facility will accept mixed construction and demolition material that requires at least 65 percent diversion.

Limited Access to MRF Until Dec. 2017

The Monterey Regional Waste Management District's materials resource facility is currently undergoing an upgrade causing closure of certain areas during construction.

Customers will be accommodated whenever possible but should be prepared to be redirected to another recycling and disposal facility.

The MRF is expected to be fully operational by December 2017.

The following materials will continue to be accepted during this construction project:

Asphalt	Metal
Concrete	Wood (unpainted, untreated)
Drywall	Yard Trimmings
Rock	Recyclables
Brick	Reusable Items

Please contact MRWMD at 831-264-6917 for additional information about the closure.

Maximize Your Project's Diversion Rate: Simple Tips to Ensure You Recycle Right

The easiest way to ensure you reach your construction and demolition recycling diversion goals is to sort materials at your site.

Source separation can be accomplished with a little planning. Waste Management can help. Follow these simple steps to maximize diversion:

- Determine the types of materials that will be generated at the job site.
- Order separate dumpsters for the following clean materials: concrete, wood, soil, other recyclable materials.
- Order separate dumpsters for hard to recycle materials such as: fiberglass insulation, romex cable or wire, ice plant and poison oak.
- Call Waste Management for assistance.

Materials Requiring Special Handing

Certain materials at a job site will require special handling and may not be accepted. Following is a list of some common materials that are not accepted in traditional construction and demolition disposal programs:

Products with Mercury	Contaminated Soils
Paints and Paint Products	Nonfriable Asbestos
Liquid Waste	

Hazardous Materials

If your construction site will generate hazardous materials please contact the Monterey County Environmental Health Department, Hazardous Materials Management Services.

831-755-4511 or www.mtyhd.org

Reciclaje de construcción y demolición en el oeste del condado

Waste Management le puede ayudar a los constructores del Condado de Monterey a cumplir con los requisitos de reciclaje para los permisos de construcción del condado

La separación de materiales reciclable y no reciclables durante su proyecto de construcción y demolición(C&D) le ayudara a alcanzar la meta de 65% de desviación requerida por el estado de California bajo el Código CalGreen y ayudar al Condado de Monterey a cumplir con los requisitos Estatales de reducción y reciclaje.

Waste Management es la compañía contratada por el Condado para proveer este servicio. Ofrecemos contenedores de 20,30 y 40 yardas para materiales reciclables y no reciclables de C&D. Al ordenar contenedores de construcción para su sitio de trabajo, nuestro personal le guiará sobre los métodos favorables de reciclaje y el tamaño y tipo del contenedor requerido para su sitio de construcción basado en los materiales generados. Para mantener los costos de eliminación al mínimo, coloque todos los materiales reciclables en contenedores de reciclaje y sepárelos de los materiales no reciclables en el sitio de trabajo. Es su responsabilidad de educar a los trabajadores, vendedores y subcontratistas sobre el uso apropiado de los diferentes tipos de contenedores.

Los materiales reciclables varían dependiendo de las ubicaciones de su proyecto en el Condado; Este folleto es específico para los proyectos de construcción ubicados en las áreas de Moss Landing, Castroville, Marina, autopista de Monterey-Salinas, sitios no incorporado como Carmel, Carmel Valley, Carmel Highlands y Big Sur.

La separación de Materiales en el sitio de generación es la mejor manera de lograr mas reciclaje.

MATERIALES RECICLABLES DE C&D

Madera: Sin pinturas/con pintura

Escombros de árboles: Troncos, ramas, & recortes

Metal: Conductos, varillas de refuerzo, Otras Metales Ferrosos y NC Ferrosos

Inerts: Concreto, Asfalto, Rocas, Grava, Azulejo, Cajas, Azulejos de techo & Otros Agregados

Los materiales reciclables de consumo: Aluminio, plástico y botellas de vidrio / latas, cartón y papel

Arena

Yeso Limpio

MATERIALES DE RECICLAJE ESPECIAL

Estos materiales son recolectados separadamente en las instalaciones para su reciclaje por compañías especializadas. Waste Management puede incluir los materiales en su reporte de separación.

Accesorios	Llantas
Electrónicos	Madera Tratada a Presión
Colchones y Box Springs	Desechos de jardín

MATERIALES PELIGROSOS

Llame a su sitio local de Materiales Peligrosos para la eliminación segura de desechos peligrosos:

Adhesivos	Pintura
Baterías/Pilas	Aceite Usado
Productos Químicos	Fluidos de Vehículo y maquinaria
Productos con Mercurio	

Siga estas recomendaciones para maximizar el desvío y minimizar los costos.
www.mrwmd.org/programs-services/recycling/construction-demolition-recycling

Por favor retenga todas las facturas relacionadas con los desechos y recibos de peso para todos los materiales de desecho generados en su sitio de trabajo. Monterey County Building Services los requerirá para el proceso de permisos.
Si tiene preguntas, comuníquese al: 1-800-321-8226

Instalación de recuperación de materiales
Aviso de cierre del proyecto de construcción

Cargas mixtas requieren un 65% de desviación

El Monterey Regional Waste Management District puede transferir todas las cargas mixtas que requieran un 65 por ciento de desviación a las instalaciones de Zanker en San José.

El costo de esta transferencia será de $ 90 por tonelada.

Los clientes que utilicen este servicio recibirán un extra LEED (Liderazgo en Energía y Diseño Ambiental) punto.

Una vez que el centro de reciclaje de MRWMD se haya actualizado y completado, la instalación aceptará mezcla de construcción y demolición de material que requiere por lo menos 65 por ciento de desviación.

Acceso limitado al centro de reciclaje hasta diciembre del 2017

La instalación de recursos de materiales del Monterey Regional Waste Management District está actualmente experimentando una actualización que causa el cierre de ciertas áreas durante la construcción.

Los clientes serán acomodados siempre que sea posible, pero deben estar preparados para ser redirigidos a otra instalación de reciclaje y eliminación.

Se espera que el centro de reciclaje esté totalmente **operativo para diciembre del 2017.**

Los siguientes materiales seguirán siendo aceptados durante este proyecto de construcción.

Tejado de Asfalto	Metal
Concreto	Madera (sin pintura/sin tratada)
Panel de yeso limpio	Desechos de jardín
Tierra y Arena	Reciclables
Ladrillo	Artículos Reutilizables

Comuníquese con MRWMD al 831-264-6917 para obtener información adicional sobre el cierre.

Maximice la tasa de desvío de su proyecto: Consejos sencillos para asegurar que recicle bien

El más fácil garantizar que usted alcance su objetivos de construcción y demolición de desviación de reciclaje es clasificar los materiales en su sitio.

La separación de materiales puede lograrse con un poco de planificación. La compañía de Waste Management te puede ayudar. Siga estos sencillos pasos para maximizar la desviación:

- Determinar los tipos de materiales que se generarán en el sitio de trabajo.
- Pedir contenedores separados para los siguientes materiales limpios: concreto, madera, suelo y otros materiales reciclables.
- Pedir contenedores separados para materiales difíciles de reciclar tal vez como: Aislamiento de fibra de vidrio, cable o alambre romex, planta de hielo y roble venenoso.
- Llame a Waste Management para obtener ayuda.

Materiales que requieren manipulación especial

Ciertos materiales en un sitio de trabajo requerirán manejo especial y no podrán ser aceptados. La siguiente es una lista de algunos materiales comunes que no son aceptados en los programas tradicionales de eliminación de demolición y construcción:

Productos con Mercurio	Suelos contaminados
Pinturas y productos de pintura	Asbestos no inflamables
Residuos líquidos	

Materiales peligrosos

Si su sitio de construcción genera materiales peligrosos, comuníquese con el Departamento de Salud Ambiental del Condado de Monterey, Servicios de Administración de Materiales Peligrosos

831-755-4511 or www.mtyhd.org

East Monterey County Construction and Demolition Recycling

Waste Management Can Help Monterey County Builders Meet Recycling Requirements for County Building Permits

Proper separation of recyclable & non-recyclable construction & demolition (C&D) material will help you reach the required 65% diversion goal of the state of California's Green Building Standards Code (CalGreen) and help Monterey County meet State waste reduction and recycling mandates. Waste Management is Monterey County's exclusive waste hauler. We offer 20, 30 and 40-yard containers for both recyclable and non-recyclable C&D materials. When ordering construction containers for your job site, our helpful staff will guide you on the optimal sorting methods and container types and sizes for your construction site based on the kind of materials generated. To keep your disposal costs to a minimum, place all recyclable materials in separate containers from non-recyclable materials at the job site. It is your responsibility to instruct workers, vendors and subcontractors on proper use of the various container types.

Recyclable materials vary depending on the location of your project in the County; this flyer is specific to construction projects located in the areas of Salinas and Salinas Valley areas of the County.

On site source separation is the best way to achieve the highest diversion rate.

RECYCLABLE C&D MATERIALS

Wood: Untreated/painted Pallets, Dimensional Lumber & Crates.

Tree Debris: Trunks, Branches, & Trimmings

Metal: Ductwork, Rebar, Other Ferrous & Non-Ferrous Metals

Inerts: Concrete, Asphalt, Bricks, Rocks, Gravel, Tile, Roofing Tiles & Other Aggregates

Fines: Dirt & Sand

Consumer Recyclables: Aluminum, Plastic & Glass Bottles/Cans, Cardboard & Paper

Asphalt Shingles

Clean Drywall

Carpet & Carpet Padding

SPECIAL HANDLING

These materials should be collected separately and can be self-hauled to a disposal site near you.

Appliances	Mattresses	Pressure Treated Wood
Ceiling Tiles	Sheetrock	Yard Waste
Electronics	Tires	

HAZARDOUS MATERIALS

Call your local household hazardous waste collection site for disposal information:

Adhesives	Paint
Batteries	Used Oil
Chemicals	Vehicle & Equipment Fluids
Mercury-containing products (Fluorescent bulbs, thermostats, etc.)	

Follow these recommendations to maximize diversion and minimize cost.
http:// svswa.org/commercial/construction-and-demolition/

If you have any questions, contact us at 1-800-321-8226 Please retain all waste related invoices and weight receipts for all waste materials generated at your job site. Monterey County Building Services will require these for the permitting process.

Reciclaje de construcción y demolición— Recicle bien

Waste Management le puede ayudar a los constructores del Condado de Monterey a cumplir con los requisitos de reciclaje para los permisos de construcción del condado

La separación de materiales reciclable y no reciclables durante su proyecto de construcción y demolición (C&D) le ayudara a alcanzar la meta de 65% de desviación requerida por el estado de California bajo el Código CalGreen y ayudar al Condado de Monterey a cumplir con los requisitos Estatales de reducción y reciclaje. Waste Management es la compañía contratada por el Condado para proveer este servicio. Ofrecemos contenedores de 20, 30 y 40 yardas para materiales reciclables y no reciclables de C & D. Al ordenar contenedores de construcción para su sitio de trabajo, nuestro personal le guiará sobre los métodos favorables de reciclaje y el tamaño y tipo del contenedor requerido para su sitio de construcción basado en los materiales generados. Para mantener los costos de eliminación al mínimo, coloque todos los materiales reciclables en contenedores de reciclaje y sepárelos de los materiales no reciclables en el sitio de trabajo. Es su responsabilidad de educar a los trabajadores, vendedores y subcontratistas sobre el uso apropiado de los diferentes tipos de contenedores.

Los materiales reciclables varían dependiendo de la ubicación de su proyecto en el Condado; Este folleto es específico para los proyectos de construcción ubicados en las áreas de Salinas y Salinas Valley áreas del Condado.

La Separación de Materiales en el sitio de generación es la mejor manera de lograr más reciclaje.

MATERIALES RECICLABLES DE C&D

Madera: Sin pinturas/ con pintura

Escombros de árboles: Troncos, ramas & recortes.

Metal: Conductos, varillas de refuerzo, Otras Metales Ferrosos y No Ferrosos

Inerts: Concreto, Asfalto, Rocas, Grava, Azulejo, Cajas, Azulejos de techo & Otros Agregados

Reciclable de consumo: Aluminio, latas, Plásticos & Botellas de Vidrio Cartón & Papel

Tejado de Asfalto

Panel de yeso limpio

Alfombra y Relleno de la Alfombra

Tierra y Arena

MATERIALES DE RECICLADO ESPECIAL

Estos materiales son recolectados separadamente en las instalaciones para su reciclaje por compañías especializadas. Waste Management puede incluir los materiales en su reporte de separación.

Accesorios	Colchones	Madera Tratada a Presión
Tejas de Techo	Sheetrock	Material de Jardín
Electrónicos	Llantas	

MATERIALES PELIGROSOS

Llame a su sitio local de Materiales Peligrosos para la eliminación segura de desechos peligrosos:

Adhesivos	Pintura
Baterías/Pilas	Aceite Usado
Productos Químicos	Fluidos de Vehículo y maquinaria
Productos con Mercurio	

Siga estas recomendaciones para maximizar el desvío y minimizar los costos
http:// svswa.org/commercial/construction-and-demolition/

Por favor retenga todas las facturas relacionadas con los desechos y recibos de peso para todos los materiales de desecho generados en su sitio de trabajo. Monterey County Building Services los requerirá para el proceso de permisos.

Si tiene preguntas, comuníquese al: 1-800-321-8226

Feldman Architecture

P 1 (415) 252 1441
E info@feldmanarch.com
W feldmanarchitecture.com

project name
WARD RESIDENCE

project address
23 VASQUEZ TRAIL,
CARMEL, CA 93923

apn #
239-121-010 (LOT 253)

client
SARAH AND RICHARD WARD

fa job #
24-010

issue
COMBO PERMIT SET

date
05.16.2025

history

△	DESC.	DATE

title
WASTE MANAGEMENT

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sheet

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1 - Home Offices

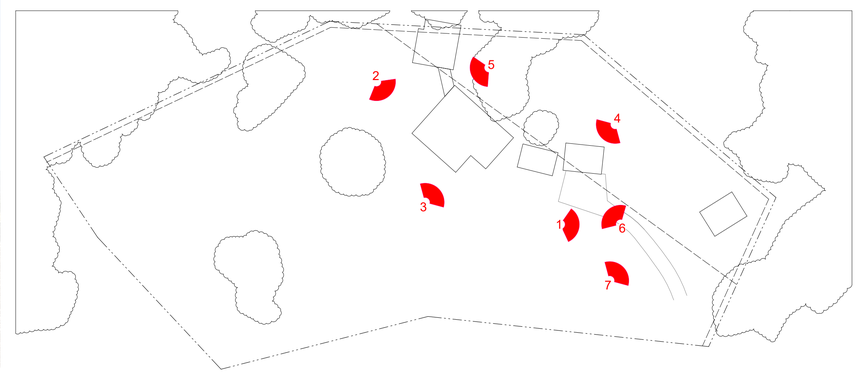
2 - Great Room looking South

3 - Great Room looking North/East

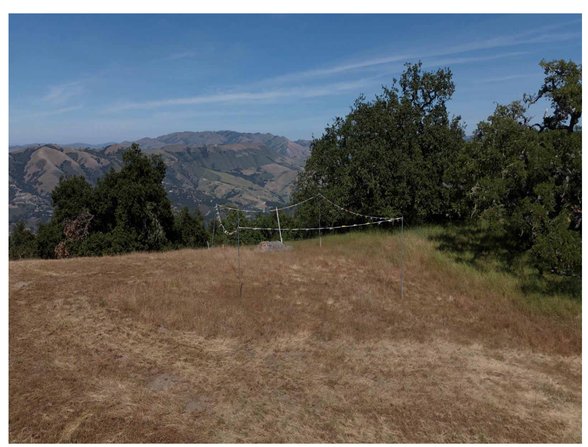
4 - Garage Roof looking West

5 - Primary and Great Room Roof looking West

KEY PLAN



6 - Main Pavillions Aerial



7 - Home Offices Aerial

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San Francisco, California 94109
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LICENSED ARCHITECT
JONATHAN FELDMAN
C-28459
11/30/2025
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT NAME
WARD RESIDENCE

PROJECT ADDRESS
23 VASQUEZ TRAIL,
CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

HISTORY

△	DESC.	DATE

TITLE
STAKING PHOTOS & KEY PLAN

A0.20
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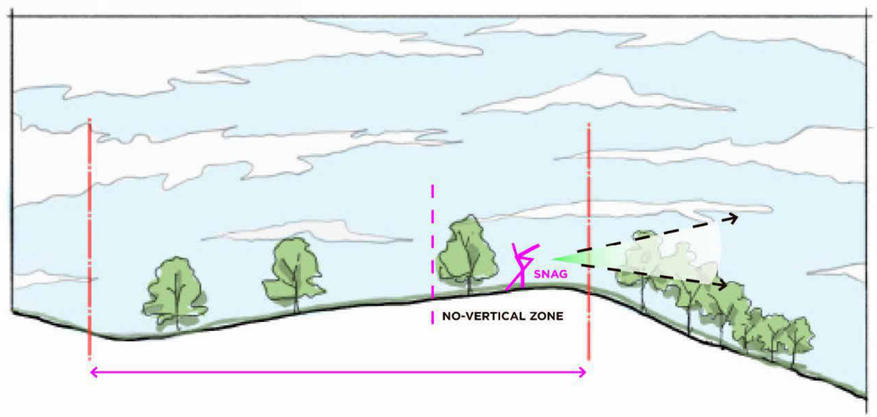
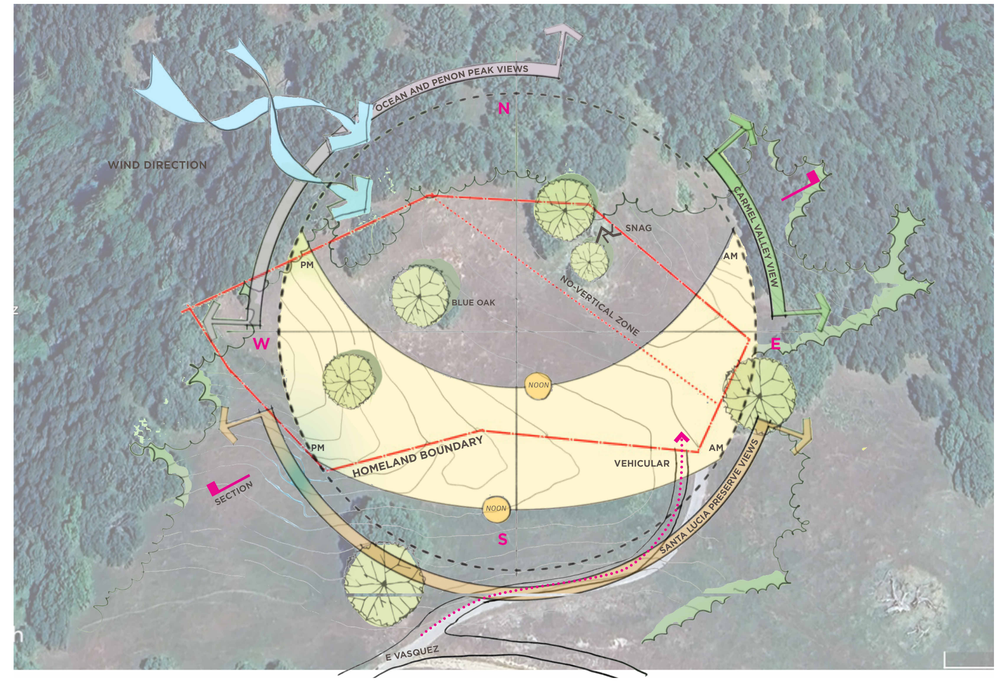
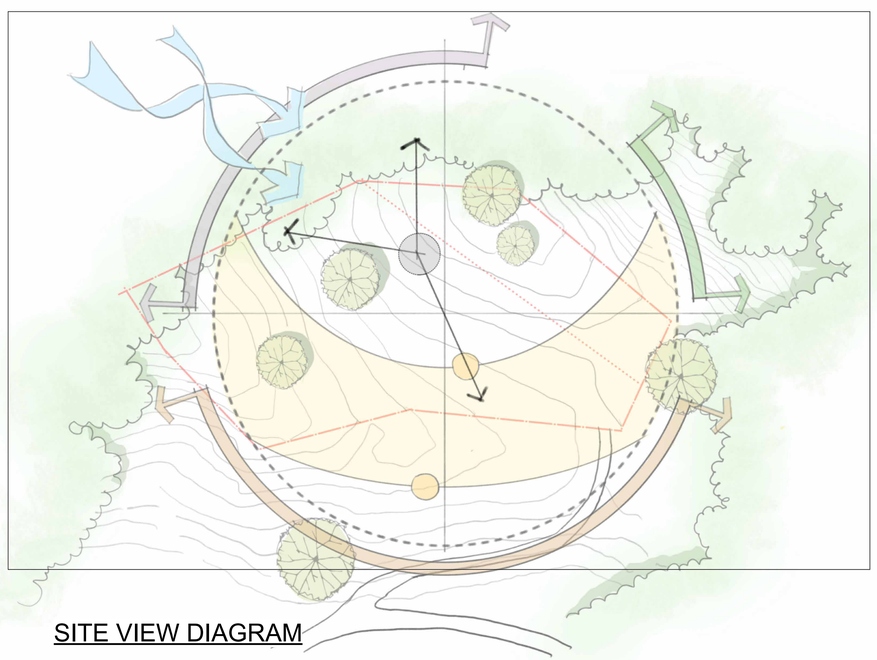


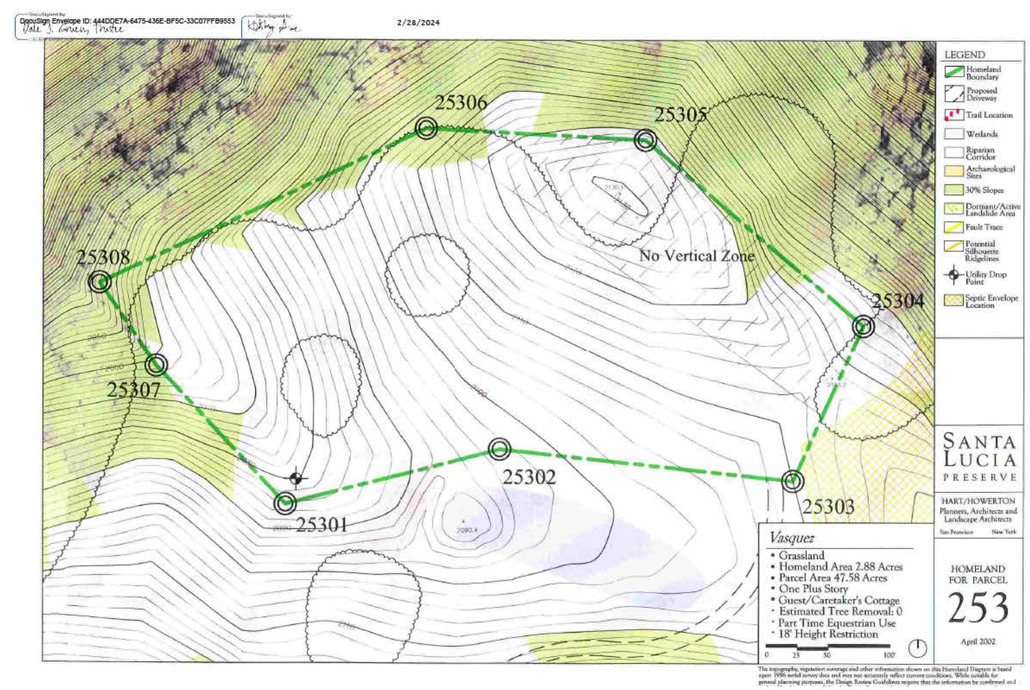
SITE SECTION



SITE ANALYSIS



SITE VIEW DIAGRAM



HOMELAND BOUNDARY

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△ DESC. DATE

TITLE
SITE ANALYSIS

A0.21
SHEET

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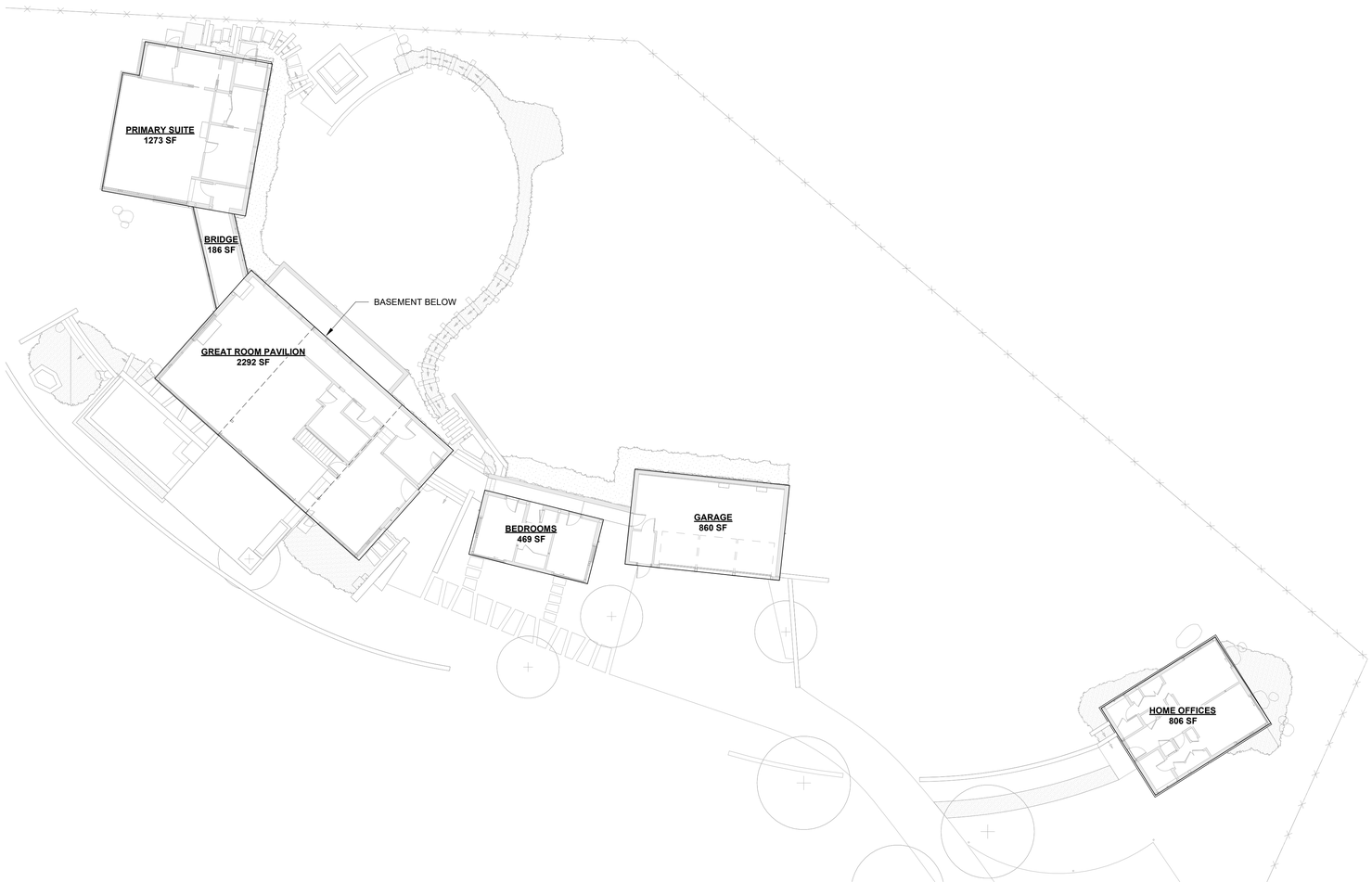
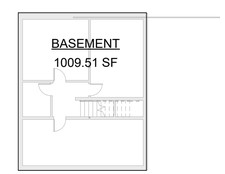


1 AREA PLAN - MAIN LEVEL
1/16" = 1'-0"



2 AREA PLAN - BASEMENT
1/16" = 1'-0"

GROSS BUILDING AREA

MAIN RESIDENCE	
PRIMARY SUITE	1273 SF
GREAT ROOM PAVILION	2292 SF
BRIDGE	186 SF
BEDROOMS	469 SF
	4220 SF
HOME OFFICES	
HOME OFFICES	806 SF
	806 SF
GARAGE	
GARAGE	861 SF
	861 SF
BASEMENT	
BASEMENT	1010 SF
	1010 SF
TOTAL	6896 SF

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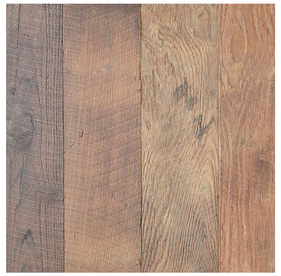
HISTORY

△	DESC.	DATE

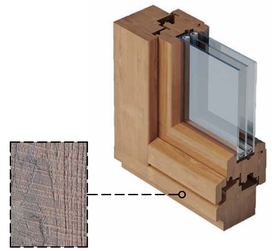
TITLE
AREA PLANS

A0.22
SHEET

SONOMA LIMESTONE BUILDING & LANDSCAPE WALLS



EXTERIOR WOOD SIDING



WOOD WINDOWS AND DOORS, TO WEATHER LIKE SIDING

BROADCAST AGGREGATE ROOF

ROOF FASCIA, WALL ACCENTS, MISCELLANEOUS EXTERIOR PANELS: PAINTED SHEET METAL

AERIAL VIEW OF MAIN HOUSE

VIEW OF GREAT ROOM PAVILION FROM SOUTHWEST

VIEW OF PRIMARY SUITE AND GREAT ROOM PAVILION FROM WEST

VIEW OF HOME OFFICES FROM NORTH

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DATE
05.16.2025

HISTORY

△	DESC.	DATE

TITLE
EXTERIOR VIEWS AND MATERIALS

A0.23
SHEET

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VIEW OF FIRE PIT FROM SOUTHWEST

AERIAL VIEW OF SPA

VIEW OF HOME OFFICES FROM DRIVEWAY

ARRIVAL FROM DRIVEWAY

5/19/2025 5:33:38 PM

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DATE
05.16.2025

HISTORY

△	DESC.	DATE

TITLE
EXTERIOR VIEWS

A0.24
SHEET

GENERAL

1. CONSTRUCTION CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY: THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL(S) HARMLESS FROM ANY AND ALL LIABILITY, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL(S).
2. ALL WORK SHALL BE PERFORMED IN CONFORMANCE WITH:
   A. ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, REGULATIONS, ORDINANCES, AND RULES, INCLUDING WITHOUT LIMITATION:
      CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIVE CODE (CAL–OSHA)
      CALIFORNIA CODE 4216 – PROTECTION OF UNDERGROUND INFRASTRUCTURE
      MONTEREY COUNTY CODE, INCLUDING COUNTY GRADING ORDINANCE NO. 2535 (TITLE 16) AND EROSION CONTROL ORDINANCE NO. 2806 (TITLE 16).
   B. THE 2022 CALIFORNIA BUILDING STANDARDS CODE (CCR TITLE 24), WITH AMENDMENTS ADOPTED BY THE JURISDICTION HAVING AUTHORITY
   C. CALIFORNIA EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
   D. THE PROJECT PLANS AND SPECIFICATIONS
   E. THE 2022 EDITION OF "STANDARD SPECIFICATIONS," STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS), AS AMENDED BY THE MOST CURRENT "REVISED STANDARD SPECIFICATIONS". THE "STANDARD SPECIFICATIONS" AND "REVISED STANDARD SPECIFICATIONS" CAN BE DOWNLOADED FOR FREE FROM
      https://dot.ca.gov/programs/design/ccs–standard–plans–and–standard–specifications
   F. THE 2022 EDITION OF "STANDARD PLANS," STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION (CALTRANS), AS AMENDED BY THE MOST CURRENT "REVISED STANDARD PLANS". THE "STANDARD PLANS" AND "REVISED STANDARD PLANS" CAN BE DOWNLOADED FOR FREE FROM
      https://dot.ca.gov/programs/design/ccs–standard–plans–and–standard–specifications
   G. ALL GRADING SHALL CONFORM TO THE MONTEREY COUNTY GRADING ORDINANCE #2535 AND EROSION CONTROL ORDINANCE #2805
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BARRICADES, SAFETY DEVICES AND CONTROL OF TRAFFIC WITHIN THE CONSTRUCTION AREA.
4. PROJECT IS NOT SUBJECT TO INUNDATION OR 100 YEAR FLOOD LEVELS.
   FEMA FIRM PANEL: 06053C0510G; EFFECTIVE DATE: APRIL 2ND, 2009.
5. MONTEREY COUNTY NOTE: INTENTION OF GRADING: CONSTRUCTION OF ONE NEW SINGLE FAMILY RESIDENCE. POOL, ACCESSORY DWELLING UNIT, BARN, AND ASSOCIATED SITE WORK.
6. MONTEREY COUNTY NOTE: ESTIMATED START: DEC. 2025 , ESTIMATED COMPLETION: MAR. 2028.
7. SEE ARCHITECTURAL/LANDSCAPE PLANS AND/OR THE PROJECT ARBORIST'S REPORT FOR TREE PROTECTION AND REMOVAL REQUIREMENTS.
8. IF DURING THE COURSE OF CONSTRUCTION, CULTURAL, ARCHAEOLOGICAL, HISTORICAL OR PALEONTOLOGICAL RESOURCES ARE UNCOVERED AT THE SITE (SURFACE OR SUBSURFACE RESOURCES) WORK SHALL BE HALTED IMMEDIATELY WITHIN 50 METERS (165 FEET) OF THE FIND UNTIL A QUALIFIED PROFESSIONAL ARCHEOLOGIST CAN EVALUATE IT. MONTEREY COUNTY HOUSING & COMMUNITY DEVELOPMENT (HCD) – PLANNING AND A QUALIFIED ARCHAEOLOGIST (I.E. AN ARCHAEOLOGIST REGISTERED WITH THE REGISTER OF PROFESSIONAL ARCHAEOLOGISTS) SHALL BE IMMEDIATELY CONTACTED BY THE RESPONSIBLE INDIVIDUAL PRESENT ON–SITE. WHEN CONTACTED, THE PROJECT PLANNER AND THE ARCHAEOLOGIST SHALL IMMEDIATELY VISIT THE SITE TO DETERMINE THE EXTENT OF THE RESOURCES AND TO DEVELOP PROPER MITIGATION MEASURES REQUIRED FOR RECOVERY.

EARTHWORK AND AREA ESTIMATES

C = 1,290 CY

F = 930 CY

NET EXPORT= 170 CY; ASSUME 20% SHRINKAGE.

ESTIMATED AREA OF SOIL DISTURBANCE = 0.90 AC

1. THE QUANTITIES PRESENTED ABOVE ARE ESTIMATES ONLY, BASED ON THE DIFFERENCE BETWEEN EXISTING SUBGRADE ELEVATION AND FINISHED SUBGRADE ELEVATION, AS SHOWN ON THE PLANS, AND ARE NOT ADJUSTED FOR CHANGES IN VOLUME DUE TO CHANGES IN SOIL DENSITY.
2. THE FOLLOWING ARE NOT INCLUDED IN THE ABOVE ESTIMATE:
   2.1. CLEARING AND STRIPPING
   2.2. REMOVAL OF STRUCTURES, FOOTINGS, AND PAVEMENTS
   2.3. UTILITY TRENCHING AND EXCAVATION FOR FOUNDATIONS
3. THESE QUANTITIES SHALL BE USED FOR BONDING AND PERMITTING PURPOSES ONLY. CONTRACTOR SHALL MAKE HIS/HER OWN SITE VISIT AND QUANTITY TAKE–OFFS AND SHALL BID ACCORDINGLY.
4. EARTHWORK VALUES SHOULD BE REEVALUATED DURING THE EARLY STAGES OF SITE GRADING. THE CONTRACTOR IS RESPONSIBLE FOR CALCULATING FINAL EARTHWORK QUANTITIES TO HIS/HER SATISFACTION PRIOR TO START OF GRADING OPERATIONS.

SURVEY AND EXISTING CONDITIONS

1. TOPOGRAPHY SHOWN WAS PREPARED BY WHITSON ENGINEERS BASED ON A FIELD SURVEY CONDUCTED ON JULY 9, 2021 AND AUGUST 9, 2021.
2. BENCHMARK: SET REBAR & CAP TAGGED WHITSON ENGINEERS. ELEVATION = 2,126.13' (ASSUMED DATUM).
3. ALL LOCATIONS WHERE PROPOSED IMPROVEMENTS ARE SHOWN TO MATCH EXISTING IMPROVEMENTS SHALL BE FIELD VERIFIED BY THE CONSTRUCTION CONTRACTOR FOR EXACT LOCATION AND ELEVATION PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER IN THE CASE OF ANY FIELD DISCREPANCY.
4. MONTEREY COUNTY NOTE: PAD ELEVATIONS SHALL BE CERTIFIED TO 0.1 FEET, PRIOR TO DIGGING ANY FOOTINGS OR SCHEDULING ANY INSPECTIONS.
5. THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A CURRENT, COMPLETE, AND ACCURATE RECORD OF ALL DEVIATIONS FROM THE WORK PROPOSED IN THESE PLANS AND SPECIFICATIONS, AND A RECORD DRAWING SET SHALL BE PREPARED AND PROVIDED TO THE ENGINEER AT THE COMPLETION OF WORK. CHANGES SHALL NOT BE MADE WITHOUT THE PRIOR WRITTEN APPROVAL OF THE DESIGN ENGINEER.
6. THE EXISTENCE, LOCATION AND ELEVATION OF ANY UNDERGROUND FACILITIES ARE SHOWN ON THESE PLANS IN A GENERAL WAY ONLY. THE UTILITIES SHOWN ON THESE PLANS ARE A COMPILATION OF FIELD SURVEYING AND RECORD INFORMATION PROVIDED BY FACILITY OWNERS. NOT ALL UTILITIES MAY BE SHOWN. IT IS MANDATORY THAT THE CONTRACTOR CONTACT UNDERGROUND SERVICE ALERT (U.S.A.) TO MARK THE LOCATION OF MEMBER UTILITIES, AND EXPOSE AND VERIFY THE TOP AND BOTTOM OF ALL UTILITIES PRIOR TO BEGINNING ANY WORK WHICH MAY BE AFFECTED BY THE EXISTING UTILITY'S LOCATION OR ELEVATION. IT IS THE RESPONSIBILITY AND DUTY OF THE CONTRACTOR TO MAKE THE FINAL DETERMINATION AS TO THE EXISTENCE, LOCATION AND ELEVATION OF ALL UTILITIES AND TO BRING ANY DISCREPANCY OR CONFLICT TO THE ATTENTION OF THE ARCHITECT.
7. BOUNDARY INFORMATION SHOWN IS FROM RECORD DATA. A BOUNDARY SURVEY WAS NOT PERFORMED AS A PART OF THIS WORK. THERE MAY BE EASEMENTS OR OTHER RIGHTS, RECORDED OR UNRECORDED, AFFECTING THE SUBJECT PROPERTY WHICH ARE NOT SHOWN HEREON.

Know what's below. Call before you dig. 811

T:\Monterey Projects\4400.04 – SLP 253 – Civil\CAD\PLANSET\4400.04 CIVIL.dwg RRamos May 12, 2025 – 3:14pm

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GRADING AND DRAINAGE

1. SITE GRADING AND EARTHWORK SHALL BE PERFORMED IN CONFORMANCE WITH THE PROJECT GEOTECHNICAL REPORT ENTITLED:

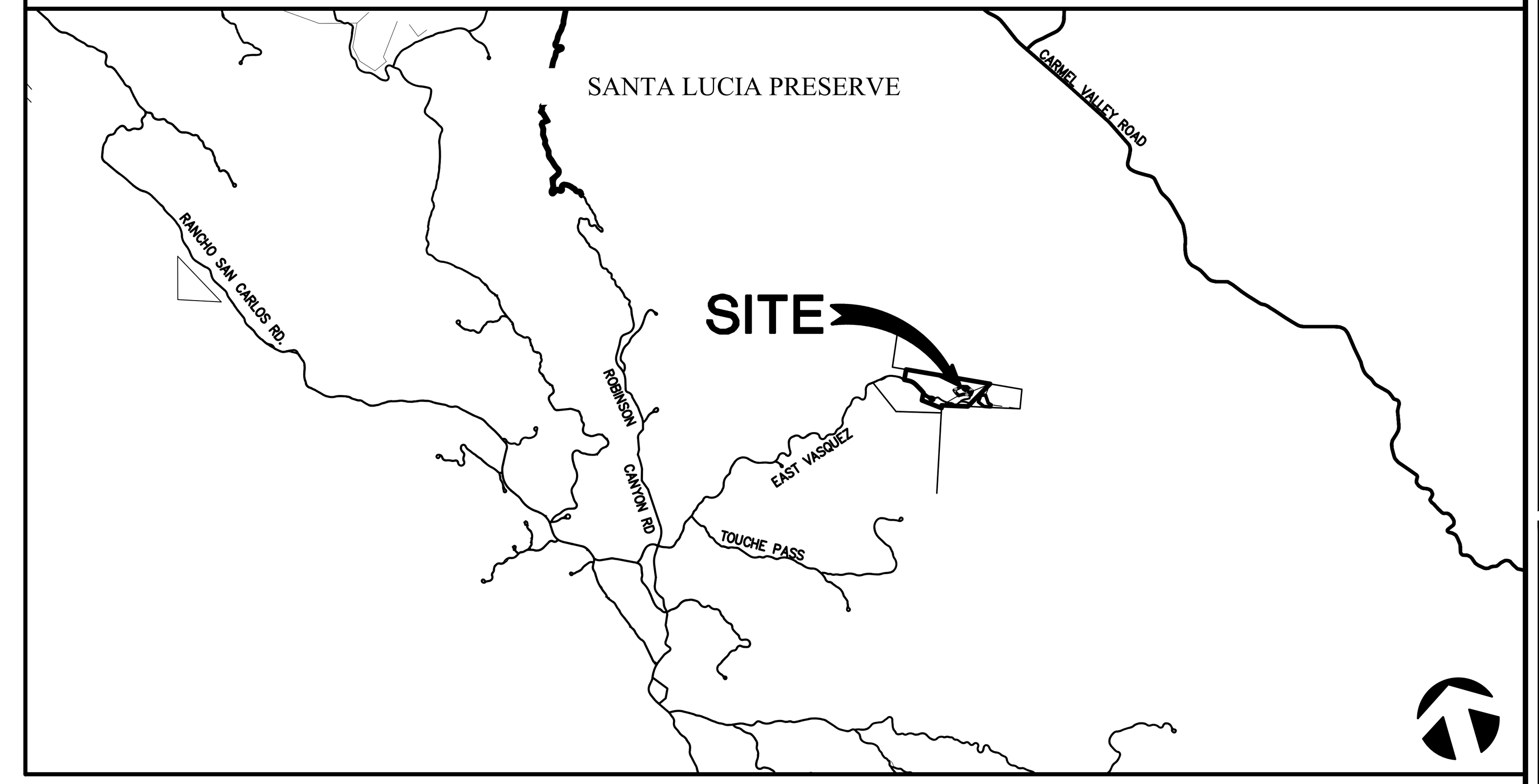
   GEOTECHNICAL AND PERCOLATION INVESTIGATION FOR THE PROPOSED SINGLE FAMILY RESIDENCE WITH ATTACHED GARAGE, POOL, AND ACCESSORY DWELLING UNIT WITH SEPTIC SYSTEMS 23 VASQUEZ TRAIL, SANTA LUCIA PRESERVE
   BY SOIL SURVEYS GROUP, INC, DATED JANUARY 24, 2022, PROJECT NO. 7993.

2. ONSITE GRADING AND EARTHWORK, SITE PREPARATION, EXCAVATION, TRENCHING AND COMPACTION SHALL BE OBSERVED AND TESTED BY THE GEOTECHNICAL ENGINEER DESIGNATED BY THE OWNER. ALL GRADING AND EARTHWORK SHALL BE DONE TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
3. SPECIAL INSPECTIONS BY A SPECIAL INSPECTOR, ARE REQUIRED DURING FILL PLACEMENT AND THAT PROPER MATERIALS AND PROCEDURES ARE USED IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT.
4. SHOULD THE RESULTS OF ANY COMPACTION TEST FAIL TO MEET THE MINIMUM REQUIRED DENSITY AS SPECIFIED ON THESE PLANS OR IN THE GEOTECHNICAL REPORT, THE DEFICIENCY SHALL BE CORRECTED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER AT THE CONTRACTOR'S EXPENSE. THE EXPENSE OF RETESTING SUCH AREAS SHALL ALSO BE BORNE BY THE CONTRACTOR, AT NO COST TO THE OWNER.
5. NOTIFY THE GEOTECHNICAL ENGINEER AT LEAST FOUR (4) WORKING DAYS PRIOR TO ANY GRADING OR FOUNDATION EXCAVATION.
6. ALL SOILS UTILIZED FOR FILL PURPOSES SHALL BE APPROVED BY THE SOILS ENGINEER BEFORE COMMENCEMENT OF GRADING OPERATIONS. IMPORTED SOILS SHALL BE APPROVED BY THE SOILS ENGINEER BEFORE BEING BROUGHT TO THE SITE.
7. EXCAVATION FOR ANY PURPOSE SHALL NOT REMOVE LATERAL SUPPORT FROM ANY FOUNDATION WITHOUT FIRST UNDERPINNING OR PROTECTING THE FOUNDATION AGAINST SETTLEMENT OR LATERAL TRANSLATION. THE EXCAVATION OUTSIDE THE FOUNDATION SHALL BE BACKFILLED WITH SOIL THAT IS FREE OF ORGANIC MATERIAL, CONSTRUCTION DEBRIS, COBBLES AND BOULDERS OR WITH A CONTROLLED LOW–STRENGTH MATERIAL (CLSM). THE BACKFILL SHALL BE PLACED IN LIFTS AND COMPACTED IN A MANNER THAT DOES NOT DAMAGE THE FOUNDATION OR THE WATERPROOFING OR DAMPPROOFING MATERIAL. EXCEPTION: CLSM NEED NOT BE COMPACTED
8. IMPERVIOUS SURFACES ADJACENT TO STRUCTURES SHALL SLOPE A MINIMUM OF 2% AWAY FROM THE STRUCTURE FOR A MINIMUM DISTANCE OF 10 FEET, UNLESS OTHERWISE SHOWN. LANDSCAPE AREAS ADJACENT TO STRUCTURES SHALL SLOPE A MINIMUM OF 5% AWAY FROM THE STRUCTURE FOR A MINIMUM DISTANCE OF 10 FEET, UNLESS OTHERWISE SHOWN.
9. RELATIVE COMPACTION SHALL BE EXPRESSED AS A PERCENTAGE OF THE MAXIMUM DRY DENSITY OF THE MATERIAL AS DETERMINED BY ASTM TEST D–1557. IN–PLACE DENSITY TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM TESTS D–1556 AND D–6938.
10. GROUND SURFACE SHALL BE PREPARED TO RECEIVE FILL BY REMOVING STRUCTURES, OBSTRUCTIONS, TREES SHOWN TO BE REMOVED, VEGETATION, ORGANIC–LADEN TOPSOIL, LARGE ROOTS, DEBRIS, AND OTHER DELETERIOUS MATERIALS. BURIED SUBSURFACE OBJECTS ENCOUNTERED, OR VOIDS CREATED DURING SITE PREPARATION SHALL BE CALLED TO THE ATTENTION OF THE GEOTECHNICAL ENGINEER.
11. SURPLUS EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE SITE IN A LEGAL MANNER.
12. SUBGRADE PREPARATION AND ENGINEERED FILL THAT SUPPORTS FOOTINGS, SLABS, PAVEMENTS, AND FLATWORK SHALL EXTEND AT LEAST 5 FEET BEYOND THE LIMITS OF PROPOSED IMPROVEMENTS.
13. FOOTINGS LOCATED ADJACENT TO OTHER FOOTINGS OR RETAINING WALLS SHALL HAVE THEIR BEARING SURFACES FOUNDED BELOW A 2:1 (H:V) LINE PROJECTED UPWARD FROM THE BOTTOM EDGE OF THE ADJACENT FOOTING, WALL, OR UTILITY TRENCH.
14. FOLLOWING CLEARING AND STRIPPING, EXPOSED SUBGRADES IN AREAS TO RECEIVE ENGINEERED FILL, STRUCTURES, PAVEMENTS, CONCRETE SLABS, OR OTHER IMPROVEMENTS SHALL BE SCARIFIED TO A DEPTH OF 12 INCHES, MOISTURE CONDITIONED, AND UNIFORMLY COMPACTED TO AT LEAST 90% RELATIVE COMPACTION.
15. THE GEOTECHNICAL ENGINEER SHALL INSPECT ALL SURFACES TO RECEIVE FILL PRIOR TO THE PLACEMENT OF ANY FILL.
16. ENGINEERED FILL SHALL BE PLACED IN LIFTS NOT EXCEEDING 8 INCHES IN LOOSE THICKNESS, MOISTURE CONDITIONED, AND COMPACTED TO A MINIMUM OF 90% RELATIVE COMPACTION.
17. CUT/FILL SLOPES SHALL BE NO STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2H:1V) UNLESS OTHERWISE APPROVED AT THE TIME OF GRADING BY THE GEOTECHNICAL ENGINEER.
18. WHERE EXISTING GRADE IS AT A SLOPE OF 5H:1V (20%) OR STEEPER AND THE DEPTH OF THE FILL EXCEEDS 5 FEET, BENCHING SHALL BE PROVIDED. A TOE KEY SHALL BE CUT A MINIMUM DEPTH OF 2 FEET INTO UNDISTURBED SOILS TO THE INSIDE OF THE FILL'S TOE. THIS KEY SHALL BE A MINIMUM OF 10 FEET WIDE AND SLOPE AT NO LESS THAN 2% INTO THE SLOPE. AS THE FILL ADVANCES UP–SLOPE, BENCHES AT LEAST 3 FEET WIDE, OR TWICE THE WIDTH OF THE COMPACTION EQUIPMENT, WHICHEVER IS WIDER, SHALL BE SCARIFIED INTO THE FILL/UNDISTURBED SOIL INTERFACE.
19. ENGINEERED FILL IN BUILDING AREAS, STRUCTURAL BACKFILL, AND THE UPPER 12" BELOW FLATWORK AND PAVEMENT SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION.
20. ALL RE–COMPACTED AND ENGINEERED FILL SOILS SHALL BE COMPACTED AT LEAST 2% OVER THE LABORATORY OPTIMUM MOISTURE CONTENT FOR THE SOIL.
21. ON–SITE NON–ORGANIC SOIL IS GENERALLY ACCEPTABLE FOR USE AS ENGINEERED FILL. NATIVE SOIL USED AS ENGINEERED FILL SHALL MEET THE FOLLOWING REQUIREMENTS:
    - SOIL SHALL BE FREE OF ORGANICS, DEBRIS, AND OTHER DELETRIOUS MATERIALS.
21. IMPORTED SOIL USED AS GENERAL ENGINEERED FILL SHALL MEET THE FOLLOWING REQUIREMENTS:
    - IMPORTED SOIL SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO BEING IMPORTED TO THE SITE.
22. IN THE EVENT THAT ANY UNUSUAL/UNSUITALBE CONDITIONS ARE ENCOUNTERED DURING GRADING OPERATIONS WHICH ARE NOT COVERED BY THE SOIL INVESTIGATION OR SPECIFICATIONS, THE SOILS ENGINEER SHALL BE IMMEDIATELY NOTIFIED SUCH THAT ADDITIONAL RECOMMENDATIONS MAY BE MADE.
    - WET, SOFT OR UNSUITABLE POCKETS OF SANDY SOIL WITHIN THE PROPOSED BUILDING LOCATIONS.
    - SOIL WITH A HIGH ORGANIC CONTENT AT THE FINISHED SUBGRADE OF THE BUILDING PADS
    - ANY OTHER UNFORESEEN CONDITION THAT WOULD REQUIRE REMEDIAL ACTION BY THE GEOTECHNICAL ENGINEER, PROJECT ENGINEER, ARCHITECT OR CONTRACTOR.
23. A LETTER SHALL BE SUBMITTED FROM A LICENSED SURVEYOR CERTIFYING THAT PAD ELEVATIONS ARE WITHIN 0.1 FEET OF ELEVATIONS STATED ON APPROVED PLANS, PRIOR TO DIGGING ANY FOOTINGS OR SCHEDULING ANY INSPECTIONS.
24. A "FINAL SOILS LETTER" FROM THE GEOTECHNICAL ENGINEER STATING THAT ALL EARTHWORK COMPLETED WAS IN ACCORDANCE WITH THE RECOMMENDATIONS STATED IN THE GEOTECHNICAL REPORT SHALL BE SUBMITTED PRIOR TO FINAL INSPECTION.
25. EXPORT SOIL SHALL BE TRANSPORTED TO A LEGAL DUMP OR TO A PERMITTED SITE APPROVED BY THE COUNTY. CONTRACTOR SHALL NOTIFY GRADING OFFICIAL OF PROPOSED HAUL ROUTE.

LEGEND

SYMBOL	DESCRIPTION
100	GROUND CONTOUR
	SUBJECT PROPERTY LINE
	ADJACENT PROPERTY LINE
	HOMELAND BOUNDARY
	EASEMENT LINE
	CENTER LINE
100	CONTROL POINT
BM	BENCHMARK
F3P	FOUND 3/4" IRON PIPE, TAGGED AS NOTED
CUM BM#301	FOUND CONCRETE UNDERGROUND MONUMENT, MARKED AS NOTED
BH–1	BORE HOLE / BORING LOCATION
+ 928.30	SPOT GRADE
12" OAK	TREE
	STUMP OR SNAG (DEAD)
	TREE DRIP LINE
	DRAINAGE PATH
	FLOW LINE OF GRADED DIRT SWALE
	AREA OF 30% OR GREATER SLOPE
	SIGN
OH	OVERHEAD UTILITY LINE(S)
E	UNDERGROUND ELECTRIC LINE
UP	UTILITY POLE SHOWING ARMS AND GUY WIRE
G	GAS LINE
GV ICV	GAS VALVE, IRRIGATION CONTROL VALVE
6"SD	STORM DRAIN LINE
	PERFORATED PIPE
	STORM DRAIN INLET
DS	DOWNSPOUT
SS	SANITARY SEWER LINE (GRAVITY)
	CLEANOUT
T	UNDERGROUND ELECTRIC LINE
W	WATER LINE
	WELL
WV	WATER VALVE
	POST INDICATOR VALVE
FDC	FIRE DEPARTMENT CONNECTION
FH	FIRE HYDRANT
HB	HOSE BIB
BFP	BACKFLOW PREVENTION DEVICE
	UTILITY VAULT
	BROW DITCH

VICINITY MAP



SCALE: 1"=5000'

TEAM DIRECTORY

SITE ADDRESS & APN
23 VASQUEZ TRAIL
SANTA LUCIA PRESERVE
CARMEL, CA

APN: 239–121–010

ARCHITECT
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GEOTECHNICAL ENGINEER
SOIL SURVEYS GROUP INC
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CONTRACTOR
TBD

LANDSCAPE ARCHITECT
ARTERRA LANDSCAPE ARCHITECTS
88 MISSOURI STREET
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TEL: (415) 861–3100

CIVIL SHEET INDEX

C001	CIVIL COVER SHEET
C002	CIVIL DETAILS
C003	CIVIL SPECIFICATIONS
C099	TOPOGRAPHIC SURVEY
C100	FIRE DEPARTMENT TURNOUTS
C101	OVERALL SITE PLAN
C102	SITE GRADING AND DRAINAGE PLAN
C103	SITE GRADING AND DRAINAGE PLAN
C104	GRADING SECTIONS
C201	EROSION AND SEDIMENT CONTROL DETAILS
C202	EROSION AND SEDIMENT CONTROL PLAN
C301	CONSTRUCTION MANAGEMENT PLAN

SPECIAL TESTS AND INSPECTION SCHEDULE

THE FOLLOWING ITEMS SHALL BE INSPECTED. "SPECIAL INSPECTION" SHALL CONFORM TO 2013 CBC 1704.7. SPECIAL INSPECTION AGENCIES AND/OR INDIVIDUALS SHALL BE RETAINED BY THE OWNER AND APPROVED BY THE BUILDING OFFICIAL PRIOR TO ANY WORK. FOR MATERIAL TESTING REQUIREMENTS, SEE SPECIFICATIONS AND/OR GENERAL NOTES. TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE BUILDING OFFICIAL AND ENGINEER.

ITEM	REQ.	REMARKS	INSPECTOR NAME	START DATE	END DATE
FOUNDATION EXCAVATIONS	YES	BY SOIL ENGINEER / PERIODIC			
SUBGRADE /FINISH GRADE PREPARATION	YES	BY SOIL ENGINEER / PERIODIC			
CLASSIFICATION/TESTING FILL MATERIAL	YES	BY SOIL ENGINEER / PERIODIC			
OBSERVATION OF FILL MATERIAL/COMPACTION	YES	BY SOIL ENGINEER / CONTINUOUS			
FOUNDATION	YES	BY SOIL ENGINEER / PERIODIC VERIFICATION - MATERIALS BELOW FOOTING/ACHEIVE BEARING CAPACITY			
MASONRY & CONCRETE CONSTRUCTION	YES	TO BE DETERMINED / PERIODIC			
REINFORCING STEEL CONSTRUCTION	YES	TO BE DETERMINED / PERIODIC			

SOILS ENGINEER TO PROVIDE OBSERVATION DURING GRADING AND FOUNDATION PHASE OF CONSTRUCTION.

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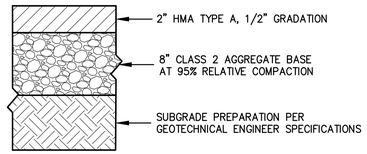
REGISTERED PROFESSIONAL ENGINEER RICHARD P. WEBER No. 55219 CIVIL STATE OF CALIFORNIA

SUBMITTAL / REVISION	
5/16/25 RA	COMBO PERMIT SET

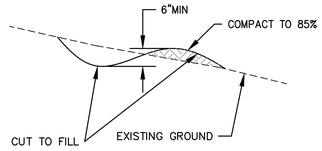
WARD RESIDENCE
23 VASQUEZ TRAIL - SLP LOT 253
Carmel, California
CIVIL COVER SHEET
APN 239-121-010

SCALE:
DRAWN: RA
JOB No.: 4400.04
SHEET C001 OF

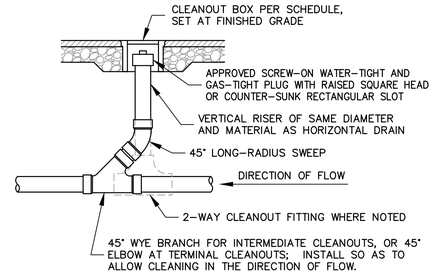
COMBO PERMIT SUBMITTAL - NOT FOR CONSTRUCTION

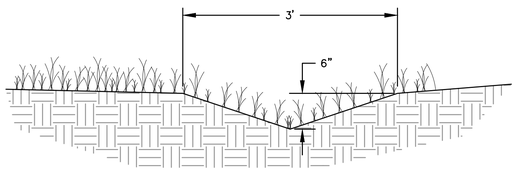


1 HMA PAVEMENT (FIRE DEPARTMENT TURNOUTS)
SCALE: NONE



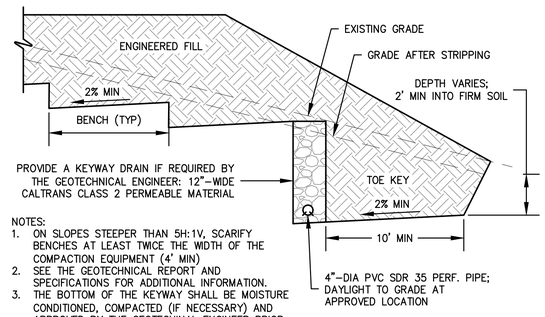
5 BROW DITCH
SCALE: NONE





NOTE:
SWALES SHALL BE SEEDED WITH A SEED MIX APPROVED BY THE LANSCAPE ARCHITECT.

2 GRADED DIRT SWALE
SCALE: NONE



NOTES:
1. ON SLOPES STEEPER THAN 5H:1V, SCARIFY BENCHES AT LEAST TWICE THE WIDTH OF THE COMPACTION EQUIPMENT (4' MIN)
2. SEE THE GEOTECHNICAL REPORT AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. THE BOTTOM OF THE KEYWAY SHALL BE MOISTURE CONDITIONED, COMPACTED (IF NECESSARY) AND APPROVED BY THE GEOTECHINAL ENGINEER PRIOR TO BACK FILL.

6 KEYING AND BENCHING
SCALE: NONE

CLEANOUT BOX SCHEDULE

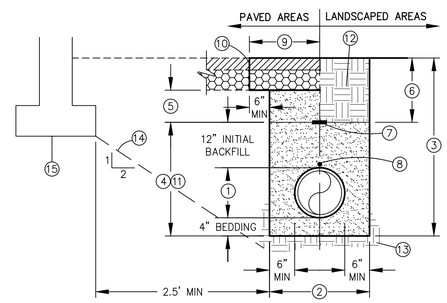
PLANTER AREAS
CHRISTY F08 BOX WITH REINFORCED CONCRETE LID, OR APPROVED EQUAL. LID MARKED "SEWER" OR "STORM", AS APPROPRIATE.

LIGHT VEHICULAR AREAS (PARKING LOTS AND ASPHALT PAVED PEDESTRIAN AREAS)
CHRISTY G03 OR G05 TRAFFIC-RATED BOX (OR APPROVED EQUAL) WITH CAST IRON LID. LID MARKED "SEWER" OR "STORM", AS APPROPRIATE.

CONCRETE PAVED PEDESTRIAN AREAS (NO VEHICULAR TRAFFIC)
CHRISTY "FIBERLYTE" FL08 BOX WITH REINFORCED CONCRETE LID, OR APPROVED EQUAL. LID MARKED "SEWER" OR "STORM", AS APPROPRIATE.

PEDESTRIAN AREAS WHERE A BRONZE COVER IS CALLED OUT
6"-DIA. BRONZE FRAME AND COVER WITH 4"-DIA RISER PIPE, ZURN CO2455, OR APPROVED EQUAL. LID TO BE MARKED "SEWER" OR "STORM", AS APPROPRIATE.

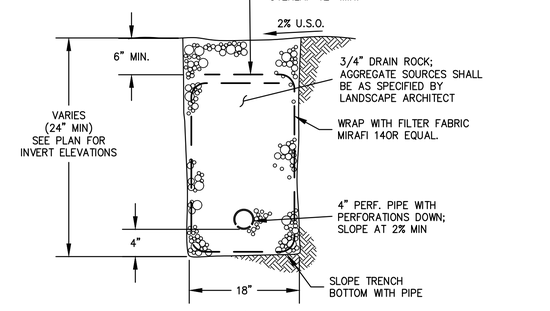
8 CLEAN OUT
SCALE: NONE



KEYNOTES

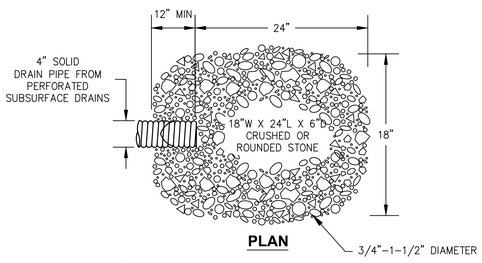
1. PROPOSED PRIVATE UTILITY; PIPE ZONE
2. MINIMUM TRENCH WIDTH = PIPE O.D. + 12" MIN. PROVIDE MIN 6" CLR EITHER SIDE OF PIPE. TRENCH WIDTH MAY VARY FROM ACTUAL WIDTH REQUIRED TO PERFORM THE WORK DEPENDING UPON METHOD OF COMPACTION AND FOR TRENCH SHORING/PROTECTION USED BY CONTRACTOR.
3. TRENCH DEPTH AS SHOWN ON PLANS. IF NOT SHOWN OR OTHERWISE SPECIFIED, PROVIDE MIN 36" COVER FOR WATER MAINS 4" AND LARGER, AND MIN 30" COVER FOR OTHER FACILITIES.
4. PIPE BEDDING AND INITIAL BACKFILL: CLEAN SAND AS DEFINED IN ASTM 2487-10, WITH SAND EQUIVALENT OF 30 OR GREATER, COMPACTED IN MAX 8" LIFTS TO MIN. 95% R.C.
5. FINAL BACKFILL IN BUILDING, SLAB, FLATWORK, AND PAVEMENT AREAS: CLEAN SAND AS DEFINED IN ASTM 2487-10, WITH SAND EQUIVALENT OF 30 OR GREATER, COMPACTED IN MAX 8" LIFTS TO MIN. 95% R.C.
6. FINAL BACKFILL IN LANDSCAPE AREAS: NATIVE MATERIAL COMPACTED IN MAX 8" LIFTS TO MIN. 90% R.C.
7. PLACE 3"-WIDE WARNING TAPE 12" ABOVE PIPE.
8. PROVIDE INSULATED 12 AWG TRACER WIRE FOR ALL EXTERIOR NON-METALLIC WATER AND GAS PIPES 4"-DIA AND LARGER. TAPE TO TOP OF PIPE AT 10' INTERVALS. EXTEND TO THE SURFACE AT VALVE BOXES, RISERS, ETC., SO LOCATOR EQUIPMENT CAN BE CONNECTED.
9. PIPE TRENCHING WORK IN EXISTING IMPROVED STREETS SHALL INCLUDE REPLACEMENT OF EXISTING PAVEMENT. THE THICKNESS OF THE NEW AC. AND AB SHALL BE EQUIVALENT TO THE EXISTING AC. AND AB THICKNESS, OR 2.5" AC ON 8" AB, WHICHEVER IS GREATER. TRENCH PATCH SHALL EXTEND MIN 6" BEYOND TRENCH WALL.
10. ALL STREET CUTS SHALL BE NEATLY SAWCUT ON TRUE LINE TO 1-1/2" MINIMUM DEPTH AT A MINIMUM OF 6" BEYOND EDGE OF TRENCH WALL.
11. IN VEHICULAR AREAS, WHERE FINISH GRADE IS LESS THAN 24" ABOVE THE TOP OF PIPE, BACKFILL TO MIN 6" ABOVE TOP OF PIPE WITH 5-SACK CONCRETE.
12. ALL SOILS PROPOSED TO BE UTILIZED FOR TRENCH BEDDING AND BACKFILL SHALL BE APPROVED BY THE SOILS ENGINEER BEFORE USE. IMPORTED SOILS SHALL BE APPROVED BY THE SOILS ENGINEER BEFORE BEING BROUGHT TO THE SITE.
13. UNDISTURBED SUBGRADE SOIL. THE GEOTECHNICAL ENGINEER SHALL APPROVE SUBGRADE PRIOR TO PLACING BEDDING.
14. UTILITY TRENCHES THAT ARE PARALLEL TO THE SIDES OF BUILDINGS OR WALL FOOTINGS SHALL BE LOCATED SO THAT THE TRENCHES DO NOT EXTEND BELOW AN IMAGINARY LINE SLOPING DOWN AT A 2:1 (H:V) SLOPE FROM THE BOTTOM OUTSIDE EDGE OF THE FOOTINGS.
15. WHERE UTILITY TRENCHES CROSS BENEATH FOOTINGS (INCLUDING PERIMETER FOUNDATIONS), A CONCRETE PLUG SHALL BE PROVIDED

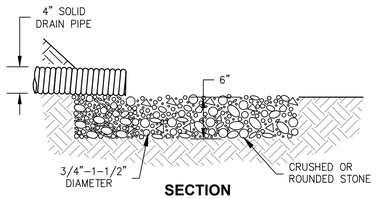
10 PRIVATE UTILITY TRENCHING
SCALE: NONE



NOTE: WHERE PERFORATED PIPE MEETS SOLID PIPE, TRENCH BACKFILL SHALL BE PLUGGED FOR A MINIMUM LENGTH OF 36" WITH NATIVE BACKFILL OR CLAYEY MATERIAL; AS DIRECTED BY THE ENGINEER.

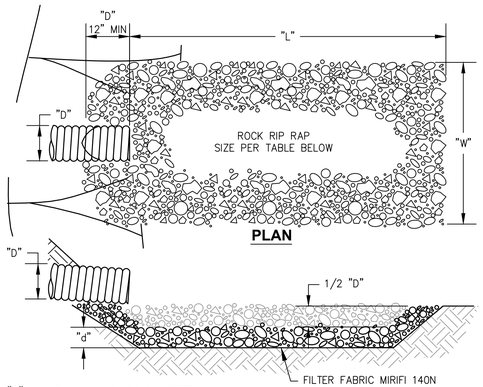
3 FRENCH DRAIN
SCALE: NONE





NOTES:
1. LANDSCAPE ARCHITECT/OWNER SHALL DIRECT THE SHAPE OF THE DRAIN APRON, HOWEVER IT SHALL MEET THE MINIMUM DIMENSIONAL REQUIREMENTS AS SHOWN HEREON.
2. ROCK SOURCE SHALL BE APPROVED BY LANDSCAPE ARCHITECT AND ENGINEER

7 SUBSURFACE DRAIN APRON DETAIL
SCALE: NONE

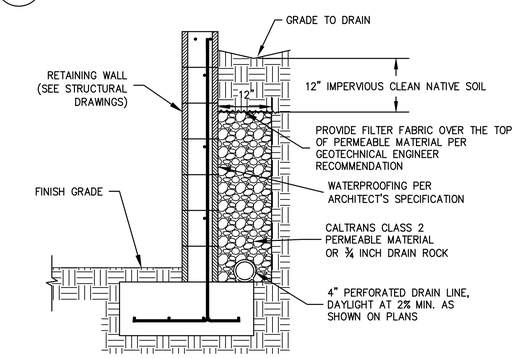


"d" = 1.5 X MAX ROCK DIAMETER
"d" MIN = 6"

NOTES:
1. LANDSCAPE ARCHITECT/OWNER SHALL DIRECT THE SHAPE OF THE RSP, HOWEVER IT SHALL MEET THE MINIMUM DIMENSIONAL REQUIREMENTS AS SHOWN HEREON.
2. "L", "W", AND "D" SHALL BE PER THE TABLE BELOW
3. APRON SHALL BE SET AT ZERO GRADE AND ALIGNED STRAIGHT
4. ROCK SHALL BE APPROVED BY LANDSCAPE ARCHITECT AND ENGINEER

PIPE DIA SLOPE ≤ 5% (INCHES)	PIPE DIA SLOPE > 5% (INCHES)	L (FEET)	W (FEET)	DIA OF 75% OF ROCK GREATER THAN (INCHES)
4-6		4.5	3	4
8	4-6	6	4	6
12	8	9	6	8
	12	12	6	8

9 ROCK SLOPE PROTECTION AT PIPE OUTFALL
SCALE: NONE



4 WALL DRAIN
SCALE: NONE

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STATE OF CALIFORNIA

SUBMITTAL / REVISION		
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WARD RESIDENCE
23 VASQUEZ TRAIL - SLP LOT 253
Carmel, California
APN 239-121-010

CIVIL DETAILS

SCALE:
DRAWN: RA
JOB No.: 4400.04
SHEET C002
OF

COMBO PERMIT SUBMITTAL - NOT FOR CONSTRUCTION

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AGGREGATE BASE

AGGREGATE BASE SHALL BE CLASS 2 CONFORMING TO THE PROVISIONS IN SECTION 26, "AGGREGATE BASES," OF THE STANDARD SPECIFICATIONS. AGGREGATE BASE SHALL BE COMPACTED TO AT LEAST 95% R.C.

ASPHALT CONCRETE

HOT MIX ASPHALT SHALL BE TYPE "A" CONFORMING TO THE PROVISIONS IN SECTION 39, "ASPHALT CONCRETE," OF THE STANDARD SPECIFICATIONS. THE GRADE OF ASPHALT BINDER SHALL BE PG 64-10.

EXTERIOR SITE CONCRETE

CONCRETE SHALL BE CLASS 3 IF NOT OTHERWISE NOTED, CONFORMING TO SECTION 90, "PORTLAND CEMENT CONCRETE," OF THE STANDARD SPECIFICATIONS.

EXPANSION JOINT DOWEL BARS

DOWEL BARS AT EXPANSION JOINTS SHALL BE GRADE 40 OR 60 PLAIN, ROUND, SMOOTH STEEL AS SHOWN ON THE PLANS AND THE PROVISIONS IN SECTION 52. DOWEL BARS SHALL BE PLACED AS SHOWN ON THE PLANS.

DOWEL BARS SHALL BE FREE FROM BURRS OR OTHER DEFORMATIONS DETRIMENTAL TO FREE MOVEMENT OF THE BARS IN THE CONCRETE. DOWEL BARS SHALL BE LUBRICATED WITH A BOND BREAKER OVER THE ENTIRE BAR, AND SHALL HAVE AN EXPANSION CAP PLACED OVER ONE END.

REINFORCEMENT

REINFORCEMENT SHALL CONFORM WITH THE PROVISIONS IN SECTION 52, "REINFORCEMENT", OF THE STANDARD SPECIFICATIONS AND THESE SPECIAL PROVISIONS, AND SHALL BE PLACED AS SHOWN ON THE PLANS, AND AS DIRECTED BY THE ENGINEER

STORM DRAINAGE

STORM DRAIN PIPE

4" AND 6" PIPE: RUBBER GASKETED PVC GRAVITY SEWER PIPE CONFORMING TO ASTM D-3034, SDR 35 OR SDR 26. ALTERNATE, 4" AND 6" RAIN WATER LEADERS: SOLVENT WELD ABS SEWER PIPE CONFORMING TO ASTM D-2661, SCH 40.

8" AND LARGER PIPE: HDPE TYPE "S" (SMOOTH INTERIOR, CORRUGATED EXTERIOR) PIPE WITH WATERTIGHT JOINTS CONFORMING TO AASHTO DESIGNATION M 294. ALTERNATE: RUBBER GASKETED PVC GRAVITY SEWER PIPE CONFORMING TO ASTM D-3034, SDR 35 OR SDR 26.

PERFORATED PIPE

SOLVENT WELD PERFORATED PVC PIPE CONFORMING TO ONE OF THE FOLLOWING: ASTM D-1785, SCH 40; ASTM D-3034, SDR 35 OR SDR 26; OR ASTM D-2729; OR SOLVENT WELD PERFORATED ABS PIPE CONFORMING TO ASTM D-2661, SCH 40.

PERFORATION PATTERN SHALL CONFORM TO AASHTO M-27 OR ASTM D-2729.

PERMEABLE MATERIAL

PERMEABLE MATERIAL (DRAIN ROCK) SHALL CONFORM TO THE PROVISIONS IN SECTION 68, "SUBSURFACE DRAINS," OF THE STANDARD SPECIFICATIONS, UNLESS OTHERWISE NOTED.

FILTER FABRIC

FILTER FABRIC SHALL CONFORM TO AASHTO M288 CLASS 2 (MIRAFI 160N OR APPROVED EQUAL) OR CLASS 3 (MIRAFI 140N OR APPROVED EQUAL). IF NOT OTHERWISE NOTED, USE CLASS 3 FILTER FABRIC.

CONCRETE DRAINAGE STRUCTURES

CONCRETE DRAINAGE STRUCTURES SHALL CONFORM TO SECTION 51, "CONCRETE STRUCTURES", SECTION 52 "REINFORCEMENT", SECTION 70 "MISCELLANEOUS FACILITIES", SECTION 75 "MISCELLANEOUS METAL" AND THESE SPECIAL PROVISIONS. PRECAST MEMBERS SHALL CONFORM TO SECTION 70-1.02H, "PRECAST CONCRETE STRUCTURES", OF THE STANDARD SPECIFICATIONS, AND NEW STANDARD PLAN D73A.

PRECAST UNIT JOINTS SHALL BE SEALED WITH PREFORMED BUTYL RUBBER JOINT SEALANT CONFORMING TO ASTM C-990.

PLASTIC PIPE CONNECTIONS TO CONCRETE STRUCTURES SHALL BE FITTED WITH AN ELASTOMERIC GASKET OR WATERSTOP CONFORMING TO ASTM C-923 OR ASTM C-1478 (FOR PVC PIPE), OR ASTM F-2510 (FOR HDPE TYPE 'S' PIPE).

THE BASE OF CONCRETE INLETS AND MANHOLES, WHETHER PRECAST OR CAST IN PLACE, SHALL BE FORMED IN THE FIELD TO PROVIDE A SMOOTH FLOW LINE TO THE PIPE SPRING LINE (HALF-BENCH). THE INVERT PAVING THICKNESS IN PRECAST BASE UNITS SHALL BE AT LEAST 4"-THICK BELOW THE BOTTOM OF PIPE.

ALL CONCRETE DRAINAGE STRUCTURES SHALL BE H-20 LOAD RATED IF LOCATED IN VEHICULAR AREAS, AND PEDESTRIAN LOAD RATED OTHERWISE. CONCRETE DRAIN INLET WALL THICKNESS "T" SHALL BE 4" FOR 12" INLETS, 5" FOR 15"-27" INLETS, AND 6" FOR 30" AND LARGER INLET SIZES.

ALL GRATES WITHIN PEDESTRIAN AREAS SHALL BE ADA-COMPLIANT. ADA-COMPLIANT GRATES HAVE LESS THAN 1/2" CLEAR BETWEEN BARS, AND THE BARS SHALL BE ALIGNED PERPENDICULAR TO THE PATH OF TRAVEL. ALL GRATES SHALL BE BOLT- OR LOCK-DOWN

INLET SCHEDULE

6"AD:	6"-DIA ROUND OR 6"X6" SQUARE DRAIN INLET WITH HDPE GRATE. ADS OR NDS 6" DROP-IN GRATE, OR APPROVED EQUAL. PIPE RISER SHALL BE 6 INCHES IN DIAMETER OR SHALL MATCH HORIZONTAL STORM DRAIN PIPE IF SMALLER.
8"AD:	NYLOPLAST LIGHT DUTY 8" INLINE DRAIN PART #2708AG__X. DOME H10 LOADING PEDESTRIAN GRATE OR EQUIVALENT.
12"DI:	NYOPLAST LIGHT DUTY 12" INLINES DRAIN PART #2712AG__X. H10 LOADING PEDESTRIAL GRATE OR EQUIVALENT.
SLOT DRAIN	ACO BRICKSLOT 100 OR APPROVED EQUAL. SLOT DRAIN SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
FRENCH DRAIN	FRENCH DRAIN PER DETAIL 3|C002. FRENCH DRAIN ROCKS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

FIRE DEPARTMENT NOTES (MONTEREY COUNTY)

FIRE007 - DRIVEWAYS

DRIVEWAYS SHALL NOT BE LESS THAN 12 FEET WIDE UNOBSTRUCTED, WITH AN UNOBSTRUCTED VERTICAL CLEARANCE OF NOT LESS THAN 15 FEET. THE GRADE FOR ALL DRIVEWAYS SHALL NOT EXCEED 15 PERCENT. WHERE THE GRADE EXCEEDS 8 PERCENT, A MINIMUM STRUCTURAL ROADWAY SURFACE OF 0.17 FEET OF ASPHALTIC CONCRETE ON 0.34 FEET OF AGGREGATE BASE SHALL BE REQUIRED. THE DRIVEWAY SURFACE SHALL BE CAPABLE OF SUPPORTING THE IMPOSED LOAD OF FIRE APPARATUS (22 TONS), AND BE ACCESSIBLE BY CONVENTIONAL-DRIVE VEHICLES, INCLUDING SEDANS. FOR DRIVEWAYS WITH TURNS 90 DEGREES AND LESS, THE MINIMUM HORIZONTAL INSIDE RADIUS OF CURVATURE SHALL BE 25 FEET. FOR DRIVEWAYS WITH TURNS GREATER THAN 90 DEGREES, THE MINIMUM HORIZONTAL INSIDE RADIUS CURVATURE SHALL BE 28 FEET. FOR ALL DRIVEWAY TURNS, AN ADDITIONAL SURFACE OF 4 FEET SHALL BE ADDED. ALL DRIVEWAYS EXCEEDING 150 FEET IN LENGTH, BUT LESS THAN 800 FEET IN LENGTH, SHALL PROVIDE A TURNOUT NEAR THE MIDPOINT OF THE DRIVEWAY. WHERE THE DRIVEWAY EXCEEDS 800 FEET, TURNOUTS SHALL BE PROVIDED AT NO GREATER THAN 400-FOOT INTERVALS. TURNOUTS SHALL BE A MINIMUM OF 12 FEET WIDE AND 30 FEET LONG WITH A MINIMUM OF 25-FOOT TAPER AT BOTH ENDS. TURNAROUNDS SHALL BE REQUIRED ON DRIVEWAYS IN EXCESS OF 150 FEET OF SURFACE LENGTH AND SHALL BE LOCATED WITHIN 50 FEET OF THE PRIMARY BUILDING. THE MINIMUM TURNING RADIUS FOR A TURNAROUND SHALL BE 40 FEET FROM THE CENTER LINE OF THE DRIVEWAY. IF A HAMMERHEAD/T IS USED, THE TOP OF THE "T" SHALL BE A MINIMUM OF 60 FEET IN LENGTH.

FIRE008 - GATES

ALL GATES PROVIDING ACCESS FROM A ROAD TO A DRIVEWAY SHALL BE LOCATED AT LEAST 30 FEET FROM THE ROADWAY AND SHALL OPEN TO ALLOW A VEHICLE TO STOP WITHOUT OBSTRUCTING TRAFFIC ON THE ROAD. GATE ENTRANCES SHALL BE AT LEAST THE WIDTH OF THE TRAFFIC LANE BUT IN NO CASE LESS THAN 12 FEET WIDE. WHERE A ONE-WAY ROAD WITH A SINGLE TRAFFIC LANE PROVIDES ACCESS TO A GATED ENTRANCE, A 40-FOOT TURNING RADIUS SHALL BE USED. WHERE GATES ARE TO BE LOCKED, THE INSTALLATION OF A KEY BOX OR OTHER ACCEPTABLE MEANS FOR IMMEDIATE ACCESS BY EMERGENCY EQUIPMENT MAY BE REQUIRED.

ND DRIVEWAY CONSTRUCTION, AND FUEL MODIFICATION SHALL BE COMPLETED PRIOR TO FINAL CLEARANCE OF THE RELATED PERMIT.

Know what's below. Call before you dig.

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REGISTERED PROFESSIONAL ENGINEER RICHARD P. WEBER No. 52049 CIVIL STATE OF CALIFORNIA

SUBMITTAL / REVISION		
5/16/25	RA	COMBO PERMIT SET

WARD RESIDENCE
23 VASQUEZ TRAIL - SLP LOT 253

Carmel, California

CIVIL SPECIFICATIONS

APN 239-121-010

SCALE:
DRAWN: RA
JOB No.: 4400.04
SHEET C003 OF

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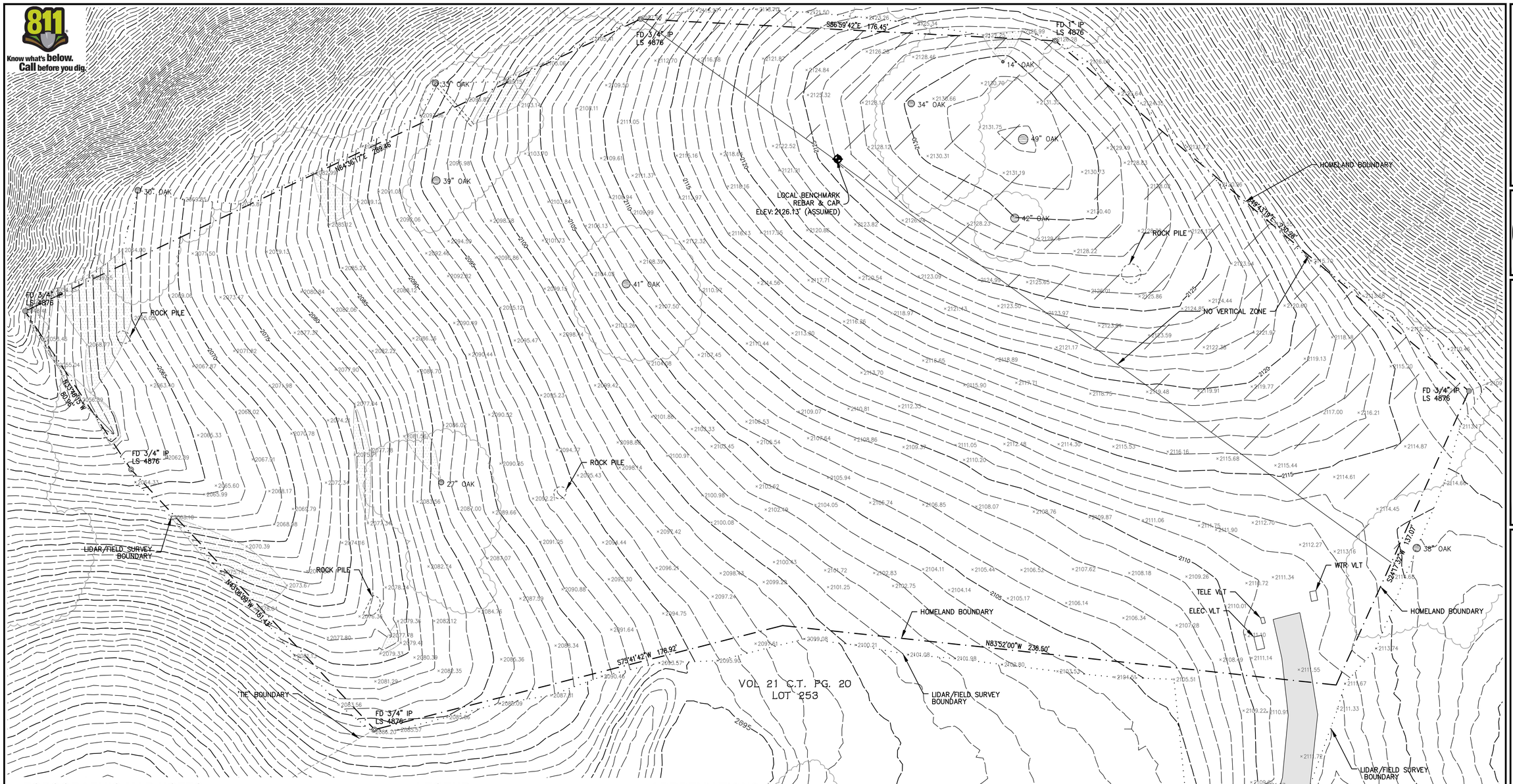

TOPOGRAPHIC MAP NOTES:

1. THIS MAP REPRESENTS A TOPOGRAPHIC SURVEY PERFORMED BY WHITSON ENGINEERS ON JULY 9 & AUGUST 9, 2021.
2. THIS MAP PORTRAYS THE SITE AT THE TIME OF THE SURVEY AND DOES NOT SHOW SOILS OR GEOLOGIC INFORMATION, UNDERGROUND CONDITIONS, EASEMENTS, ZONING OR REGULATORY INFORMATION OR ANY OTHER ITEMS NOT SPECIFICALLY REQUESTED BY THE CLIENT.
3. BOUNDARY LOCATIONS SHOWN HEREON WERE DETERMINED WITH THE BENEFIT OF A FIELD SURVEY SUPPLEMENTED BY RECORD DATA. ALL BOUNDARY SHOWN IS FROM RECORD DATA. THIS TOPOGRAPHIC MAP DOES NOT CONSTITUTE A BOUNDARY SURVEY. THERE MAY BE EASEMENTS OR OTHER RIGHTS, RECORDED OR UNRECORDED, AFFECTING THE SUBJECT PROPERTY, WHICH ARE NOT SHOWN HEREON.
4. DISTANCES AND DIMENSIONS SHOWN ARE EXPRESSED IN FEET AND DECIMALS THEREOF, UNLESS OTHERWISE NOTED.
5. BEARINGS AND DISTANCES SHOWN HEREON ARE BASED OFF OF VOLUME 21 CITIES AND TOWNS AT PAGE 20.
6. BENCHMARK: SET REBAR & CAP TAGGED WHITSON ENGINEERS. ELEVATION: 2126.13' (ASSUMED DATUM BASED ON LIDAR DATA)
7. LOCATION OF UNDERGROUND UTILITIES WAS NOT WITHIN THE SCOPE OF THIS SURVEY. WITH THE EXCEPTION OF OBSERVED FACILITIES, UNDERGROUND UTILITIES ARE SHOWN WITH APPROXIMATE LOCATION BASED ON SURFACE FEATURES.
8. THE EXISTENCE, LOCATION AND DEPTH OF ALL UTILITIES MUST BE VERIFIED BY POSITIVE LOCATION (POTHOLING) BY THE CONSTRUCTION CONTRACTOR PRIOR TO EXCAVATION OR ANY CONSTRUCTION WHICH MAY BE AFFECTED BY THE LOCATION OR ELEVATION OF THE UTILITY.
9. DIAMETERS OF TREES ARE SHOWN IN INCHES MEASURED AT BREAST HEIGHT. TREES SMALLER THAN 6" WERE NOT NECESSARILY LOCATED AS PART OF THIS SURVEY.

LEGEND

100	GROUND CONTOUR
	SUBJECT PROPERTY LINE
	HOMELAND BOUNDARY
	TIE BOUNDARY LINE
	ASPHALT CONCRETE
	GRADE BREAK
100	CONTROL POINT
BM	SITE BENCHMARK
	FOUND 1" IRON PIPE, TAGGED RCE 15310
12" OAK	TREE; SIZE AND TYPE AS NOTED
	STUMP
	TREE DRIP LINE
+ 928.30	SPOT GRADE
	ASPHALT CONCRETE PAVEMENT
	30% SLOPE OR GREATER

ABBREVIATIONS

AC	ASPHALT CONCRETE
BM	BENCHMARK
DW	DRIVEWAY
ELEC	ELECTRIC
ELEV	ELEVATION
FD	FOUND
GB	GRADE BREAK
INV	INVERT
IP	IRON PIPE
TELE	TELEPHONE
VLT	VAULT
WTR	WATER

0 1 2 INCHES 3

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LICENSED LAND SURVEYOR RICHARD P. WEBER No. 8002 STATE OF CALIFORNIA

SUBMITTAL / REVISION

SANTA LUCIA PRESERVE LOT 253

Carmel Valley, California

APN 239-121-010

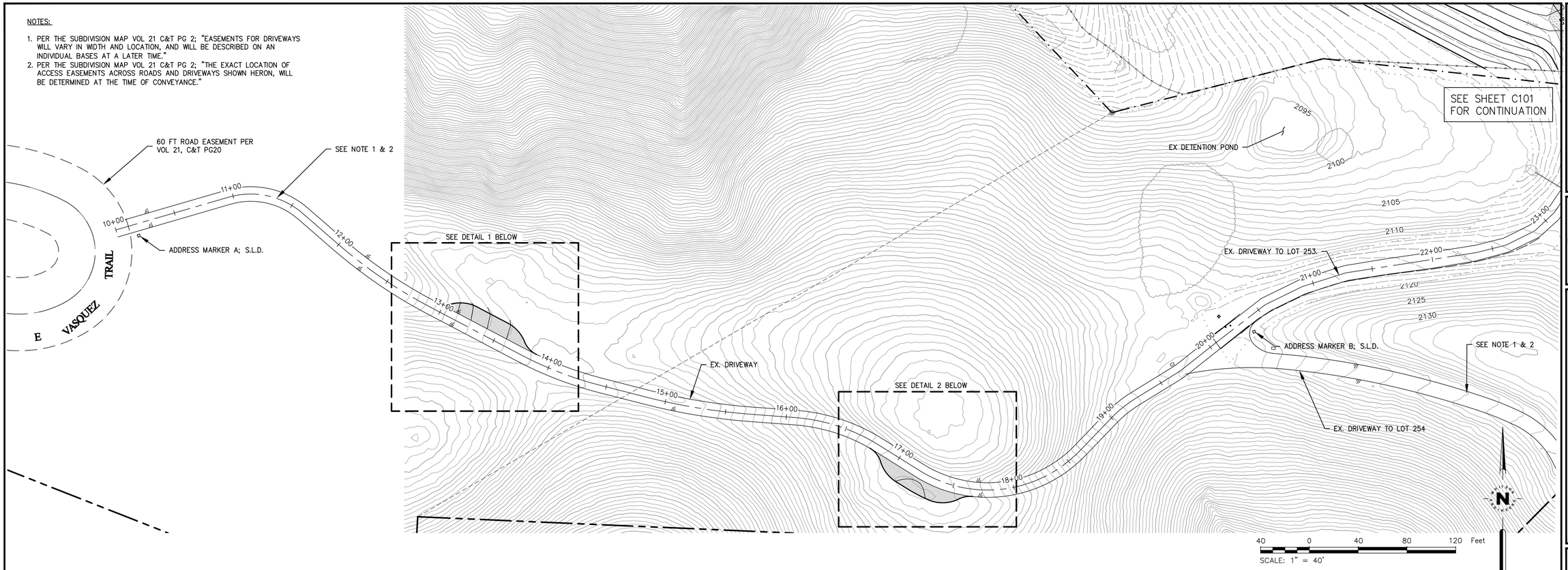
HOMELAND SURVEY

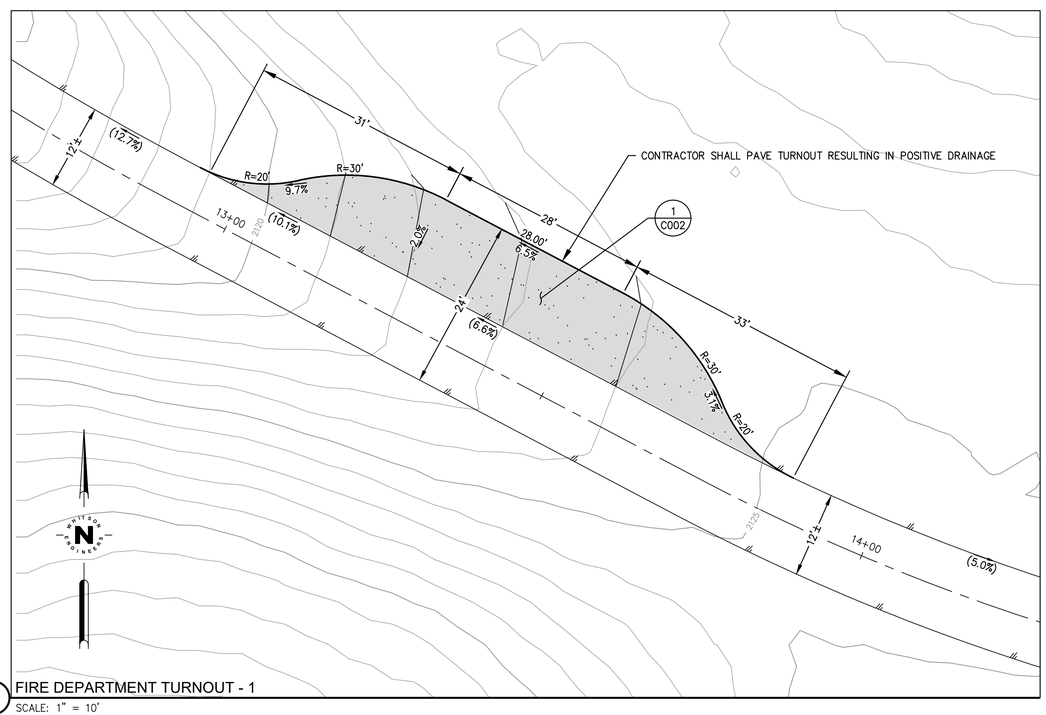
SCALE:	1"=20'
DRAWN:	RW
JOB No.:	4400.00
SHEET	C099 OF 2

T:\Monterey Projects\4400 - SLP Lot 253\SURVEY\4400 - SLP Lot 253.dwg rwebber Jan 06, 2022 - 7:04pm

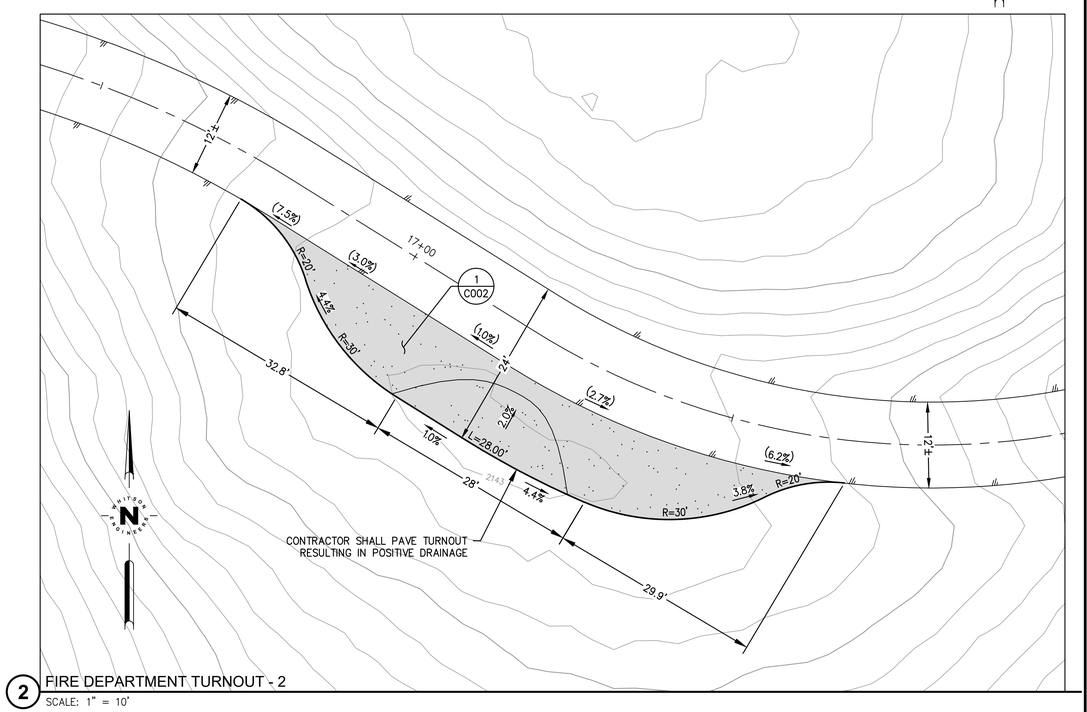
NOTES:

1. PER THE SUBDIVISION MAP VOL 21 C&T PG 2; "EASEMENTS FOR DRIVEWAYS WILL VARY IN WIDTH AND LOCATION, AND WILL BE DESCRIBED ON AN INDIVIDUAL BASES AT A LATER TIME."
2. PER THE SUBDIVISION MAP VOL 21 C&T PG 2; "THE EXACT LOCATION OF ACCESS EASEMENTS ACROSS ROADS AND DRIVEWAYS SHOWN HERON, WILL BE DETERMINED AT THE TIME OF CONVEYANCE."





1 FIRE DEPARTMENT TURNOUT - 1
SCALE: 1" = 10'



2 FIRE DEPARTMENT TURNOUT - 2
SCALE: 1" = 10'

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12-18-2025

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5/16/25	RA	COMBO PERMIT SET

WARD RESIDENCE
23 VASQUEZ TRAIL - SLP LOT 253
Carmel, California
APN 239-121-010

FIRE DEPARTMENT TURNOUTS

SCALE:	
DRAWN:	RA
JOB No.:	4400.04
SHEET	C100 OF

COMBO PERMIT SUBMITTAL - NOT FOR CONSTRUCTION

0 1 2 INCHES 3

F:\Monterey Projects\4400.04 - SLP 253 - Ward\CAD\PLANSET\4400.04 CIVIL.dwg RRamos May 12, 2025 - 2:41pm

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No. 50509
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STATE OF CALIFORNIA

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RA	

WARD RESIDENCE
23 VASQUEZ TRAIL - SLP LOT 253

Carmel, California

APN 239-121-010

OVERALL SITE PLAN

SCALE:	1/16" = 1'
DRAWN:	RA
JOB No.:	4400.04

SHEET
C101
OF

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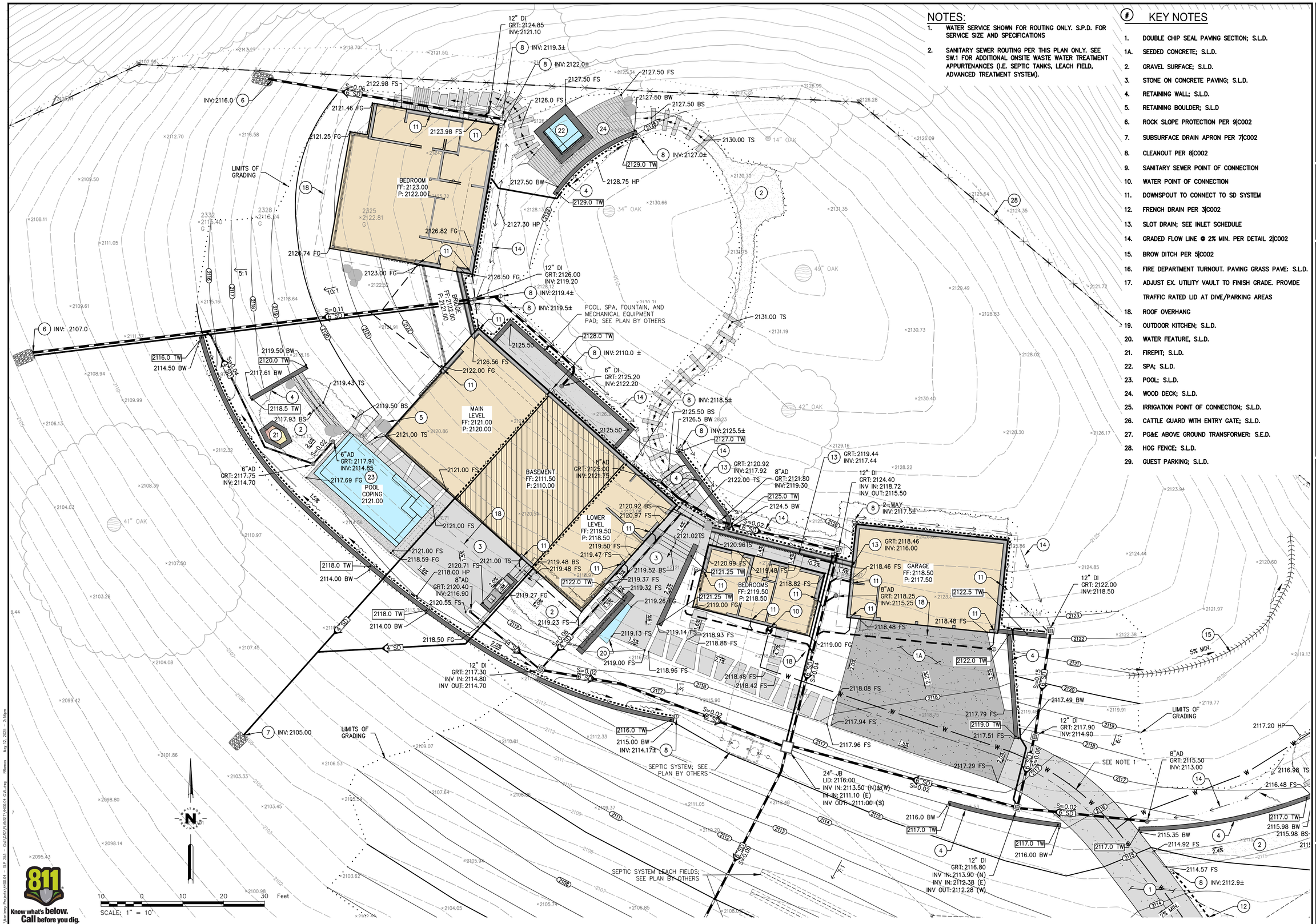

NOTES:

1. WATER SERVICE SHOWN FOR ROUTING ONLY. S.P.D. FOR SERVICE SIZE AND SPECIFICATIONS
2. SANITARY SEWER ROUTING PER THIS PLAN ONLY. SEE SW.1 FOR ADDITIONAL ONSITE WASTE WATER TREATMENT APPURTENANCES (I.E. SEPTIC TANKS, LEACH FIELD, ADVANCED TREATMENT SYSTEM).

KEY NOTES

1. DOUBLE CHIP SEAL PAVING SECTION; S.L.D.
1A. SEEDED CONCRETE; S.L.D.
2. GRAVEL SURFACE; S.L.D.
3. STONE ON CONCRETE PAVING; S.L.D.
4. RETAINING WALL; S.L.D.
5. RETAINING BOULDER; S.L.D
6. ROCK SLOPE PROTECTION PER 9|C002
7. SUBSURFACE DRAIN APRON PER 7|C002
8. CLEANOUT PER 8|C002
9. SANITARY SEWER POINT OF CONNECTION
10. WATER POINT OF CONNECTION
11. DOWNSPOUT TO CONNECT TO SD SYSTEM
12. FRENCH DRAIN PER 3|C002
13. SLOT DRAIN; SEE INLET SCHEDULE
14. GRADED FLOW LINE @ 2% MIN. PER DETAIL 2|C002
15. BROW DITCH PER 5|C002
16. FIRE DEPARTMENT TURNOUT. PAVING GRASS PAVE: S.L.D.
17. ADJUST EX. UTILITY VAULT TO FINISH GRADE. PROVIDE TRAFFIC RATED LID AT DIVE/PARKING AREAS
18. ROOF OVERHANG
19. OUTDOOR KITCHEN; S.L.D.
20. WATER FEATURE, S.L.D.
21. FIREPIT; S.L.D.
22. SPA; S.L.D.
23. POOL; S.L.D.
24. WOOD DECK; S.L.D.
25. IRRIGATION POINT OF CONNECTION; S.L.D.
26. CATTLE GUARD WITH ENTRY GATE; S.L.D.
27. PG&E ABOVE GROUND TRANSFORMER: S.E.D.
28. HOG FENCE; S.L.D.
29. GUEST PARKING; S.L.D.

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RA		

WARD RESIDENCE
23 VASQUEZ TRAIL - SLP LOT 253

Carmel, California

SITE GRADING AND DRAINAGE PLAN

APN 239-121-010

SCALE:	1" = 10'
DRAWN:	RA
JOB No.:	4400.04

SHEET
C102
OF

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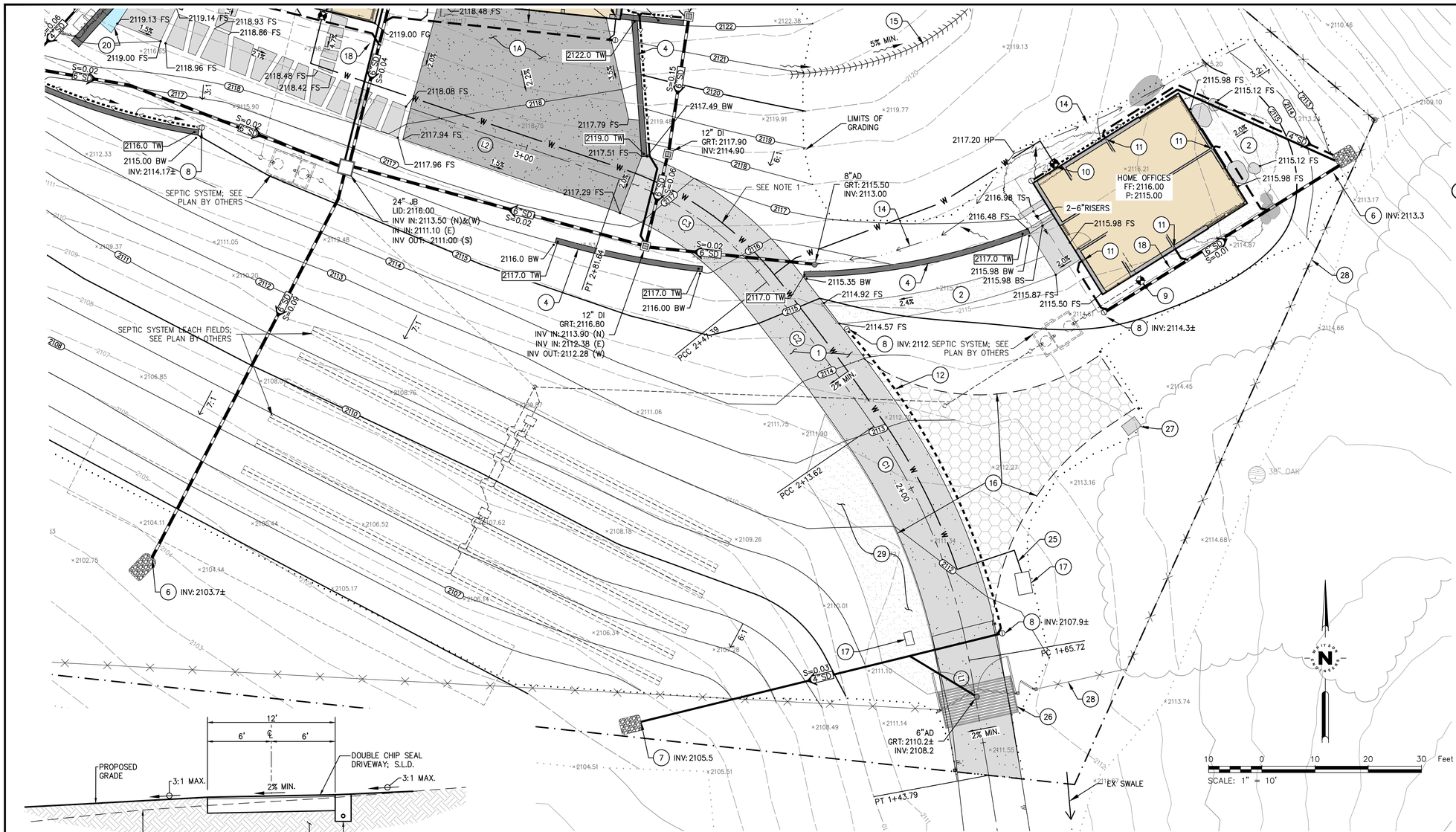

DESIGN CENTERLINE LINE AND CURVE TABLE

Number	Radius	Length	Line/Chord Direction
C1	110.00	47.90	N22° 08' 52.04"W
C2	483.70	33.77	N36° 37' 19.22"W
C3	60.00	34.25	N54° 58' 32.12"W
L1		21.93	N9° 40' 25.72"W
L2		41.41	N71° 19' 44.16"W

KEY NOTES

1. DOUBLE CHIP SEAL PAVING SECTION; S.L.D.
1A. SEEDED CONCRETE; S.L.D.
2. GRAVEL SURFACE; S.L.D.
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13. SLOT DRAIN; SEE INLET SCHEDULE
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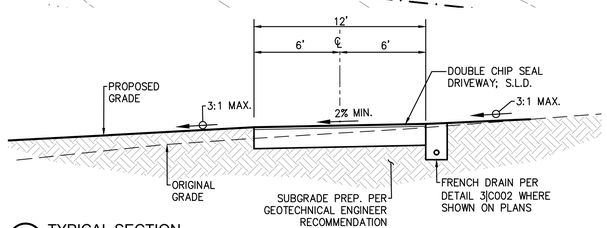
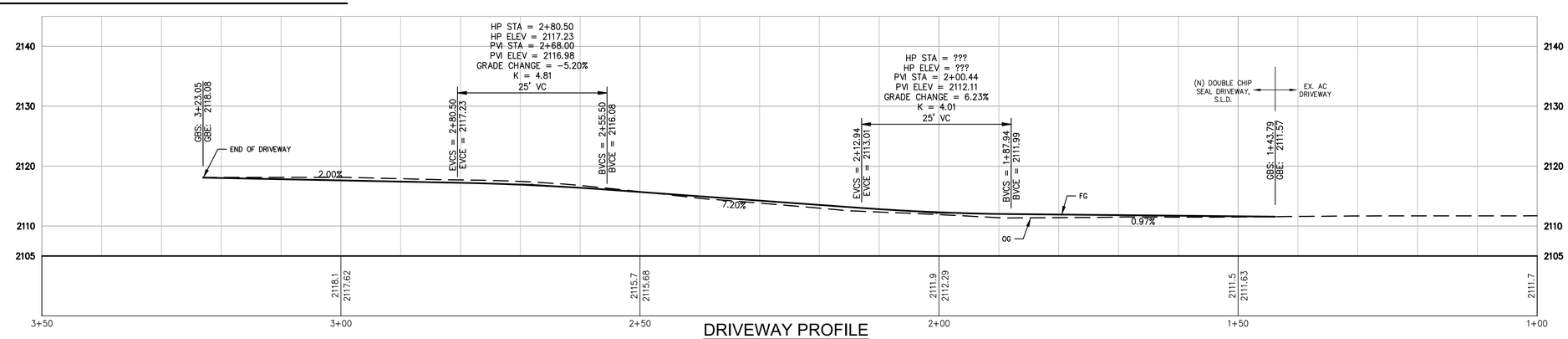
19. OUTDOOR KITCHEN; S.L.D.
20. WATER FEATURE, S.L.D.
21. FIREPIT; S.L.D.
22. SPA; S.L.D.
23. POOL; S.L.D.
24. WOOD DECK; S.L.D.
25. IRRIGATION POINT OF CONNECTION; S.L.D.
26. CATTLE GUARD WITH ENTRY GATE; S.L.D.
27. PG&E ABOVE GROUND TRANSFORMER: S.E.D.
28. HOG FENCE; S.L.D.
29. GUEST PARKING; S.L.D.

NOTES:

1. WATER SERVICE SHOWN FOR ROUTING ONLY. S.P.D. FOR SERVICE SIZE AND SPECIFICATIONS
2. SANITARY SEWER ROUTING PER THIS PLAN ONLY. SEE SW.1 FOR ADDITIONAL ONSITE WASTE WATER TREATMENT APPURTENANCES (I.E. SEPTIC TANKS, LEACH FIELD, ADVANCED TREATMENT SYSTEM).



A TYPICAL SECTION
SCALE: 1" = 5'



DRIVEWAY PROFILE
SCALE: HORIZONTAL 1"=10'
VERTICAL 1"=10'

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Carmel, California
APN 239-121-010

SITE GRADING AND DRAINAGE PLAN

SCALE:	1" = 10'
DRAWN:	RA
JOB No.:	4400.04

SHEET
C103
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Know what's below. Call before you dig.

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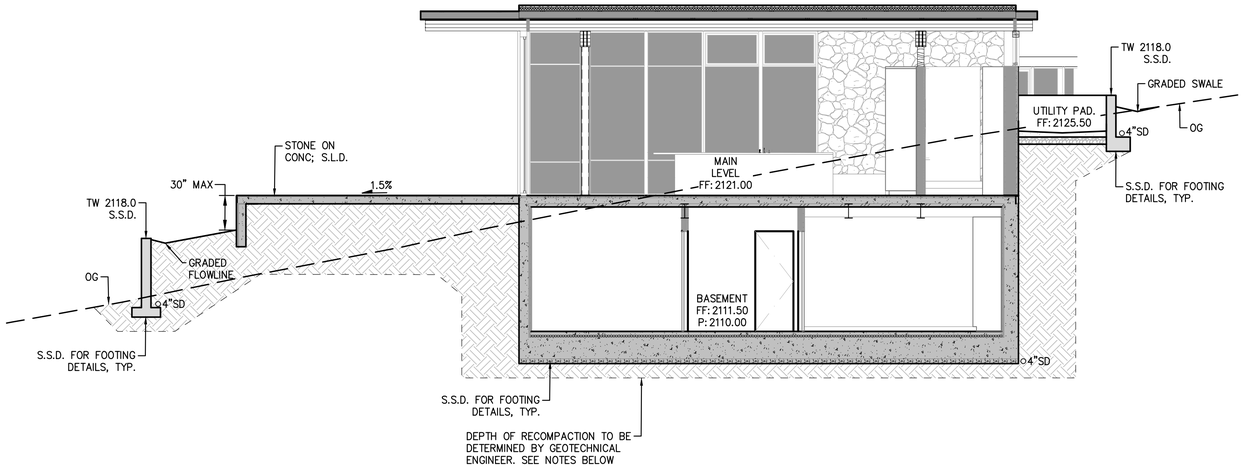
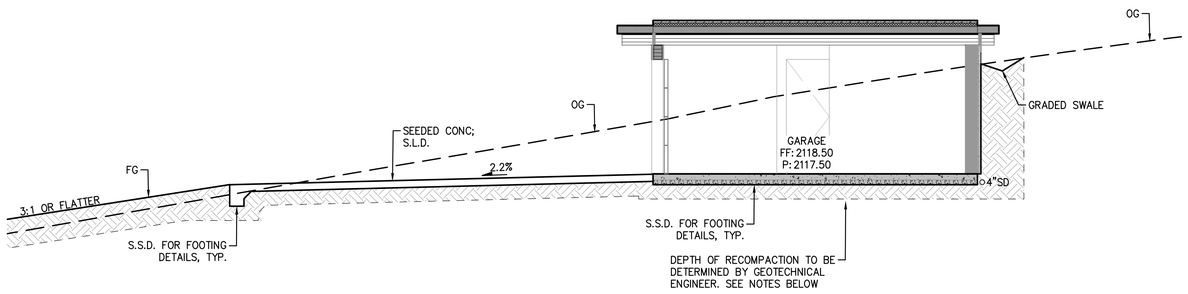
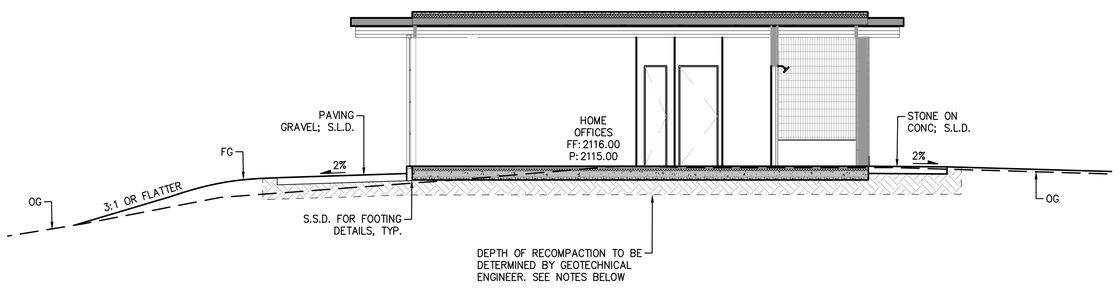


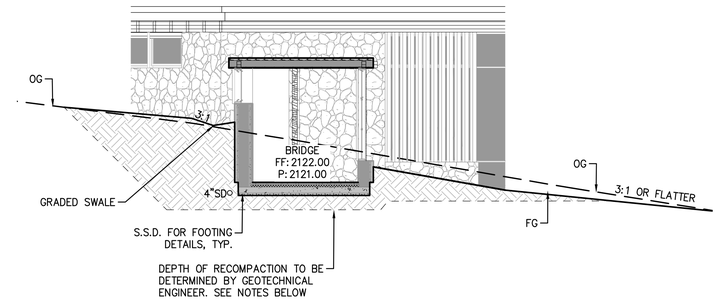
A SECTION A - MAIN HOUSE & BASEMENT
SCALE: 1" = 5'



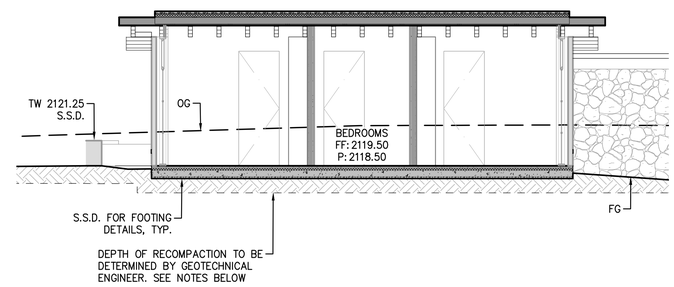
B SECTION B - GARAGE AND ARRIVAL COURT
SCALE: 1" = 5'



C SECTION C - HOME OFFICES
SCALE: 1" = 5'



D SECTION D - BRIDGE
SCALE: 1" = 5'



E SECTION E - BEDROOMS
SCALE: 1" = 5'

NOTES:

1. ALL LOOSE SOIL WITHIN THE PROPOSED BUILDING PADS AND EXTENDING A MIN. OF 5FT IN ALL DIRECTIONS OUTSIDE OF THE PROPOSED BUILDING FOUNDATIONS SHALL BE RECOMPACTED AS NECESSAR TO 90 PERCENT RELATIVE COMPACTION AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER PRIOR TO PLACING ADDITIONAL PAD FILLS OR FINISHING THE BUILDING PAD SUBGRADES
2. THE GEOTECHNICAL ENGINEER SHALL DETERMINE THE DEPTH OF RECOMPACTION WITH THE BUILDING PERIMETERS AFTER CLEARING, GRUBBING, AND PAD GRADING.
3. THE BOTTOM OF THE SUBEXCAVATION SHALL BE SCARIFIED A MIN. OF 12" MOISTURE CONDITIONED, AND RECOMPACTED TO 90% RELATIVE COMPACTION.
4. IF NO SUBEXCAVATION IS REQUIRED, THE BUILDING PADS SHALL BE SCARIFIED A MIN. OF 12", MOISTURE CONDITIONED, AND RECOMPACTED TO 90% RELATIVE COMPACTION.
5. ALL WALL SUBDRAINS PER DETAIL 4 ON SHEET C002.

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APN 239-121-010

GRADING SECTIONS

SCALE:	
DRAWN:	RA
JOB No.:	4400.04

SHEET
C104
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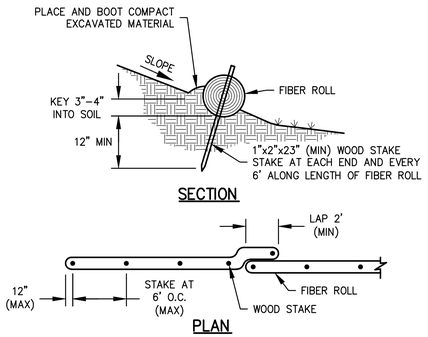
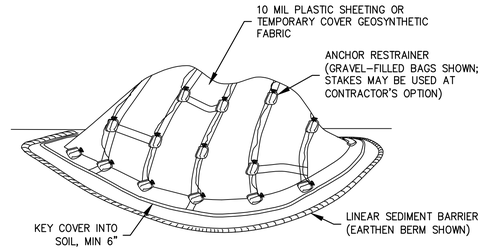
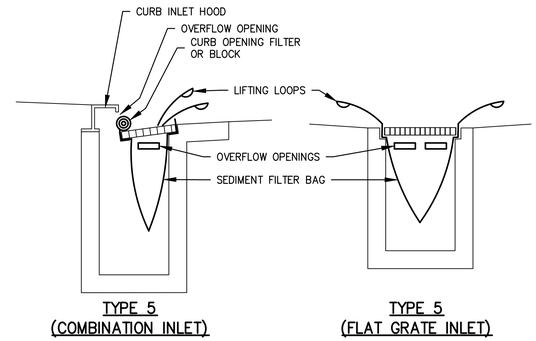


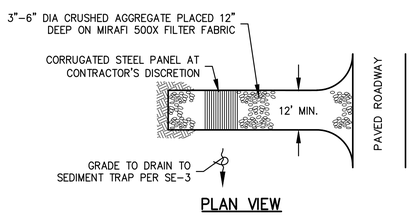
NOTES:
1. PRIOR TO FIBER ROLL INSTALLATION, EXCAVATE A CONCAVE KEY TRENCH (FURROW) 3" TO 4" DEEP. INSTALL AND STAKE THE FIBER ROLL TIGHT AGAINST THE FURROW SO THAT STORMWATER RUNOFF WILL NOT PASS UNDER THE FIBER ROLL.
2. PLACE SOIL EXCAVATED FROM THE FURROW ON THE UPHILL SIDE OF THE FIBER ROLL AND BOOT COMPACT AGAINST FIBER ROLL AFTER FIBER ROLL INSTALLATION, TO PREVENT RUNOFF FROM PASSING UNDER THE FIBER ROLL.
3. AT JOINTS, OVERLAP FIBER ROLLS 2' (MIN), WITH THE ROLLS TIGHTLY ABUTTING. WHERE MULTIPLE ROWS ARE INSTALLED ON A SLOPE, STAGGER THE JOINTS ON ADJACENT ROWS 5' (MIN).
4. INSTALL FIBER ROLLS LEVEL (FOLLOWING THE GROUND CONTOUR) WHERE SHOWN.

SE-5 / -- FIBER ROLL
SCALE: NONE

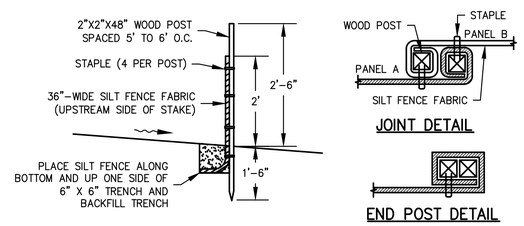


WM-3 / -- TEMPORARY COVER ON STOCKPILE
SCALE: NONE



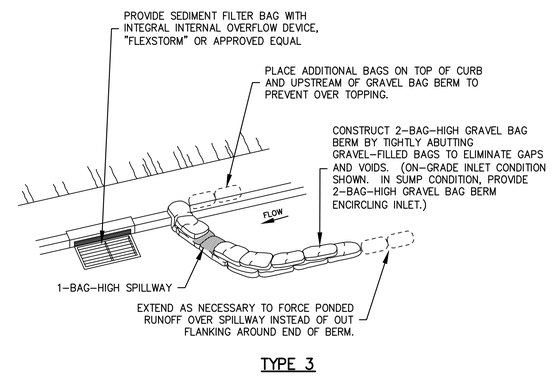


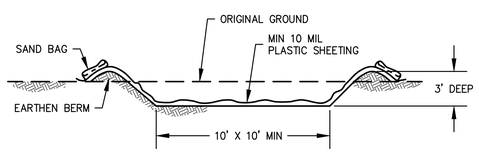
TC-1 / -- STABILIZED CONSTRUCTION ENTRANCE
SCALE: NONE



NOTES:
1. THE DOWNSTREAM END OF THE SILT FENCE SHALL HAVE THE LAST 8' ANGLED UP SLOPE TO PREVENT WATER FROM RUNNING AROUND THE END OF THE SILT FENCE
2. JOINT SECTIONS SHALL NOT BE PLACED AT SUMP LOCATIONS

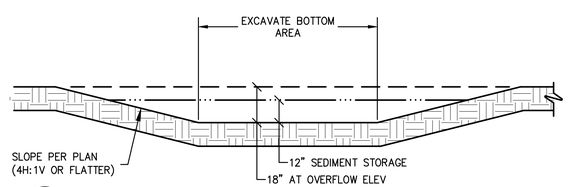
SE-1 / -- TEMPORARY SILT FENCE
SCALE: NONE



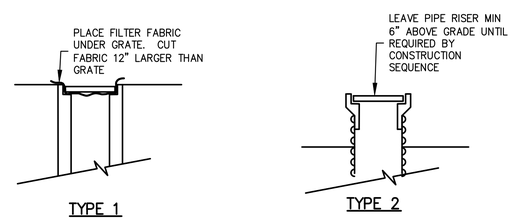


NOTES:
1. AT CONTRACTOR'S OPTION, AN EQUIVALENT 10' X 10' X 2'–DEEP ABOVE–GRADE WASHOUT MAY BE CONSTRUCTED USING LUMBER OR HAY BALES.

WM-8 / -- TEMPORARY CONCRETE WASHOUT FACILITY
SCALE: NONE



SE-3 / -- SEDIMENT TRAP
SCALE: NONE



NOTES:
1. PROVIDE TYPE 1 INLET PROTECTION AT ALL INLETS IF OTHER TYPE NOT PROVIDED.
2. TYPE 2 INLET PROTECTION MAY BE PROVIDED IN LIEU OF TYPE 1 AT CONTRACTOR'S OPTION.
3. TYPE 3 INLET PROTECTION SHALL BE PROVIDED FOR ALL EXISTING AND PROPOSED PUBLIC STORM DRAIN INLETS, AND ANY PRIVATE INLETS WHICH ARE TO REMAIN IN SERVICE DURING CONSTRUCTION.

SE-10 / -- STORM DRAIN INLET PROTECTION
SCALE: NONE

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5/16/25

SUBMITTAL / REVISION		
5/16/25	RA	COMBO PERMIT SET

WARD RESIDENCE
23 VASQUEZ TRAIL - SLP LOT 253
Carmel, California
APN 239-121-010

EROSION AND SEDIMENT CONTROL DETAILS

SCALE:	
DRAWN:	RA
JOB No.:	4400.04
SHEET	C201
OF	

COMBO PERMIT SUBMITTAL - NOT FOR CONSTRUCTION

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TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

1. ESTIMATED TOTAL DISTURBED SOIL AREA: 0.90 ACRES. THIS PROJECT WILL DISTURB LESS THAN 1 ACRE OF SOIL AND THEREFORE IS NOT SUBJECT TO THE CONSTRUCTION GENERAL PERMIT.
2. THIS PLAN DOES NOT NECESSARILY REFLECT THE BMP DEPLOYMENT REQUIRED DURING ALL CONSTRUCTION STAGES OR FOR ALL CONSTRUCTION SITE CONDITIONS. THE CONTRACTOR'S WATER POLLUTION CONTROL MANAGER (WPCM) IS RESPONSIBLE FOR REGULARLY EVALUATING SITE CONDITIONS AND IMPLEMENTING BMP'S NECESSARY TO PROTECT WATER QUALITY AND TO COMPLY WITH ALL RULES, REGULATIONS AND PERMITS.
3. BEST MANAGEMENT PRACTICES (BMP'S) (MATERIALS AND THEIR INSTALLATION) SHALL CONFORM TO ONE OF THE FOLLOWING:
   A. THE 2019 EDITION OF THE CALTRANS STORM WATER QUALITY HANDBOOKS PPDG.
   B. THE 2023 EDITION OF THE CALIFORNIA STORMWATER BEST MANAGEMENT PRACTICE (BMP) HANDBOOK BY THE CALIFORNIA STORMWATER QUALITY ASSOCIATION (CASQA).

   BMP DESIGNATIONS REFER TO THE DESIGNATIONS GIVEN IN THE CASQA BMP MANUAL.
4. THIS PLAN IS INTENDED TO BE USED FOR INTERIM WATER POLLUTION CONTROL ONLY AND IS NOT TO BE USED FOR FINAL ELEVATIONS OR PERMANENT IMPROVEMENTS.
5. REASONABLE CARE SHALL BE TAKEN WHEN HAULING ANY EARTH, SAND, GRAVEL, STONE, DEBRIS, PAPER OR ANY OTHER SUBSTANCE OVER ANY PUBLIC STREET, ALLEY OR OTHER PUBLIC PLACE. ANY MATERIAL THAT IS TO BE HAULED OFF-SITE SHALL BE COVERED. SHOULD ANY BLOW, SPILL, OR TRACK OVER AND UPON SAID PUBLIC OR ADJACENT PRIVATE PROPERTY, IMMEDIATE REMEDY SHALL OCCUR.
6. KEEP ADDITIONAL EROSION AND SEDIMENT CONTROL MATERIALS ON SITE IN CASE IMMEDIATE REPAIRS OR MODIFICATIONS ARE REQUIRED.
7. STORM WATER POLLUTION PREVENTION TRAINING SHALL BE PROVIDED AT THE BEGINNING OF CONSTRUCTION AND AT LEAST QUARTERLY DURING CONSTRUCTION FOR ALL PERSONS WORKING ON THE JOB SITE. TRAINING SHALL BE PROVIDED BY THE CONTRACTOR'S WATER POLLUTION CONTROL MANAGER IF THE PROJECT DOES NOT HAVE A SWPPP, OR BY THE CONTRACTOR-PROVIDED QSP IF THE PROJECT DOES HAVE A SWPPP. TOPICS SHALL INCLUDE, BUT ARE NOT LIMITED TO: GOOD HOUSEKEEPING, MATERIAL MANAGEMENT PRACTICES, SPILL PREVENTION AND RESPONSE, LOCATIONS AND FUNCTIONS OF EROSION AND SEDIMENT CONTROL DEVICES, AND FINES AND PENALTIES

BEST MANAGEMENT PRACTICES

1. SCHEDULE THE WORK (BMP EC-1) TO MINIMIZE THE POTENTIAL FOR DISCHARGE OF POLLUTANTS.
2. PROVIDE CONSTRUCTION SITE PERIMETER PROTECTION PRIOR TO GROUND DISTURBANCE AND MAINTAIN THROUGHOUT THE COURSE OF CONSTRUCTION. USE SILT FENCE (BMP SE-1) AND STABILIZED CONSTRUCTION ENTRANCE AND EXIT (BMP TC-1) UNLESS OTHERWISE SHOWN. A LINEAR SEDIMENT BARRIER BMP (E.G., LARGE-DIAMETER FIBER ROLL) MAY BE USED IN LIEU OF SILT FENCE AS A PERIMETER PROTECTION BMP ONLY IF APPROVED BY THE ENGINEER. REMOVE PERIMETER PROTECTION BMP'S AT THE END OF CONSTRUCTION, AFTER ALL DISTURBED SOIL AREAS HAVE BEEN STABILIZED.
3. PROVIDE INLET PROTECTION (BMP SE-10) AT ALL DRAIN INLETS WITHIN THE CONSTRUCTION SITE AND AT DRAIN INLETS THAT RECEIVE RUNOFF FROM STREETS AND OTHER PAVED AREAS THAT MAY HAVE SEDIMENT TRACKED ONTO THEM FROM THE CONSTRUCTION SITE. REMOVE INLET PROTECTION BMP'S AT THE END OF CONSTRUCTION, AFTER ALL DISTURBED SOIL AREAS HAVE BEEN STABILIZED.
4. LINEAR SEDIMENT CONTROL BMP'S SHALL BE ONE OF THE FOLLOWING:
   - SE-5 FIBER ROLL
   - SE-12 MANUFACTURED LINEAR SEDIMENT BARRIER
   - SE-13 COMPOST SOCK OR COMPOST BERM
5. FINISH GRADE AND INSTALL PERMANENT EROSION CONTROL (MULCH AND LANDSCAPING) AS EARLY IN THE CONSTRUCTION SEQUENCE AS FEASIBLE. PROVIDE TEMPORARY "EFFECTIVE SOIL COVER" ON ALL "INACTIVE DISTURBED AREAS" (DEFINED AS AREAS WHICH HAVE NOT BEEN DISTURBED FOR AT LEAST 14 DAYS) PRIOR TO INSTALLATION OF FINAL LANDSCAPING, IF FINAL LANDSCAPING CANNOT BE INSTALLED WITHIN THE REQUIRED 14 DAY WINDOW. FOR FINISH GRADED AREAS, IMPLEMENT PERMANENT SOIL COVER AS SHOWN ON THE LANDSCAPE DRAWINGS. WHERE PERMANENT EROSION CONTROL WILL NOT BE IMPLEMENTED, IMPLEMENT ONE OF THE FOLLOWING TEMPORARY BMP'S:
   - EC-3 TEMPORARY HYDRAULIC MULCH
   - EC-4 TEMPORARY HYDROSEED
   - EC-6 TEMPORARY STRAW MULCH
6. SELECT THE TEMPORARY SOIL COVER BMP BASED ON THE DURATION THAT THE BMP IS NEEDED.
7. FOR TEMPORARY HYDRAULIC MULCH AND TEMPORARY HYDROSEED, APPLY FIBER AT A MINIMUM RATE OF 2,000 LBS/ACRE. APPLY TACKED STRAW AT A MINIMUM RATE OF 2,000 LBS/ACRE. APPLY TACKIFIER AT THE MANUFACTURER'S RECOMMENDED RATE FOR THE SLOPE, SOIL AND WIND CONDITIONS.
8. PROVIDE WIND EROSION CONTROL (BMP WE-1) AT ALL TIMES DURING CONSTRUCTION AS REQUIRED BY FEDERAL, STATE, AND LOCAL AGENCY REQUIREMENTS.
9. PROVIDE VELOCITY DISSIPATION DEVICE (BMP EC-10) AT ALL PIPE DISCHARGE LOCATIONS AND OTHER LOCATIONS WHERE CONCENTRATED STORMWATER DISCHARGE MAY CAUSE EROSION.
10. PROVIDE EARTH DIKES AND DRAINAGE SWALES (BMP EC-9) WHERE NEEDED TO PREVENT STORMWATER RUN-ON FROM OFFSITE AREAS FROM ENTERING THE WORK AREA AND CAUSING EROSION. THE WPCM SHALL REGULARLY EVALUATE THE DRAINAGE PATTERNS ON THE CONSTRUCTION SITE AND DIRECT IMPLEMENTATION OF THIS BMP WHERE APPROPRIATE.
11. PROVIDE EARTH DIKES AND DRAINAGE SWALES (BMP EC-9) AND SLOPE DRAINS (BMP EC-11) WHERE NEEDED TO COLLECT AND CONVEY CONCENTRATED DRAINAGE DOWN A GRADED SLOPE. THE WPCM SHALL REGULARLY EVALUATE THE DRAINAGE PATTERNS ON THE CONSTRUCTION SITE AND DIRECT IMPLEMENTATION OF THIS BMP WHERE APPROPRIATE.
12. IMPLEMENT ALL APPLICABLE NON-STORMWATER BMP'S (NS- SERIES BMP'S) AND MATERIAL MANAGEMENT BMP'S (WM- SERIES BMP'S).
13. LIMIT THE USE OF PLASTIC MATERIALS WHEN MORE SUSTAINABLE, ENVIRONMENTALLY FRIENDLY ALTERNATIVES EXIST. WHERE PLASTIC MATERIALS ARE DEEMED NECESSARY, CONSIDER THE USE OF PLASTIC MATERIALS RESISTANT TO SOLAR DEGRADATION AND WHICH MAY BE RE-USED.

MONTEREY COUNTY REQUIREMENTS

1. ALL GRADING SHALL CONFORM TO THE MONTEREY COUNTY CODE, INCLUDING CHAPTER 16.08 "GRADING" AND CHAPTER 16.12 "EROSION CONTROL".
2. PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE, THE OWNER/APPLICANT SHALL SCHEDULE AN INSPECTION WITH HCD-ENVIRONMENTAL SERVICES TO ENSURE ALL NECESSARY SEDIMENT CONTROLS ARE IN PLACE AND THE PROJECT IS COMPLIANT WITH MONTEREY COUNTY GRADING AND EROSION CONTROL REGULATIONS.
3. DURING CONSTRUCTION THE OWNER/APPLICANT SHALL SCHEDULE AN INSPECTION WITH HCD-ENVIRONMENTAL SERVICES TO UPDATE COMPACTION TEST RECORDS, INSPECT DRAINAGE DEVICE INSTALLATION, REVIEW THE MAINTENANCE AND EFFECTIVENESS OF BMP'S INSTALLED, AS WELL AS, TO VERIFY THAT POLLUTANTS OF CONCERN ARE NOT DISCHARGED FROM THE SITE.
4. PRIOR TO FINAL INSPECTION, THE OWNER/APPLICANT SHALL SCHEDULE AN INSPECTION WITH HCD-ENVIRONMENTAL SERVICES TO CONDUCT A FINAL GRADING INSPECTION, COLLECT FINAL GEOTECHNICAL LETTER OF CONFORMANCE, ENSURE THAT ALL DISTURBED AREAS HAVE BEEN STABILIZED AND THAT ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES THAT ARE NO LONGER NEEDED HAVE BEEN REMOVED.
5. ALL OR PART OF THE CONSTRUCTION OF THIS PROJECT IS EXPECTED TO OCCUR DURING THE WINTER SEASON (OCTOBER 15TH THROUGH APRIL 15TH).
6. IT SHALL BE THE RESPONSIBILITY OF THE OWNER AND THE PERMITTEE TO ENSURE THAT EROSION DOES NOT OCCUR FROM AN ACTIVITY DURING OR AFTER PROJECT CONSTRUCTION. ADDITIONAL MEASURES, BEYOND THOSE SPECIFIED, MAY BE REQUIRED AS DEEMED NECESSARY TO CONTROL ACCELERATED EROSION. (MCC 16.12.100)
7. ACTUAL GRADING SHALL BEGIN WITHIN 30 DAYS OF VEGETATION REMOVAL OR THE AREA SHALL BE PLANTED TO CONTROL EROSION. VEGETATION REMOVAL BETWEEN OCTOBER 15TH AND APRIL 15TH SHALL NOT PRECEDE SUBSEQUENT GRADING OR CONSTRUCTION ACTIVITIES BY MORE THAN 15 DAYS.
8. THE FOLLOWING PROVISIONS SHALL APPLY BETWEEN OCTOBER 1 AND APRIL 30.
   A. DISTURBED SURFACES NOT INVOLVED IN THE IMMEDIATE OPERATIONS MUST BE PROTECTED BY APPLYING STRAW MULCH AT 2000 LBS. PER ACRE AND ANCHORED BY TRACK-WALKING TO PREVENT MOVEMENT DURING WATER FLOW.
   B. RUNOFF FROM THE SITE SHALL BE DETAINED OR FILTERED BY BERMS, VEGETATED FILTER STRIPS AND/OR CATCH BASINS TO PREVENT THE ESCAPE OF SEDIMENT FROM THE SITE. THESE DRAINAGE CONTROLS MUST BE MAINTAINED BY THE CONTRACTOR AS NECESSARY TO ACHIEVE THEIR PURPOSE THROUGHOUT THE LIFE OF THE PROJECT. SEE THIS SHEET FOR EROSION CONTROL PLAN AND EROSION CONTROL DETAILS.
   C. EROSION CONTROL MEASURES SHALL BE IN PLACE AT THE END OF EACH DAY'S WORK.
   D. THE BUILDING INSPECTOR SHALL STOP OPERATIONS DURING PERIODS OF INCLEMENT WEATHER IF HE DETERMINES THAT EROSION PROBLEMS ARE NOT BEING CONTROLLED ADEQUATELY.
   E. CUT AND FILL SLOPES SHALL BE PLANTED WITH AN SEED MIX APPROVED BY THE LANDSCAPE ARCHITECT. AMOUNT OF SEED AND FERTILIZER SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.
9. ALL SURFACES EXPOSED OR EXPECTED TO BE EXPOSED DURING GRADING ACTIVITIES SHALL BE PREPARED AND MAINTAINED THROUGH THE LENGTH OF THE ENTIRE PROJECT TO PROTECT AGAINST EROSION.
10. AT ALL TIMES DURING CONSTRUCTION AND UNTIL FINAL COMPLETION, THE CONTRACTOR, WHEN HE OR HIS SUBCONTRACTORS ARE OPERATING EQUIPMENT ON THE SITE, SHALL PREVENT THE FORMATION OF AN AIRBORNE DUST NUISANCE BY WATERING AND/OR TREATING THE SITE OF THE WORK IN SUCH A MANNER THAT WILL CONFINE DUST PARTICLES TO THE IMMEDIATE SURFACE OF THE WORK. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE DONE BY DUST FROM HIS OR HER SUBCONTRACTOR.

BMP OBSERVATION AND MAINTENANCE

1. VISUALLY OBSERVE AND MAINTAIN BEST MANAGEMENT PRACTICES (BMP'S) AS FOLLOWS:
   A. WEEKLY, AND
   B. WITHIN 72 HOURS PRIOR TO EACH STORM EVENT, AND
   C. WITHIN 96 HOURS AFTER EACH STORM EVENT.
   D. DAILY DURING STORM EVENTS
2. REPAIR DAMAGED BMP'S WITHIN 48 HOURS OF OBSERVATION.
3. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL BMP'S BEFORE SEDIMENT HAS ACCUMULATED TO A DEPTH OF ONE THIRD THE HEIGHT OF THE SEDIMENT BARRIER OR SUMP, IF NOT OTHERWISE SPECIFIED IN THE DRAWINGS OR SPECIFICATIONS OR BY THE BMP SUPPLIER OR MANUFACTURER.
4. TRASH AND DEBRIS SHALL BE REMOVED FROM BMP'S DURING SCHEDULED INSPECTIONS.
5. REMOVED SEDIMENT SHALL BE PLACED AT AN APPROVED LOCATION AND IN SUCH A MANNER THAT IT WILL NOT ERODE, OR SHALL BE DISPOSED OF OFF-SITE.
6. REPAIR RILLS AND GULLIES BY RE-GRADING AND THEN TRACK-WALKING PERPENDICULAR TO THE SLOPE. PROVIDE TEMPORARY SOIL COVER IF NECESSARY.

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LEGEND

SYMBOL	BMP #	DESCRIPTION
	EC-9	EARTH DIKES, DRAINAGE SWALES AND LINED DITCHES
	SE-1, SE-5, SE-6	LINEAR SEDIMENT BARRIER: LARGE-DIAMETER FIBER ROLL, SILT FENCE, OR COMPOST SOCK (CONTRACTOR'S OPTION)
	SE-1	LINEAR PERIMETER SEDIMENT CONTROL: SILT FENCE
	SE-6	GRAVEL BAG CHECK DAM
~~SE-7~~	SE-7	STREET SWEEPING
	SE-10	INLET PROTECTION
CWM	WM-8	CONCRETE WASTE MANAGEMENT (WASHOUT) AREA
	TC-1	STABILIZED CONSTRUCTION ENTRANCE/EXIT
C.S.A.	WM-1	CONSTRUCTION STAGING AREA: MATERIAL STORAGE, VEHICLE AND EQUIPMENT STAGING, MAINTENANCE AND FUELING, LOADING/UNLOADING, AND WASTE MANAGEMENT
WM-3	WM-3	TEMPORARY STOCKPILES
□SS	WM-9	SANITARY FACILITIES
	–	DIRECTION OF DRAINAGE
★ #1	–	DISCHARGE MONITORING AND SAMPLING LOCATION
—x—	–	TEMPORARY CONSTRUCTION SITE FENCING (CONCEPTUAL LOCATION; MAY BE REVISED IN THE FIELD)
—ESA—	–	TEMPORARY TREE PROTECTION FENCING OR ENVIRONMENTALLY SENSITIVE AREA (E.S.A.) FENCING (42"-TALL SNOW FENCE)
	SS-3, SS-4, SS-5, SS-6, SS-7, SS-8	PERMANENT STORMWATER CONTROL MEASURE (SCM): SEE PROTECTION NOTES HEREON
		TREE PROTECTION; S.L.D.

Whitson ENGINEERS

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REGISTERED PROFESSIONAL ENGINEER
RICHARD P. WEBER
No. 55219
CIVIL
STATE OF CALIFORNIA

SUBMITTAL / REVISION		
5/16/25	RA	COMBO PERMIT SET

WARD RESIDENCE
23 VASQUEZ TRAIL - SLP LOT 253
Carmel, California
EROSION AND SEDIMENT CONTROL PLAN
APN 239-121-010

SCALE:	1" = 30'
DRAWN:	RA
JOB No.:	4400.04

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OF

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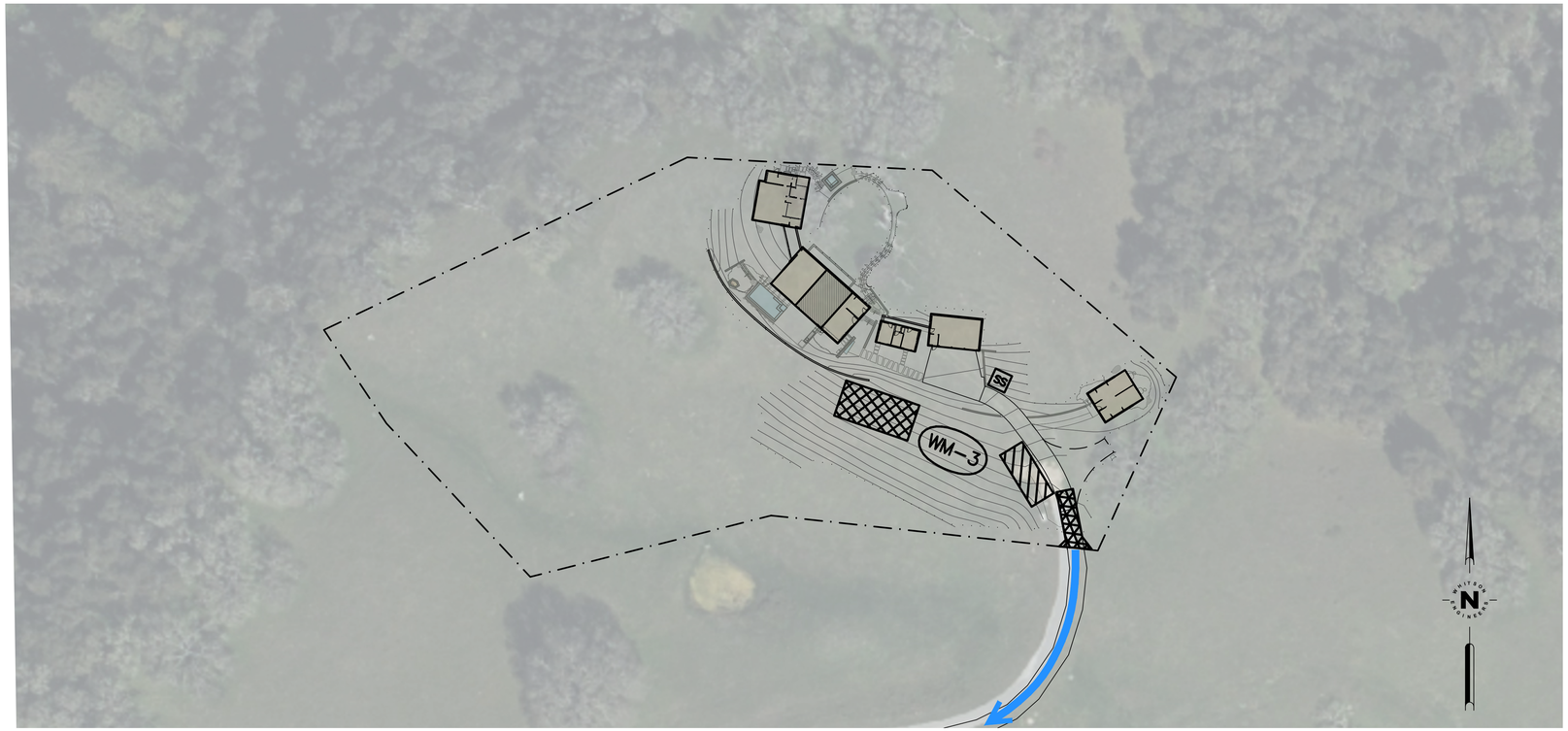
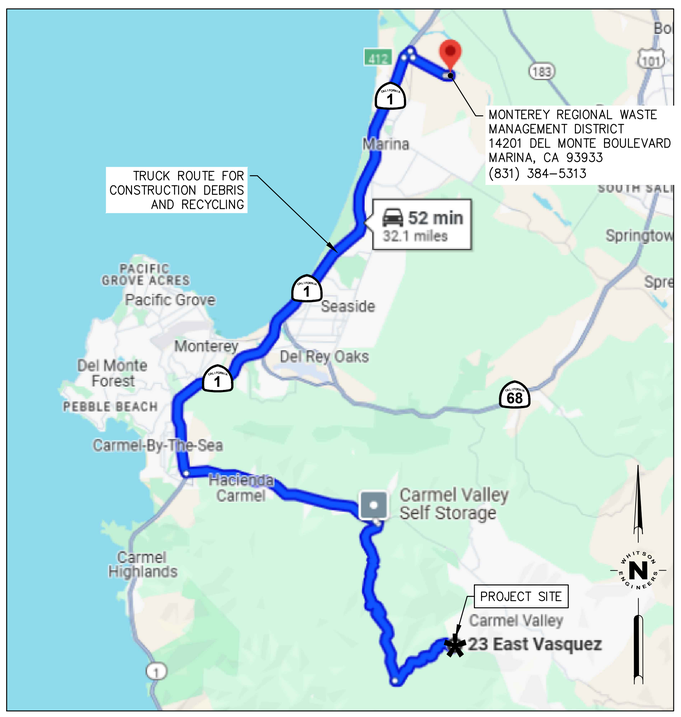
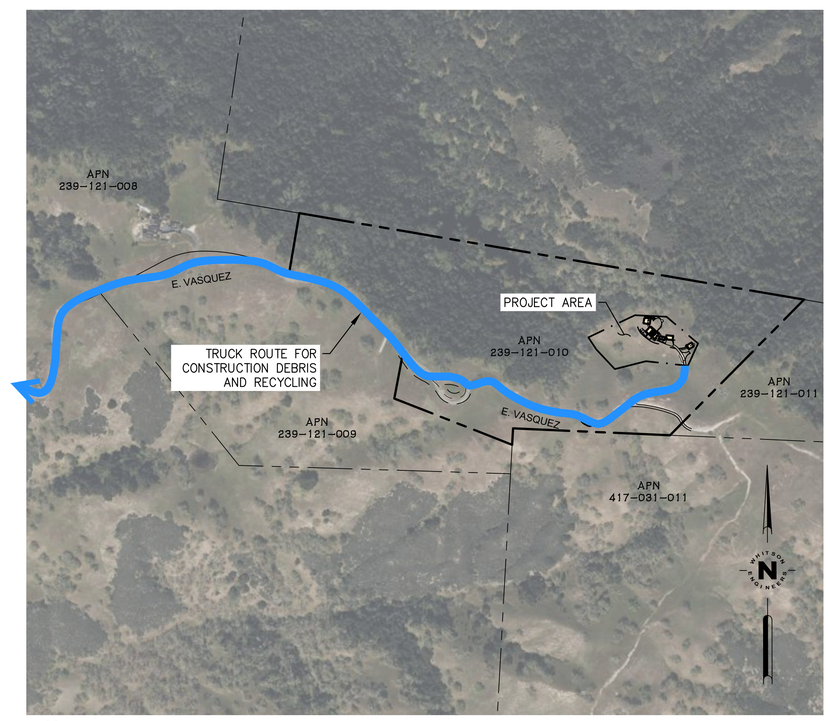


A CM1 CONSTRUCTION SITE PLAN
SCALE: 1"=30'



B CM1 TRUCK ROUTING PLAN
SCALE: 1"=6,000'



C CM1 OVERALL SITE PLAN
SCALE: 1"=400'

EARTHWORK QUANTITIES

1,290	CY CUT
930	CY FILL
170	CY EXPORT (20% SHRINKAGE)

CONTACT INFO

ARCHITECT
FELDMAN ARCHITECTURE
1648 PACIFIC AVENUE, SUITE B
SAN FRANCISCO, CA 94109

TEL: (415) 252-1441

CONTRACTOR
TRUE BUILD CONSTRUCTION, INC.
2096 SUNSET DRIVE
PACIFIC GROVE, CA 93950

TEL: (831) 917-9399

CONSTRUCTION COORDINATOR

CONTRACTOR SHALL PROVIDE A CONSTRUCTION COORDINATOR THAT CAN BE CONTACTED DURING CONSTRUCTION. SHOULD QUESTIONS ARISE DURING CONSTRUCTION (IN CASE OF BOTH REGULAR INQUIRES AND IN EMERGENCIES). THEIR CONTACT INFORMATION (INCLUDING THEIR ADDRESS AND 24-HOUR PHONE NUMBERS) SHALL BE CONSPICUOUSLY POSTED AT THE JOB SITE IN A MANNER THAT THE CONTACT INFORMATION IN READILY VISIBLE FROM PUBLIC VIEWING AREAS. THE POSTING SHALL INDICATE THAT THE CONSTRUCTION COORDINATOR SHOULD BE CONTACTED TO ANSWER ANY QUESTIONS THAT ARISE DURING CONSTRUCTION (IN CASE OF BOTH REGULAR INQUIRIES AND IN EMERGENCIES). THE CONSTRUCTION COORDINATOR SHALL RECORD THE NAME, PHONE NUMBER AND NATURE OF ALL COMPLAINTS (IF ANY) RECEIVED DURING CONSTRUCTION, AND SHALL INVESTIGATE COMPLAINTS AND TAKE REMEDIAL ACTION, IF NECESSARY, WITHIN 24-HOURS OF RECEIPT OF THE COMPLAINT OR INQUIRY.

CONSTRUCTION MANAGEMENT NOTES

1. DURATION OF CONSTRUCTION: DECEMBER 2025 – MARCH 2028.
2. NOISE-GENERATING CONSTRUCTION ACTIVITIES ARE LIMITED TO THE HOURS BETWEEN 7 A.M. AND 7 P.M. MONDAY THROUGH SATURDAY; NO CONSTRUCTION OPERATIONS ALLOWED ON SUNDAYS OR NATIONAL HOLIDAYS.
3. TRUCKS WILL BE ROUTED TO AND FROM THE SITE USING THE TRUCK ROUTE SHOWN ON THIS SHEET (B|CM1) UNLESS A CLOSER COUNTY APPROVED SITE IS AVAILABLE TO RECEIVE EXPORT AND/OR RECYCLING.
4. ESTIMATED TOTAL NUMBER OF TRUCK TRIPS: 60
5. THE NUMBER OF WORKERS WILL VARY THROUGH OUT CONSTRUCTION. WORKERS ONSITE WILL RANGE FROM 10 TO 25.
6. EROSION CONTROL PROTECTION TO BE INSTALLED PER THE EROSION CONTROL PLAN PREPARED WITH THE BUILDING PERMIT PLAN SET.
7. STATIONARY NOISE-GENERATING CONSTRUCTION EQUIPMENT AND STAGING AREAS SHALL BE LOCATED AS FAR AWAY AS POSSIBLE FROM RESIDENTIAL RECEIVERS AS POSSIBLE.
8. CONSTRUCTION EQUIPMENT MUST BE PROPERLY MAINTAINED. ALL INTERNAL COMBUSTION ENGINE-DRIVEN EQUIPMENT SHALL BE EQUIPPED WITH WITH INTAKE AND EXHAUST MUFFLERS THAT ARE IN GOOD CONDITION AND APPROPRIATE FOR THE EQUIPMENT
9. SEE ARCHITECTURAL/LANDSCAPE PLANS AND/OR THE PROJECT ARBORIST'S REPORT FOR TREE PROTECTION AND REMOVAL REQUIREMENTS.

LEGEND

— · — · — · —	PROPERTY LINE
	WORKER PARKING
	EQUIPMENT PARKING
	TRUCK ROUTE FOR CONSTRUCTION DEBRIS AND RECYCLING
WM-3	TEMPORARY STOCKPILES (LOCATIONS WILL VARY)
SS	SANITARY FACILITIES (LOCATIONS WILL VARY)
	STABILIZED CONSTRUCTION ENTRANCE/EXIT OR TIRE WASH

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REGISTERED PROFESSIONAL ENGINEER
RICHARD P. WEBER
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CIVIL
STATE OF CALIFORNIA
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SUBMITTAL / REVISION		
5/16/25	RA	COMBO PERMIT SET

WARD RESIDENCE
23 VASQUEZ TRAIL - SLP LOT 253
Carmel, California
APN 239-121-010

CONSTRUCTION MANAGEMENT PLAN

SCALE:	AS SHOWN
DRAWN:	RA
JOB No.:	4400.04

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VICINITY MAP

NOT TO SCALE

PROJECT INFORMATION

PROPERTY OWNER:	RICHARD AND SARAH WARD 3504 WEST LAURELHURST DRIVE NE SEATTLE, CA 95105
JURISDICTION:	COUNTY OF MONTEREY
ASSESSORS PARCEL NO:	239-121-010-000
DESCRIPTION:	23 VASQUEZ TRAIL, CARMEL, CA 93923

BASIS OF SEPTIC DESIGN:

1. THE SEPTIC SYSTEM IS DESIGNED TO COMPLY WITH THE MONTEREY COUNTY ORDINANCE 15.20 FOR SEWAGE DISPOSAL. THE LOT IS 48.28 ACRES AND IS NOT LOCATED IN A GROUND WATER RECHARGE AREA. THE TOTAL ALLOWABLE NITROGEN LOADING IS 1931.20 GRAM OF NITROGEN. THE ESTIMATED NITROGEN LOADING IS 60 GRAMS OF NITROGEN.

2. THE SYSTEM IS SIZED FOR A THREE BEDROOM SINGLE FAMILY DWELLING AND A DETACHED OFFICE (TWO SEPARATE OFFICES). THE ESTIMATED SEWERAGE FLOW IS 525 GALLONS PER DAY. THE MINIMUM SEPTIC TANK SIZE IS 2,000 GALLONS (1,000 FOR SFD AND 1,000 FOR OFFICE).

3. PER THE SITE PERCOLATION INVESTIGATION REPORT BY SOIL SURVEYS GROUP, INC., DATED JANUARY 24, 2022, JOB#7993 AND SUPPLEMENTAL PERCOLATION INVESTIGATION REPORT, DATED SEPTEMBER 12, 2022, JOB#7993-1, THE PERCOLATION RATES ARE SHOWN BELOW:

BORING	DEPTH(FT)	RATE(MPI)
P-1	10.0	100.0
P-2	5.0	100.0
P-3	3.0	100.0
P-4	3.0	100.0
P-5	5.0	25.0
P-6	10.0	250.0
P-7	16.1	7.4
P-8	14.4	16.7
P-9	12.2	11.9
P-10	15.8	20.8
P-11	13.1	10.1
P-12	12.1	20.8

FOR THE SEPTIC DISPERSAL AREA, THE SOILS AT A DEPTH OF 5 FEET (BORING P-5) IS 25.0 MINUTES PER INCH.

4. PER TABLE 5-4, SOIL APPLICATION RATES (AS DETERMINED FROM STANDARDIZED PERCOLATION RATES), THE MAXIMUM SOIL APPLICATION RATE IS 0.5 GALLONS PER DAY PER SQUARE FOOT. THE DESIGN IS BASED ON 0.5 GALLONS PER DAY.

5. THE ESTIMATED DAILY WASTEWATER GENERATION IS 525 GALLONS PER DAY. 525 / 0.5 = 1050 SF. 1050 SF / 4 SF/FT = 262.5 LINEAL FEET.
PRIMARY FIELD: 4 SF/FT X 254 LF (3X88) = 1056 SF > 1050 SF
SECONDARY FIELD: 4 FT X 254 LF (3X88) = 1056 SF > 1050 SF

6. THE LEACH FIELDS SHALL HAVE AT MINIMUM OF 12 INCHES OF SOIL COVER. THE BOTTOM OF THE TRENCH WILL BE LOCATED 5 FEET BELOW THE EXISTING GRADE.

7. THE LEACH FIELDS SHALL NOT BE COVERED BY AN IMPERMEABLE SURFACE, SUCH AS PAVING, CONCRETE SLABS, PLASTIC SHEETING OR ANY OTHER MATERIAL THAT PREVENTS OXYGEN TRANSFER TO THE SOIL UNLESS SUPPLEMENTAL TREATMENT IS INCORPORATED INTO THE SEPTIC SYSTEM.

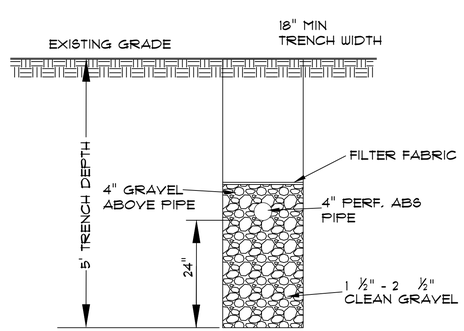
8. TO FACILITATE FUTURE INSPECTIONS OF THE LEACH FIELDS, TRACER WIRE SHALL BE LAID ALONG THE LENGTH OF THE DISTRIBUTION PIPE AND INSPECTION PORTS ARE TO BE INSTALLED AT THE END OF EACH TRENCH.

9. THE LEACH FIELDS SHALL NOT BE DEEPER THAN TEN FEET.

10. THE SEPTIC TANK SHALL BE WATER TIGHT AND CONSTRUCTED OF DURABLE, CORROSION RESISTANT MATERIALS AND MUST CONFORM TO IAPMO, NSF OR ASTM STANDARDS. THE TANK SHALL BE INSTALLED NO DEEPER THAN SIX INCHES BELOW FINISH GRADE UNLESS FITTED WITH WATERTIGHT RISERS. THE OWNERS SHALL MAINTAIN ACCESS OPENINGS SO THAT THE TANK IS READILY ACCESSIBLE FOR OBSERVATIONS, MAINTENANCE AND PUMPING.

SEPTIC PLAN

SCALE: 1" = 20'0"



LEACH FIELD DETAIL

SEPTIC NOTES:

1. THE ON-SITE WASTEWATER TREATMENT SYSTEM SHALL BE INSTALLED IN COMPLIANCE WITH THE MONTEREY COUNTY LAMP FOR OWTS FOR NEW CONSTRUCTION.

2. THE CONTRACTOR SHALL INSTALL THE PRIMARY AND SECONDARY LEACH FIELDS. DIVERTER VALVES, DISTRIBUTION BOXES, ETC. AT THE INITIAL INSTALLATION OF THE SEPTIC SYSTEM.

3. THE INSTALLATION OF THE SEPTIC TANK AND LEACH FIELDS SHALL BE INSPECTED AND APPROVED BY THE MONTEREY COUNTY HEALTH DEPARTMENTS PRIOR TO COVERING OR PLACEMENT OF THE DRAIN ROCK.

4. THE SEPTIC TANK SHALL BE EQUIPPED WITH AN EFFLUENT FILTER.

5. NOT ALL UNDERGROUND UTILITIES WERE LOCATED. UNDERGROUND UTILITY LOCATIONS SHOULD BE OBTAINED FROM THE LOCAL UTILITY COMPANIES, PUBLIC OR PRIVATE AND/OR PROPERTY OWNERS.

6. THIS TOPOGRAPHY AND GRADING BASE MAP HAS BEEN PROVIDED BY ARTERRA LANDSCAPE ARCHITECTS.

SCOPE OF WORK

INSTALL A NEW 1000 GALLON SEPTIC TANK NEAR THE RESIDENCE AND A 1000 GALLON SEPTIC TANK NEAR THE OFFICE BUILDING. EFFLUENT CONVEYED TO THE DIVERSION VALVE UP-GRADIENT FROM THE LEACH FIELDS. DISTRIBUTION BOXES ABOVE EACH LEACH FIELD. PRIMARY AND SECONDARY LEACH FIELDS CONSIST OF THREE - 88 FT BY 5 FT X 18 INCH TRENCHES (2 FT EFFECTIVE DEPTH).

GENERAL / GRADING NOTES

1. SURFACE WATER WILL DRAIN AWAY FROM EACH STRUCTURE ON THE LOT.
2. INSTALL SEDIMENT LOGS AROUND CONSTRUCTION AREA TO KEEP DEBRIS ON PROPERTY.
3. PLACE GRAVEL BAGS AROUND NEARBY, DOWN-STREAM OF STORM INLET(S) DURING CONSTRUCTION.
4. DURING CONSTRUCTION THE CONTRACTOR SHALL MAINTAIN THE COUNTY RIGHT-OF-WAY (STREET/SIDEWALK) FREE FROM DEBRIS AND DIRT.
5. ALL GRADING SHALL COMPLY WITH THE COUNTY OF MONTEREY GRADING ORDINANCE.

REVISIONS

TALUBAN ENGINEERING, INC.
103 CHURCH STREET
SALINAS, CALIFORNIA 93901
P.O. BOX 232, SALINAS, CALIFORNIA 93902
taluban@sbcglobal.net

REGISTERED PROFESSIONAL ENGINEER BRENDA A. TALUBAN No. 44217 Exp. 6/30/25 CIVIL STATE OF CALIFORNIA

SEPTIC SYSTEM SITE PLAN

23 VASQUEZ TRAIL
CARMEL, CALIFORNIA 93923

DATE: 02/28/25
SCALE: AS SHOWN
DRAWN: BT
JOB: 25-001
APN:239-121-010-000
SHEET SW.1
OF SHEETS

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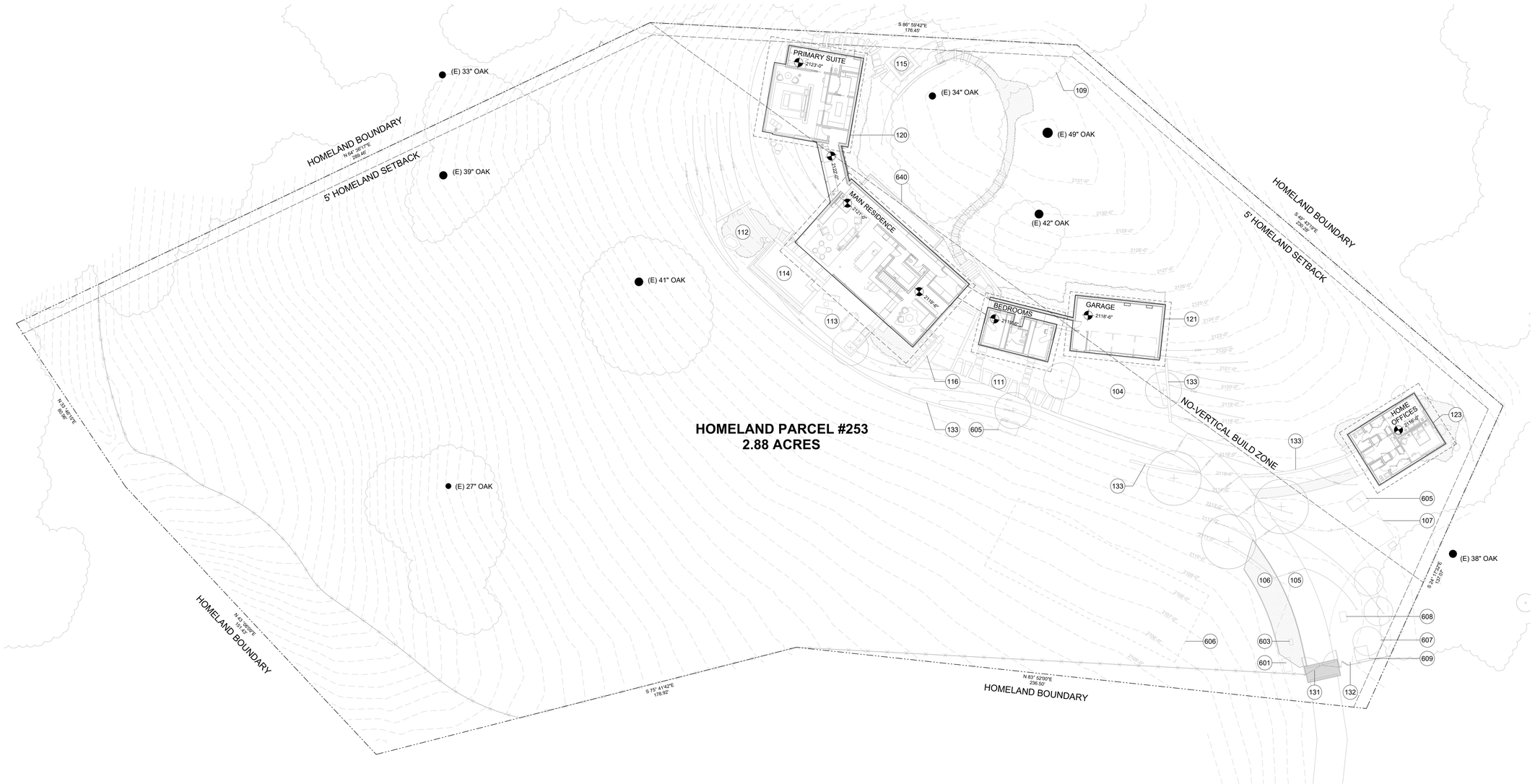

1 SITE PLAN
3/64" = 1'-0"

LEGEND

- HOMELAND BOUNDARY
- SETBACK LINE
- (E) GRADE
- (N) GRADE
- (E) FENCE
- SS (E) SEPTIC LEACH FIELDS
- (E) TREE TO REMAIN
- (N) TREE

KEYNOTE LEGEND

104	AUTO COURT
105	DRIVEWAY
106	GUEST PARKING
107	FIRE TRUCK HAMMERHEAD
109	(E) TREE DRIP LINE, TYP
111	ENTRY WALKWAY, SLD
112	FIRE PIT TERRACE, SLD
113	EXTERIOR DECK, SLD
114	POOL, SLD
115	HOT TUB, SLD
116	WATER FEATURE, SLD
120	PRIMARY SUITE WITHIN NO-VERTICAL BUILD ZONE IS COVERED BY TREE CANOPIES AND IS NOT VISIBLE FROM CARMEL VALLEY
121	GARAGE FULLY TUCKED IN THE HILL AND IS NOT VISIBLE FROM CARMEL VALLEY
123	HOME OFFICES WITHIN NO-VERTICAL BUILD ZONE IS COVERED BY TREE CANOPIES AND IS NOT VISIBLE FROM CARMEL VALLEY
131	CATTLE GUARD WITH ENTRY GATE, SLD
132	PEDESTRIAN GATE, SLD
133	SITE RETAINING WALL, SLD
601	(E) ELECTRICAL VAULT, TO BE RELOCATED
603	(E) TELEPHONE VAULT, TO BE REMOVED
605	SEPTIC TANK, SCD
606	SEPTIC LEACH FIELD, SCD

KEYNOTE LEGEND

607	WATER STORAGE TANKS
608	WATER VAULT
609	PG&E ABOVE GROUND TRANSFORMER
640	POOL AND SPA EQUIPMENT VAULT

5/19/2025 5:33:42 PM

FELDMAN ARCHITECTURE
1648 Pacific Avenue, Suite B
San Francisco, California 94109
415 252 1441
www.feldmanarch.com

LICENSED ARCHITECT
JONATHAN FELDMAN
C-28459
11/30/2025
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT NAME
WARD RESIDENCE

PROJECT ADDRESS
23 VASQUEZ TRAIL,
CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

HISTORY

△	DESC.	DATE

0' 10' 20' 40'

TITLE
SITE PLAN

A1.20
SHEET

1 KEY PLAN
1/16" = 1'-0"

5/19/2025 5:33:45 PM

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HISTORY

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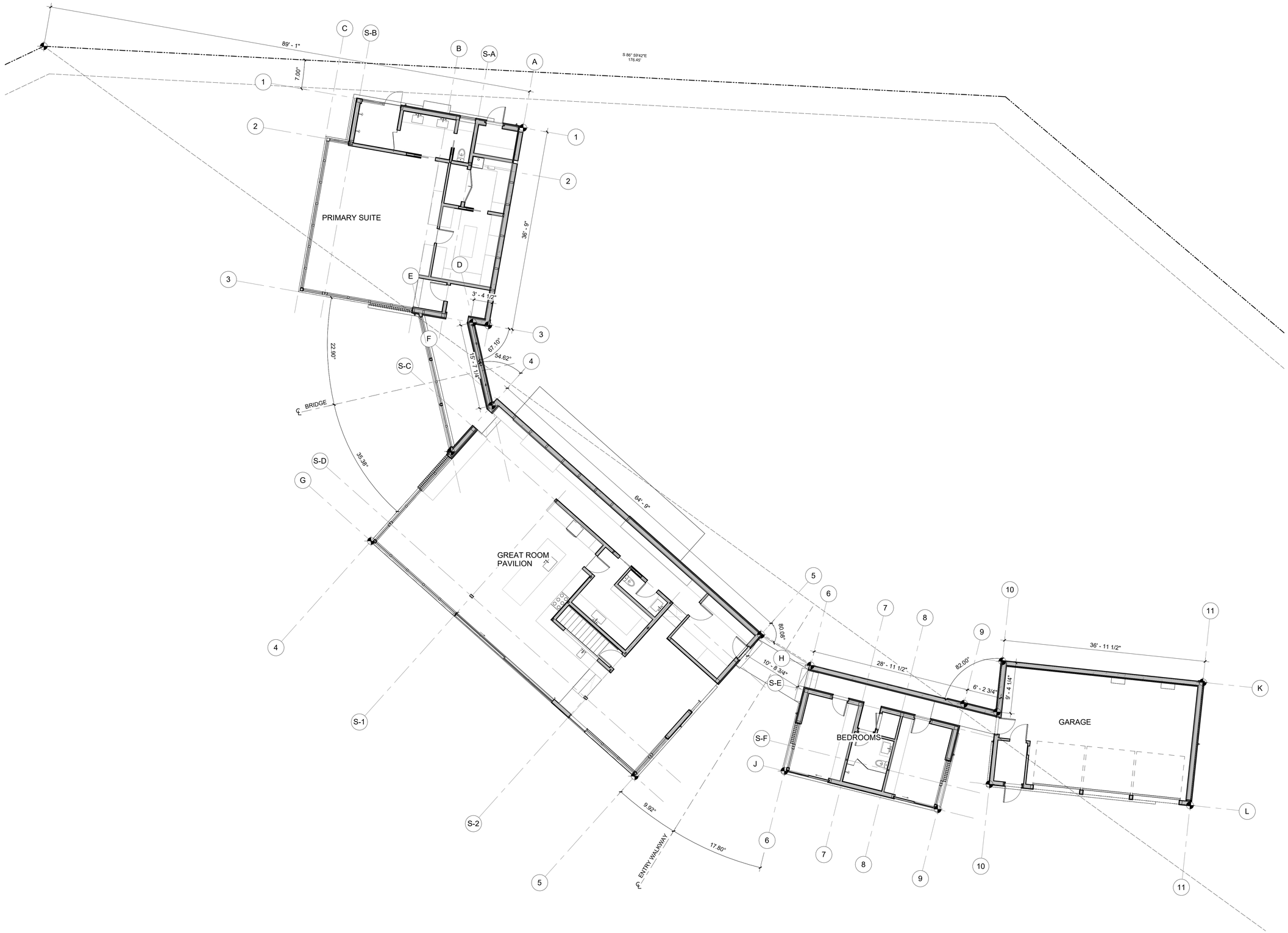
0' 5' 10' 20'

TITLE
KEY PLAN

A2.00
SHEET



1 PLAN - WORK POINTS
1/8" = 1'-0"

5/19/2025 5:33:46 PM

Feldman Architecture

P 1 (415) 252 1441
E info@feldmanarch.com
W feldmanarchitecture.com

project name
WARD RESIDENCE

project address
23 VASQUEZ TRAIL,
CARMEL, CA 93923

apn #
239-121-010 (LOT 253)

client
SARAH AND RICHARD WARD

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24-010

issue
COMBO PERMIT SET

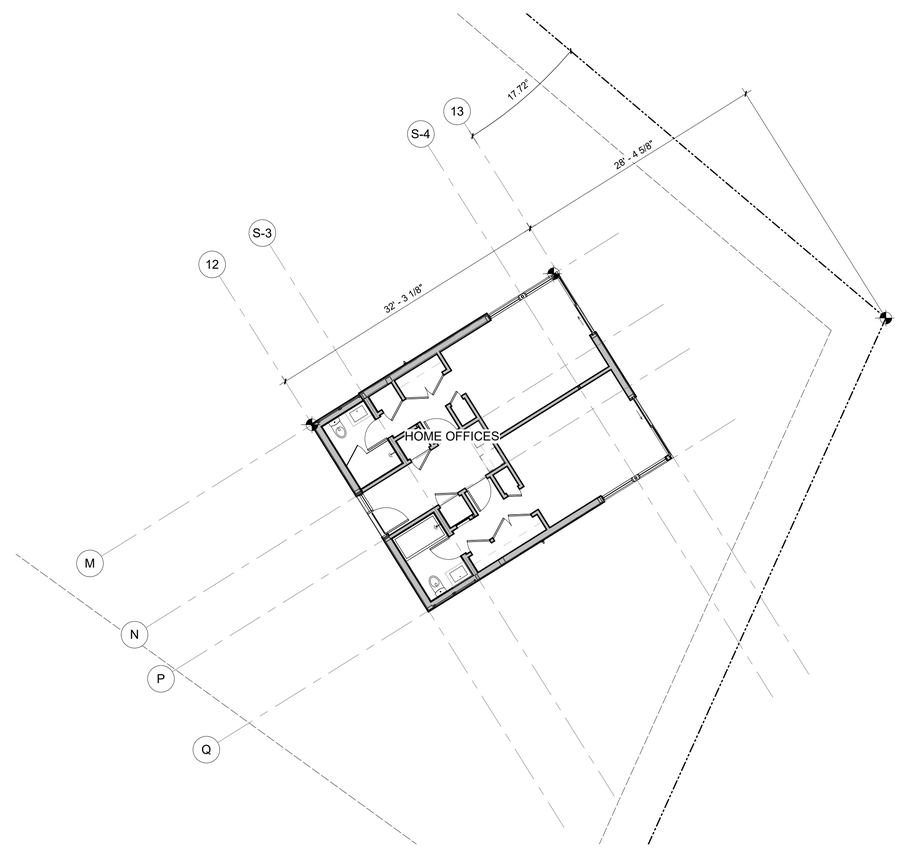
date
05.16.2025

history

△	DESC.	DATE

title
PLAN - WORK POINTS

A2.01
sheet



1 PLAN - HOME OFFICE WORK POINTS
1/8" = 1'-0"

5/19/2025 5:33:47 PM

Feldman Architecture

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E info@feldmanarch.com
W feldmanarchitecture.com

project name
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23 VASQUEZ TRAIL,
CARMEL, CA 93923

apn #
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client
SARAH AND RICHARD WARD

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issue
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date
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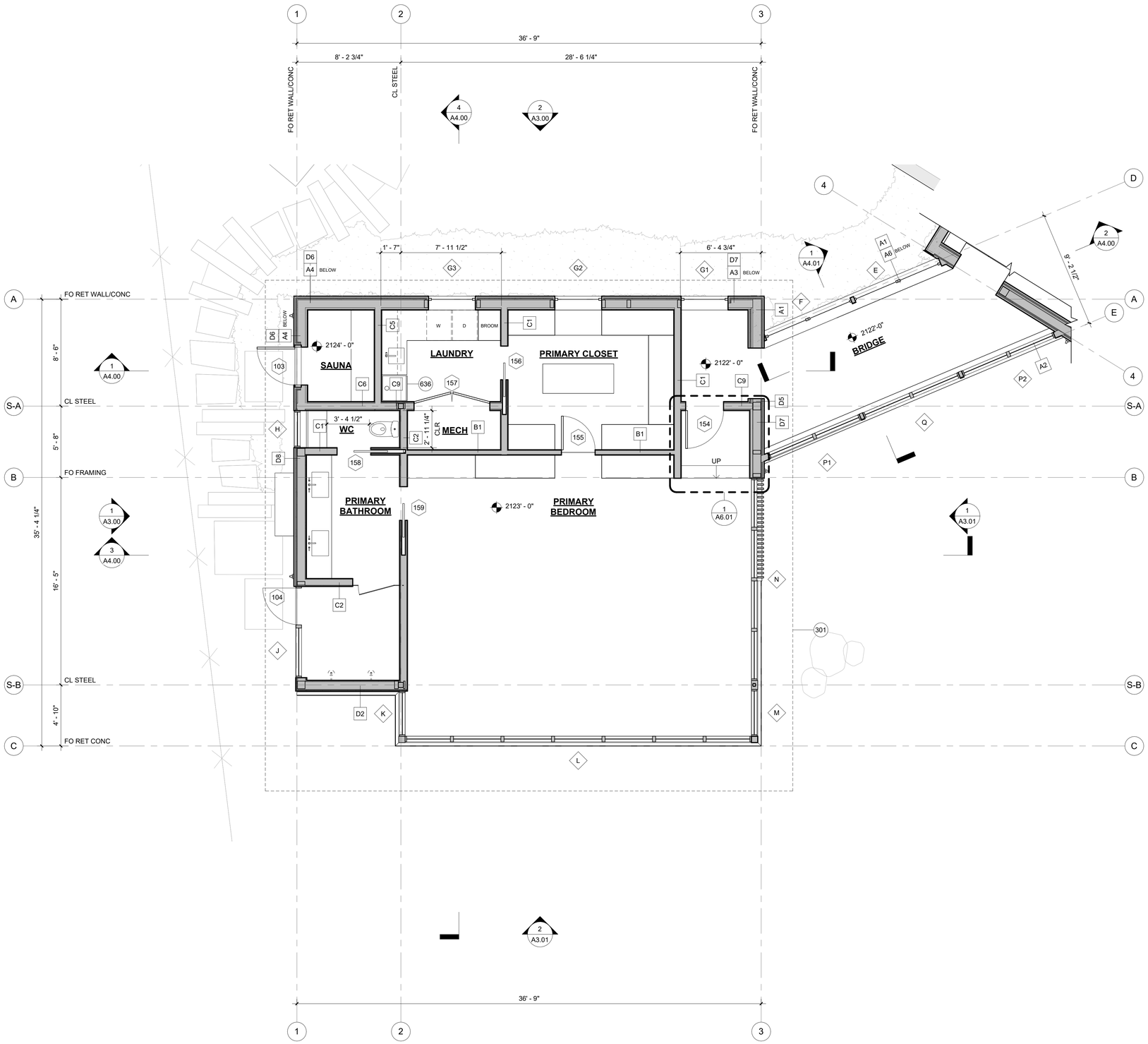
history

△	DESC.	DATE

title
PLAN - HOME OFFICE WORK POINTS

A2.02
sheet



1 MAIN HOUSE - PRIMARY SUITE FLOOR PLAN
1/4" = 1'-0"

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LEGEND

- STONE FLOORING
- CORK FLOORING
- WOOD FLOORING

KEYNOTE LEGEND

301 LINE OF ROOF OVERHANG ABOVE
636 DRYING CLOSET

FLOOR PLAN GENERAL NOTES

1. PROVIDE MIN 36" x 36" LEVEL LANDINGS OUTSIDE AT EXTERIOR DOORS PER 2022 CBC SECTION 1010.1.5, WITH LANDINGS NOT MORE THAN 7.75" BELOW INSIDE FINISHED FLOORS AT INWARD SWINGING (OR SLIDING) DOORS AND .75" AT OUTWARD SWINGING PER 2022 CBC SECTION 1010.1.6. LANDINGS SHALL SLOPE 1/4"/FT MIN. AWAY FROM DOORS.
2. PROVIDE SOUND ATTENUATION INSULATION AT INTERIOR WALLS AND FLOORS.
3. GLASS DOORS & PANELS OF SHOWER & BATHTUB ENCLOSURES & ADJACENT WALL OPENINGS WITHIN 60" ABOVE A STANDING SURFACE OR DRAIN INLET SHALL BE TEMPERED SAFETY GLASS, AS PER 2022 CBC SECTION 2406.4.5.
4. PROVIDE SKID-RESISTANT SURFACE ON BATHROOM FLOORS.
5. BASE MATERIAL BENEATH SHOWER PAN SLOPED TO DRAIN AS PER 2022 CPC SECTION 408.7.
6. PER 2022 CRC R307.2 AND R702.4.2, BATHTUB/SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR.
7. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, TYP.
8. PROVIDE MIN 30" CLR WIDTH @ W.C. AND 24" CLR. FLOOR AREA AT FRONT OF BOWL.
9. ANNULAR SPACE AROUND PIPES, ELECTRIC OUTLETS, CONDUITS OR OTHER OPENINGS IN THE BUILDING'S ENVELOPE AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR METHODS (2022 CALGREEN 4.406.1)
10. RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 75 PERCENT OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE IN ACCORDANCE WITH 2022 CALGREEN SECTION 4.408.1 TIER 2.
11. ALL DIMENSIONS ARE TO FACE OF FRAMING, U.O.N.

KEY PLAN

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CLIENT
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24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

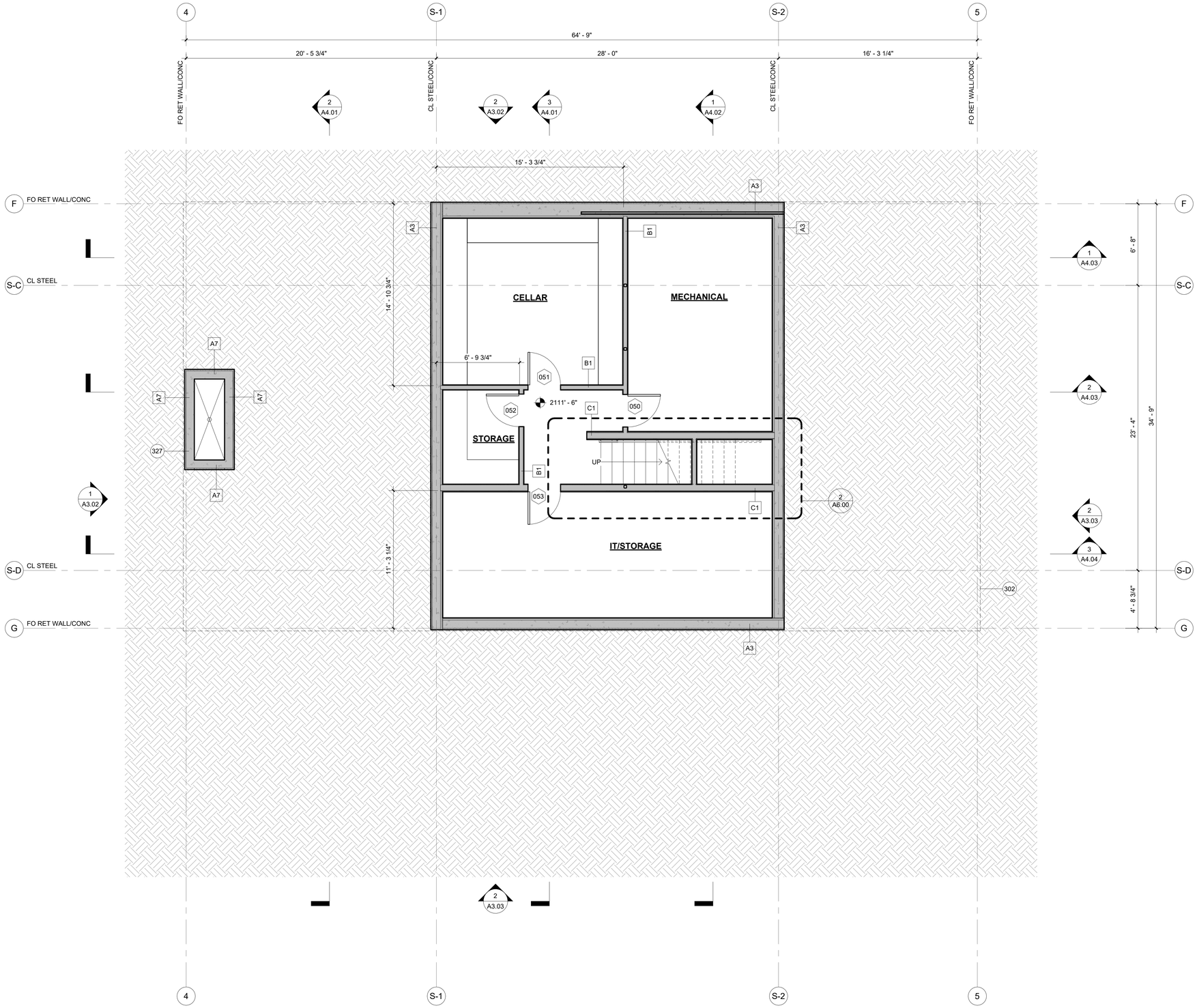
HISTORY

△	DESC.	DATE

0' 2' 4' 8'

TITLE
FLOOR PLAN - PRIMARY SUITE

A2.20
SHEET



LEGEND

- STONE FLOORING
- CORK FLOORING
- WOOD FLOORING

KEYNOTE LEGEND

302 LINE OF FLOOR ABOVE
327 TV VAULT

FLOOR PLAN GENERAL NOTES

1. PROVIDE MIN 36" x 36" LEVEL LANDINGS OUTSIDE AT EXTERIOR DOORS PER 2022 CBC SECTION 1010.1.5, WITH LANDINGS NOT MORE THAN 7.75" BELOW INSIDE FINISHED FLOORS AT INWARD SWINGING (OR SLIDING) DOORS AND .75" AT OUTWARD SWINGING PER 2022 CBC SECTION 1010.1.6. LANDINGS SHALL SLOPE 1/4"/FT MIN. AWAY FROM DOORS.
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11. ALL DIMENSIONS ARE TO FACE OF FRAMING, U.O.N.

KEY PLAN

5/19/2025 5:33:51 PM

1 MAIN HOUSE - BASEMENT FLOOR PLAN
1/4" = 1'-0"

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CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

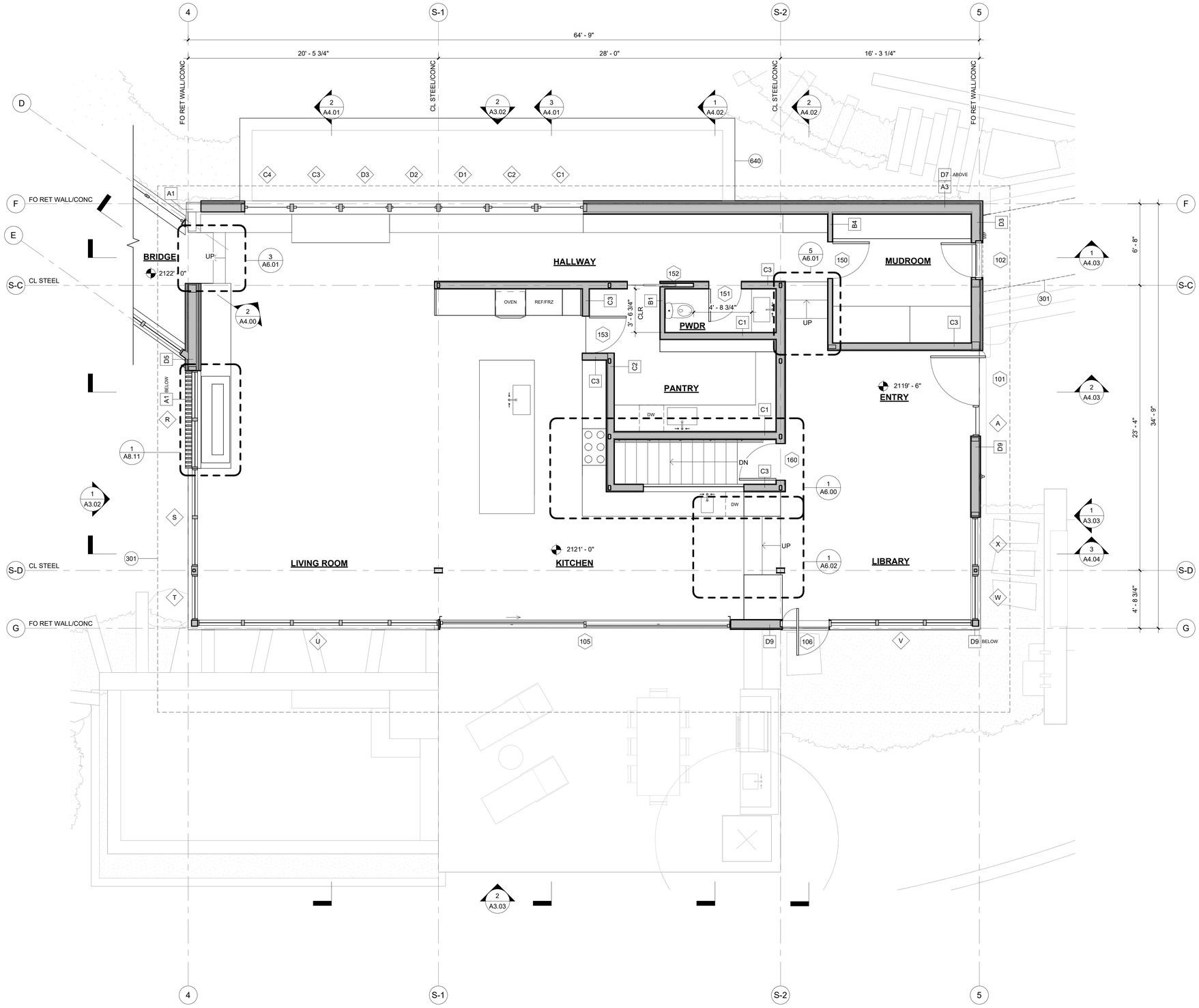
HISTORY

△	DESC.	DATE

0' 2' 4' 8'

TITLE
FLOOR PLAN - GREAT ROOM BASEMENT

A2.21
SHEET



1 MAIN HOUSE - GREAT ROOM PAVILION FLOOR PLAN
1/4" = 1'-0"

5/19/2025 5:33:53 PM

LEGEND

- STONE FLOORING
- CORK FLOORING
- WOOD FLOORING

KEYNOTE LEGEND

301 LINE OF ROOF OVERHANG ABOVE
640 POOL AND SPA EQUIPMENT VAULT

FLOOR PLAN GENERAL NOTES

1. PROVIDE MIN 36" x 36" LEVEL LANDINGS OUTSIDE AT EXTERIOR DOORS PER 2022 CBC SECTION 1010.1.5, WITH LANDINGS NOT MORE THAN 7.75" BELOW INSIDE FINISHED FLOORS AT INWARD SWINGING (OR SLIDING) DOORS AND .75" AT OUTWARD SWINGING PER 2022 CBC SECTION 1010.1.6. LANDINGS SHALL SLOPE 1/4"/FT MIN. AWAY FROM DOORS.
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11. ALL DIMENSIONS ARE TO FACE OF FRAMING, U.O.N.

KEY PLAN

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C-28459
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WARD RESIDENCE

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CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

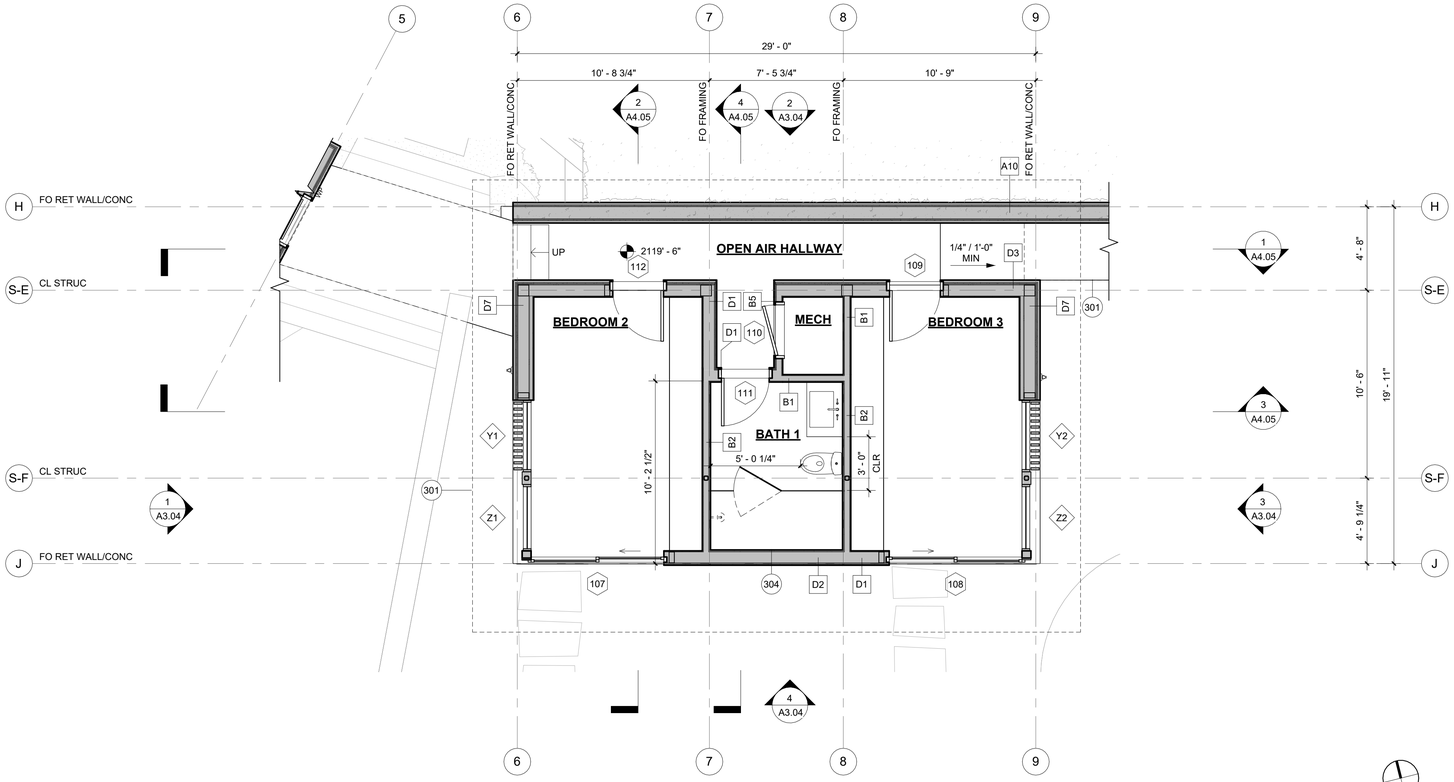
HISTORY

△	DESC.	DATE

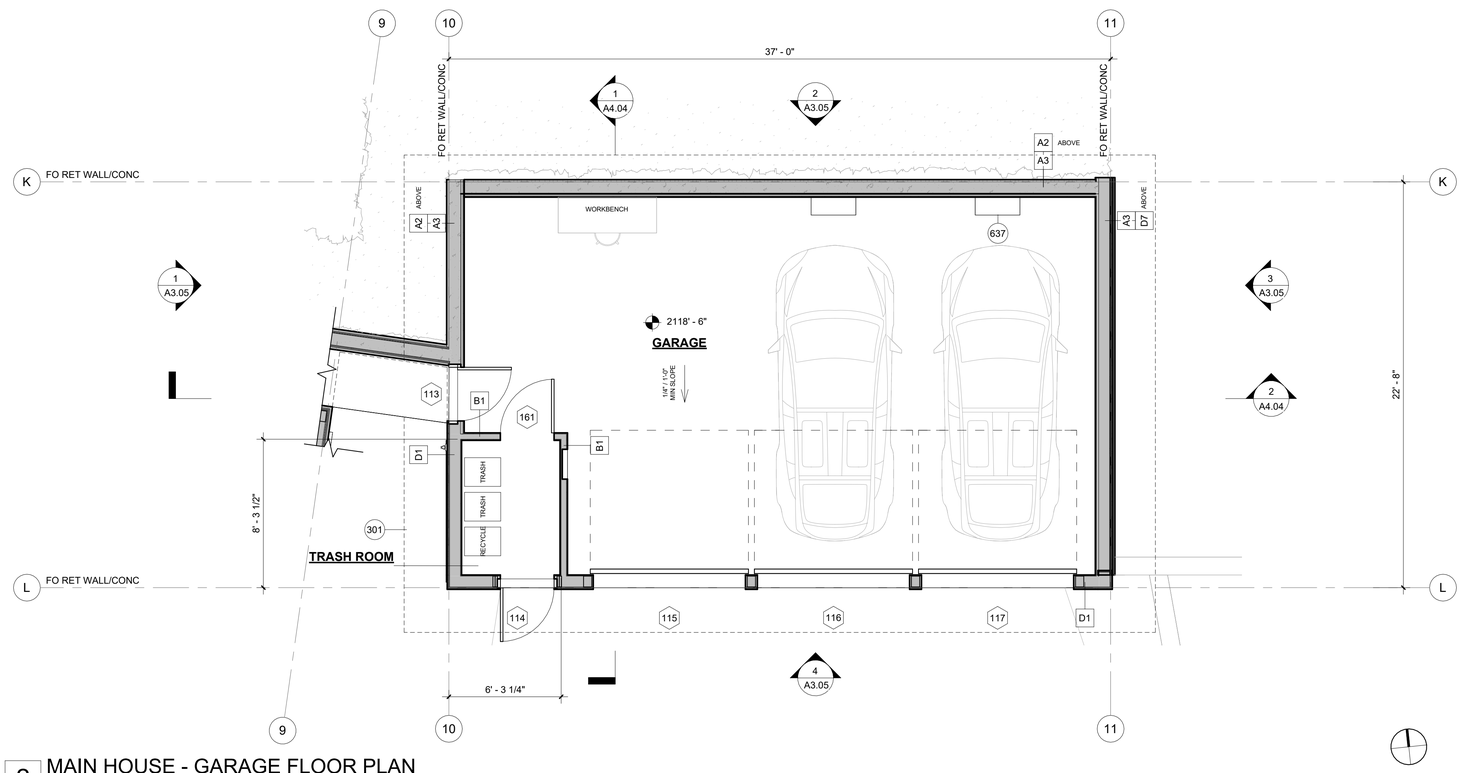
0' 2' 4' 8'

TITLE
FLOOR PLAN - GREAT ROOM

A2.22
SHEET



1 MAIN HOUSE - BEDROOMS FLOOR PLAN
1/4" = 1'-0"



2 MAIN HOUSE - GARAGE FLOOR PLAN
1/4" = 1'-0"

LEGEND

- STONE FLOORING
- CORK FLOORING
- WOOD FLOORING

KEYNOTE LEGEND

301	LINE OF ROOF OVERHANG ABOVE
304	LINE OF SKYLIGHT ABOVE
637	EV CHARGERS

FLOOR PLAN GENERAL NOTES

1. PROVIDE MIN 36" x 36" LEVEL LANDINGS OUTSIDE AT EXTERIOR DOORS PER 2022 CBC SECTION 1010.1.5, WITH LANDINGS NOT MORE THAN 7.75" BELOW INSIDE FINISHED FLOORS AT INWARD SWINGING (OR SLIDING) DOORS AND .75" AT OUTWARD SWINGING PER 2022 CBC SECTION 1010.1.6. LANDINGS SHALL SLOPE 1/4"/FT MIN. AWAY FROM DOORS.
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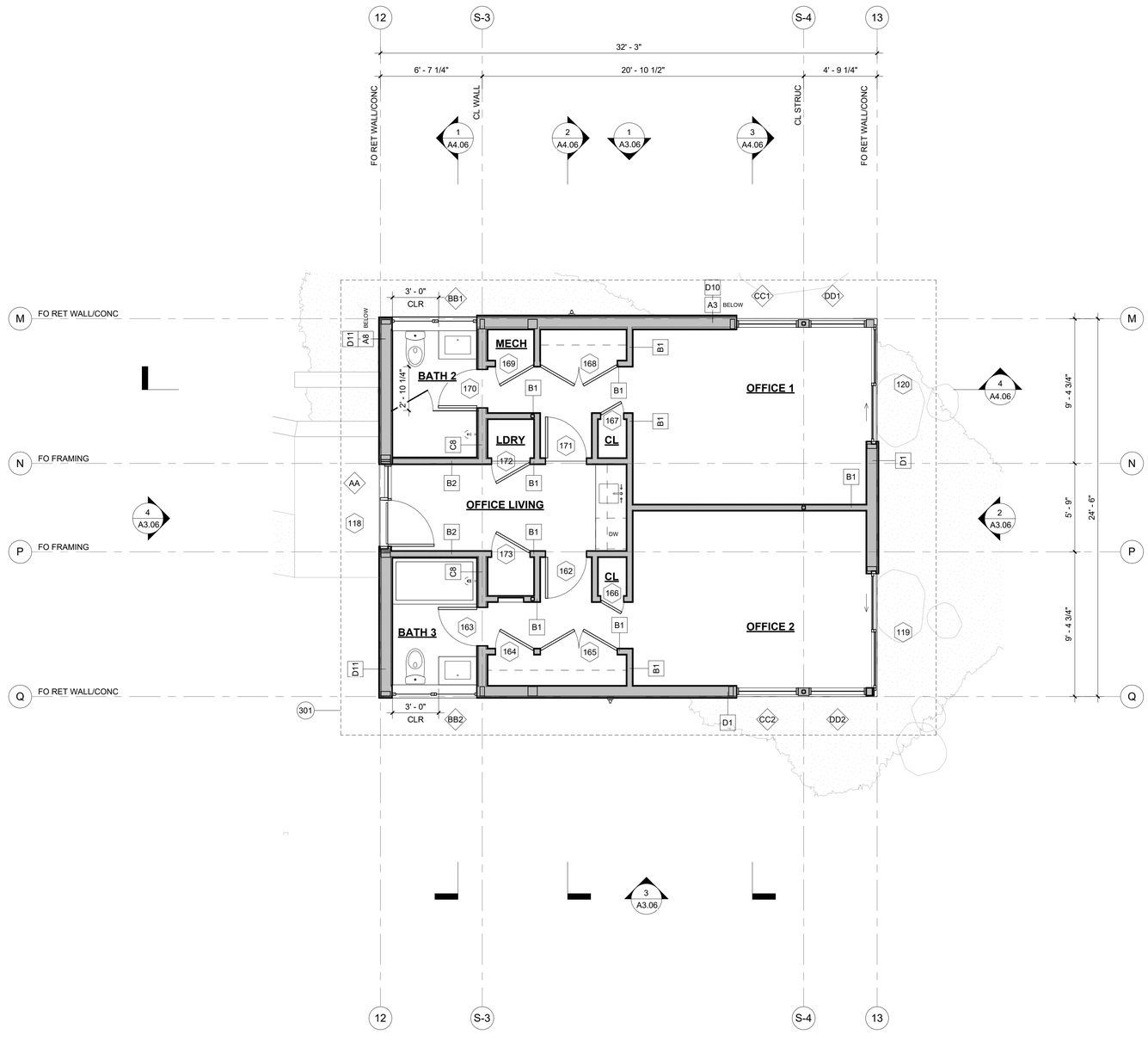
0' 2' 4' 8'

TITLE
FLOOR PLAN - BEDROOMS AND GARAGE

A2.23
SHEET

5/19/2025 5:33:56 PM



1 HOME OFFICES - FLOOR PLAN

1/4" = 1'-0"

LEGEND

STONE FLOORING

CORK FLOORING

WOOD FLOORING

KEYNOTE LEGEND

301 LINE OF ROOF OVERHANG ABOVE

FLOOR PLAN GENERAL NOTES

1. PROVIDE MIN 36" x 36" LEVEL LANDINGS OUTSIDE AT EXTERIOR DOORS PER 2022 CBC SECTION 1010.1.5, WITH LANDINGS NOT MORE THAN 7.75" BELOW INSIDE FINISHED FLOORS AT INWARD SWINGING (OR SLIDING) DOORS AND .75" AT OUTWARD SWINGING PER 2022 CBC SECTION 1010.1.6. LANDINGS SHALL SLOPE 1/4"/FT MIN. AWAY FROM DOORS.
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7. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, TYP.
8. PROVIDE MIN 30" CLR WIDTH @ W.C. AND 24" CLR. FLOOR AREA AT FRONT OF BOWL.
9. ANNULAR SPACE AROUND PIPES, ELECTRIC OUTLETS, CONDUITS OR OTHER OPENINGS IN THE BUILDING'S ENVELOPE AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR METHODS (2022 CALGREEN 4.406.1)
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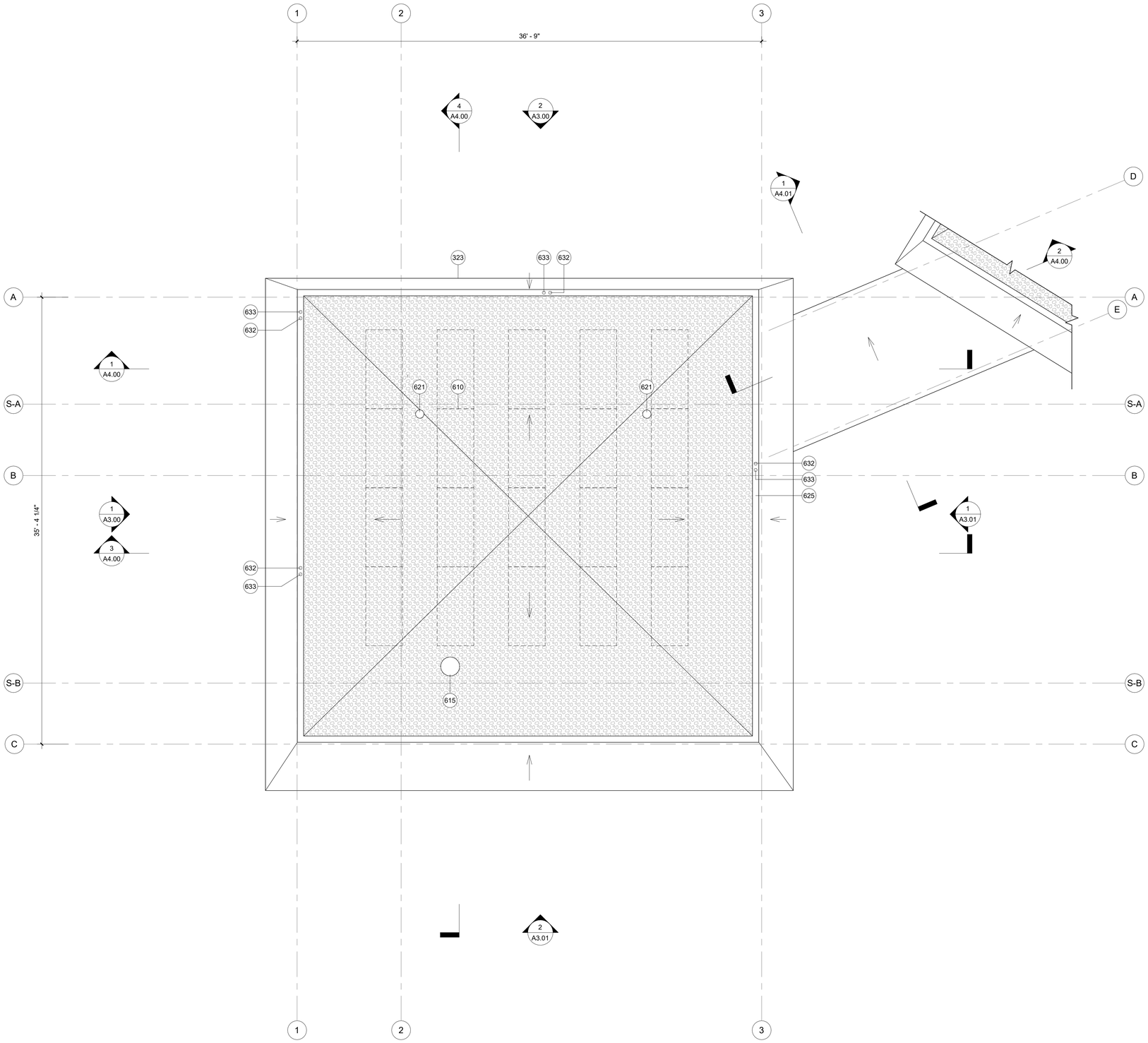
0' 2' 4' 8'

TITLE
FLOOR PLAN - HOME OFFICES

A2.24
SHEET

5/19/2025 5:33:57 PM



LEGEND

DIRECTION OF SLOPE

KEYNOTE LEGEND

323	MTL FASCIA AT OVERHANG, TYP
610	SOLAR PV ARRAY
615	FIREPLACE ROOF VENT
621	ROOF VENT
625	INTEGRATED MTL GUTTER
632	OVERFLOW DRAIN AT EXTERIOR WALL
633	RAINWATER LEADER

ROOF PLAN GENERAL NOTES

1. ROOFING SHALL MAINTAIN A CLASS 'A' FIRE RATING AND COMPLY WITH THE PROVISIONS OF 2022 CRC SECTION R902.1.3.
2. ROOF AND DECK SURFACES SHALL SLOPE AT 1/4" PER FOOT MINIMUM, U.O.N. VERIFY ALL SLOPES IN FIELD WITH ARCHITECT.
3. PROVIDE CRICKETS AT SKYLIGHTS, CHIMNEYS, MECHANICAL EQUIPMENT, AND OTHER LOCATIONS AS REQUIRED FOR POSITIVE DRAINAGE TOWARD DRAINS.
4. THE CONTRACTORS SHALL HAVE A COPY OF THE ROOFING SYSTEM I.C.B.O.REPORT PRESENT AT INSPECTIONS.
5. PROVIDE INDEPENDENTLY PIPED OVERFLOW DRAINS AT ROOF DRAIN LOCATIONS OR OVERFLOW SCUPPERS AS NOTED/REQUIRED.
6. PROVIDE CLEANOUTS AS REQUIRED.
7. PROVIDE BASKET DEBRIS SCREENS AT ROOF DRAINS.
8. FLASH AND SEAL ROOF PENETRATIONS SUCH AS VENTS, FANS, HOODS, ETC. AS REQUIRED FOR A WATER-TIGHT INSTALLATION.
9. SHEET METAL FLASHING AND TRIM SHALL BE G.S.M. TO THE MINIMUM GAUGES SPECIFIED IN THE PROJECT MANUAL, U.O.N.
10. STRUCTURAL OBSERVATION SHALL BE REQUIRED BY THE ENGINEER FOR STRUCTURAL CONFORMANCE TO THE APPROVED PLANS.
11. ROOF CAVITIES ARE FILLED WITH INSULATION IN LIEU OF VENTILATION. SPRAY-IN-PLACE FOAM INSULATION IS USED AS A VAPOR BARRIER (2" MIN. APPLICATION) AS PRESCRIBED BY INDUSTRY STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
    A. ROOF OVER CONDITIONED SPACES:
    (3" THK (R-19) SPRAY APPLIED FOAM-IN-PLACE INSULATION APPLIED TO ROOF DECK W/ R-19 BATT INSULATION, TYP.
    B. ROOF OVER UNCONDITIONED SPACES:
    NO INSULATION, TYP.
    C. PARAPETS:
    FILL CAVITIES W/ SPRAY APPLIED FOAM-IN-PLACE INSULATION, TYP.
    D. FREE-STANDING WALLS:
    FILL CAVITIES W/ SPRAY APPLIED FOAM-IN-PLACE INSULATION, TYP.

KEY PLAN

FELDMAN ARCHITECTURE
1648 Pacific Avenue, Suite B
San Francisco, California 94109
415 252 1441
www.feldmanarch.com

LICENSED ARCHITECT
JONATHAN FELDMAN
C-28459
11/30/2025
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT NAME
WARD RESIDENCE

PROJECT ADDRESS
23 VASQUEZ TRAIL, CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

HISTORY

△	DESC.	DATE

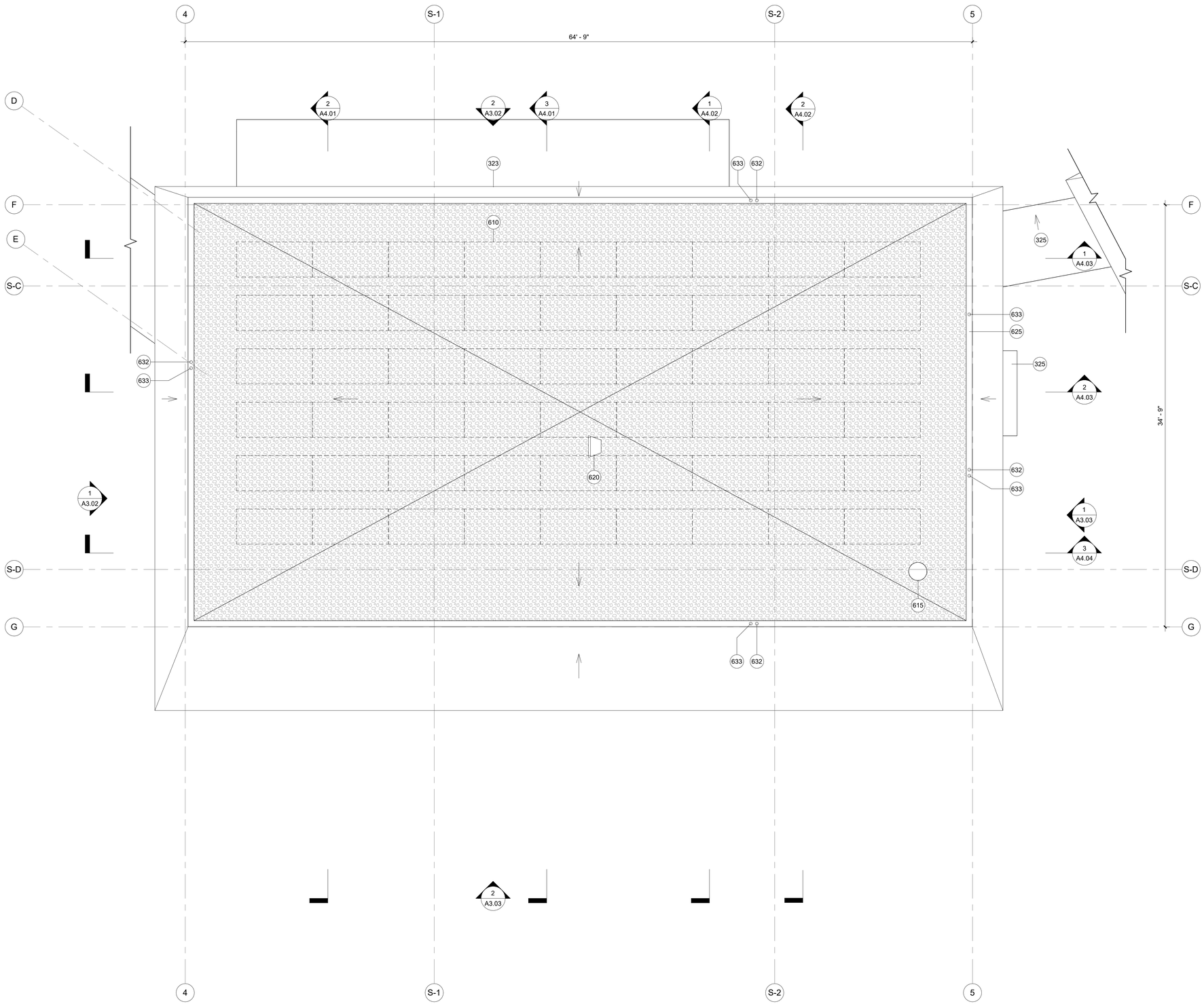
0' 2'-6" 5' 10'

TITLE
ROOF PLAN - PRIMARY SUITE

A2.25
SHEET

5/19/2025 5:33:59 PM

1 ROOF PLAN - MAIN HOUSE - PRIMARY SUITE
1/4" = 1'-0"



1 ROOF PLAN - MAIN HOUSE - GREAT ROOM

1/4" = 1'-0"

LEGEND

DIRECTION OF SLOPE

KEYNOTE LEGEND

323	MTL FASCIA AT OVERHANG, TYP
325	FORMED ALUM AWNING, PTD
610	SOLAR PV ARRAY
615	FIREPLACE ROOF VENT
620	RANGE HOOD ROOF VENT
625	INTEGRATED MTL GUTTER
632	OVERFLOW DRAIN AT EXTERIOR WALL
633	RAINWATER LEADER

ROOF PLAN GENERAL NOTES

1. ROOFING SHALL MAINTAIN A CLASS 'A' FIRE RATING AND COMPLY WITH THE PROVISIONS OF 2022 CRC SECTION R902.1.3.
2. ROOF AND DECK SURFACES SHALL SLOPE AT 1/4" PER FOOT MINIMUM, U.O.N. VERIFY ALL SLOPES IN FIELD WITH ARCHITECT.
3. PROVIDE CRICKETS AT SKYLIGHTS, CHIMNEYS, MECHANICAL EQUIPMENT, AND OTHER LOCATIONS AS REQUIRED FOR POSITIVE DRAINAGE TOWARD DRAINS.
4. THE CONTRACTORS SHALL HAVE A COPY OF THE ROOFING SYSTEM I.C.B.O.REPORT PRESENT AT INSPECTIONS.
5. PROVIDE INDEPENDENTLY PIPED OVERFLOW DRAINS AT ROOF DRAIN LOCATIONS OR OVERFLOW SCUPPERS AS NOTED/REQUIRED.
6. PROVIDE CLEANOUTS AS REQUIRED.
7. PROVIDE BASKET DEBRIS SCREENS AT ROOF DRAINS.
8. FLASH AND SEAL ROOF PENETRATIONS SUCH AS VENTS, FANS, HOODS, ETC. AS REQUIRED FOR A WATER-TIGHT INSTALLATION.
9. SHEET METAL FLASHING AND TRIM SHALL BE G.S.M. TO THE MINIMUM GAUGES SPECIFIED IN THE PROJECT MANUAL, U.O.N.
10. STRUCTURAL OBSERVATION SHALL BE REQUIRED BY THE ENGINEER FOR STRUCTURAL CONFORMANCE TO THE APPROVED PLANS.
11. ROOF CAVITIES ARE FILLED WITH INSULATION IN LIEU OF VENTILATION. SPRAY-IN-PLACE FOAM INSULATION IS USED AS A VAPOR BARRIER (2" MIN. APPLICATION) AS PRESCRIBED BY INDUSTRY STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
    - A. ROOF OVER CONDITIONED SPACES: (3" THK (R-19) SPRAY APPLIED FOAM-IN-PLACE INSULATION APPLIED TO ROOF DECK W/ R-19 BATT INSULATION, TYP.
    - B. ROOF OVER UNCONDITIONED SPACES: NO INSULATION, TYP.
    - C. PARAPETS: FILL CAVITIES W/ SPRAY APPLIED FOAM-IN-PLACE INSULATION, TYP.
    - D. FREE-STANDING WALLS: FILL CAVITIES W/ SPRAY APPLIED FOAM-IN-PLACE INSULATION, TYP.

KEY PLAN

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C-28459
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FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

HISTORY

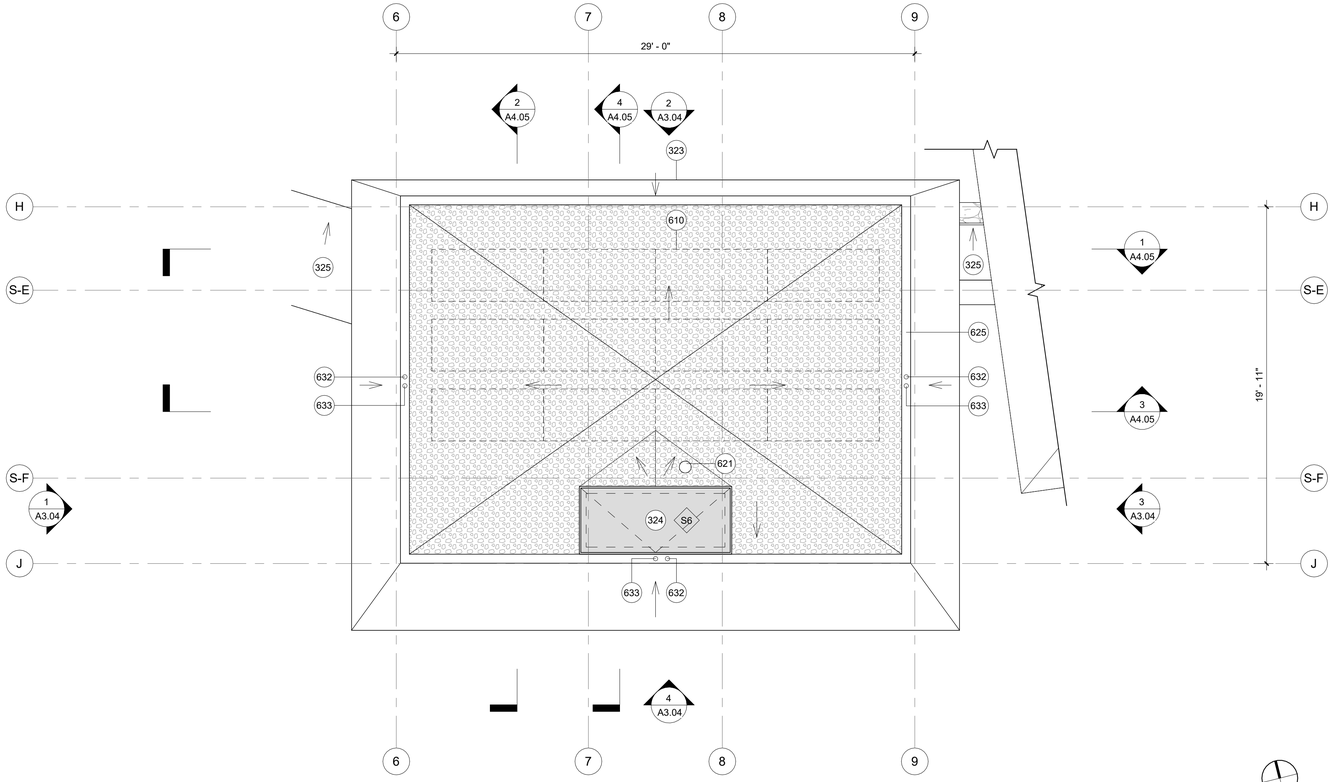
△	DESC.	DATE

0' 2'-6" 5' 10'

TITLE
ROOF PLAN - GREAT ROOM

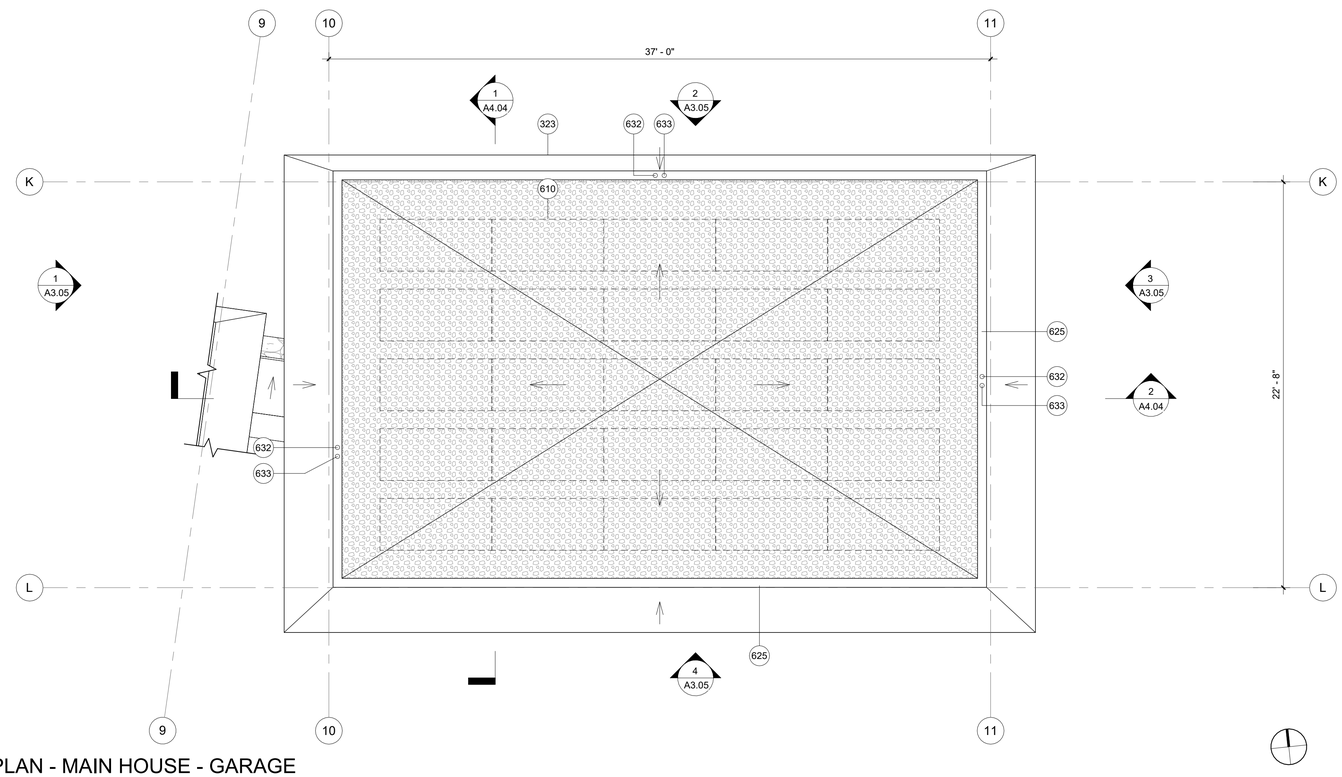
A2.26
SHEET

5/19/2025 5:34:01 PM



2 ROOF PLAN - MAIN HOUSE - BEDROOMS

1/4" = 1'-0"



1 ROOF PLAN - MAIN HOUSE - GARAGE

1/4" = 1'-0"

LEGEND

DIRECTION OF SLOPE

KEYNOTE LEGEND

323	MTL FASCIA AT OVERHANG, TYP
324	MOTORIZED SKYLIGHT
325	FORMED ALUM AWNING, PTD
610	SOLAR PV ARRAY
621	ROOF VENT
625	INTEGRATED MTL GUTTER
632	OVERFLOW DRAIN AT EXTERIOR WALL
633	RAINWATER LEADER

ROOF PLAN GENERAL NOTES

1. ROOFING SHALL MAINTAIN A CLASS 'A' FIRE RATING AND COMPLY WITH THE PROVISIONS OF 2022 CRC SECTION R902.1.3.
2. ROOF AND DECK SURFACES SHALL SLOPE AT 1/4" PER FOOT MINIMUM, U.O.N. VERIFY ALL SLOPES IN FIELD WITH ARCHITECT.
3. PROVIDE CRICKETS AT SKYLIGHTS, CHIMNEYS, MECHANICAL EQUIPMENT, AND OTHER LOCATIONS AS REQUIRED FOR POSITIVE DRAINAGE TOWARD DRAINS.
4. THE CONTRACTORS SHALL HAVE A COPY OF THE ROOFING SYSTEM I.C.B.O.REPORT PRESENT AT INSPECTIONS.
5. PROVIDE INDEPENDENTLY PIPED OVERFLOW DRAINS AT ROOF DRAIN LOCATIONS OR OVERFLOW SCUPPERS AS NOTED/REQUIRED.
6. PROVIDE CLEANOUTS AS REQUIRED.
7. PROVIDE BASKET DEBRIS SCREENS AT ROOF DRAINS.
8. FLASH AND SEAL ROOF PENETRATIONS SUCH AS VENTS, FANS, HOODS, ETC. AS REQUIRED FOR A WATER-TIGHT INSTALLATION.
9. SHEET METAL FLASHING AND TRIM SHALL BE G.S.M. TO THE MINIMUM GAUGES SPECIFIED IN THE PROJECT MANUAL, U.O.N.
10. STRUCTURAL OBSERVATION SHALL BE REQUIRED BY THE ENGINEER FOR STRUCTURAL CONFORMANCE TO THE APPROVED PLANS.
11. ROOF CAVITIES ARE FILLED WITH INSULATION IN LIEU OF VENTILATION. SPRAY-IN-PLACE FOAM INSULATION IS USED AS A VAPOR BARRIER (2" MIN. APPLICATION) AS PRESCRIBED BY INDUSTRY STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
    A. ROOF OVER CONDITIONED SPACES:
       (3" THK (R-19) SPRAY APPLIED FOAM-IN-PLACE INSULATION APPLIED TO ROOF DECK W/ R-19 BATT INSULATION, TYP.
    B. ROOF OVER UNCONDITIONED SPACES:
       NO INSULATION, TYP.
    C. PARAPETS:
       FILL CAVITIES W/ SPRAY APPLIED FOAM-IN-PLACE INSULATION, TYP.
    D. FREE-STANDING WALLS:
       FILL CAVITIES W/ SPRAY APPLIED FOAM-IN-PLACE INSULATION, TYP.

KEY PLAN

FELDMAN ARCHITECTURE
1648 Pacific Avenue, Suite B
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LICENSED ARCHITECT
JONATHAN FELDMAN
C-28459
11/30/2025
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT NAME
WARD RESIDENCE

PROJECT ADDRESS
23 VASQUEZ TRAIL,
CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

HISTORY

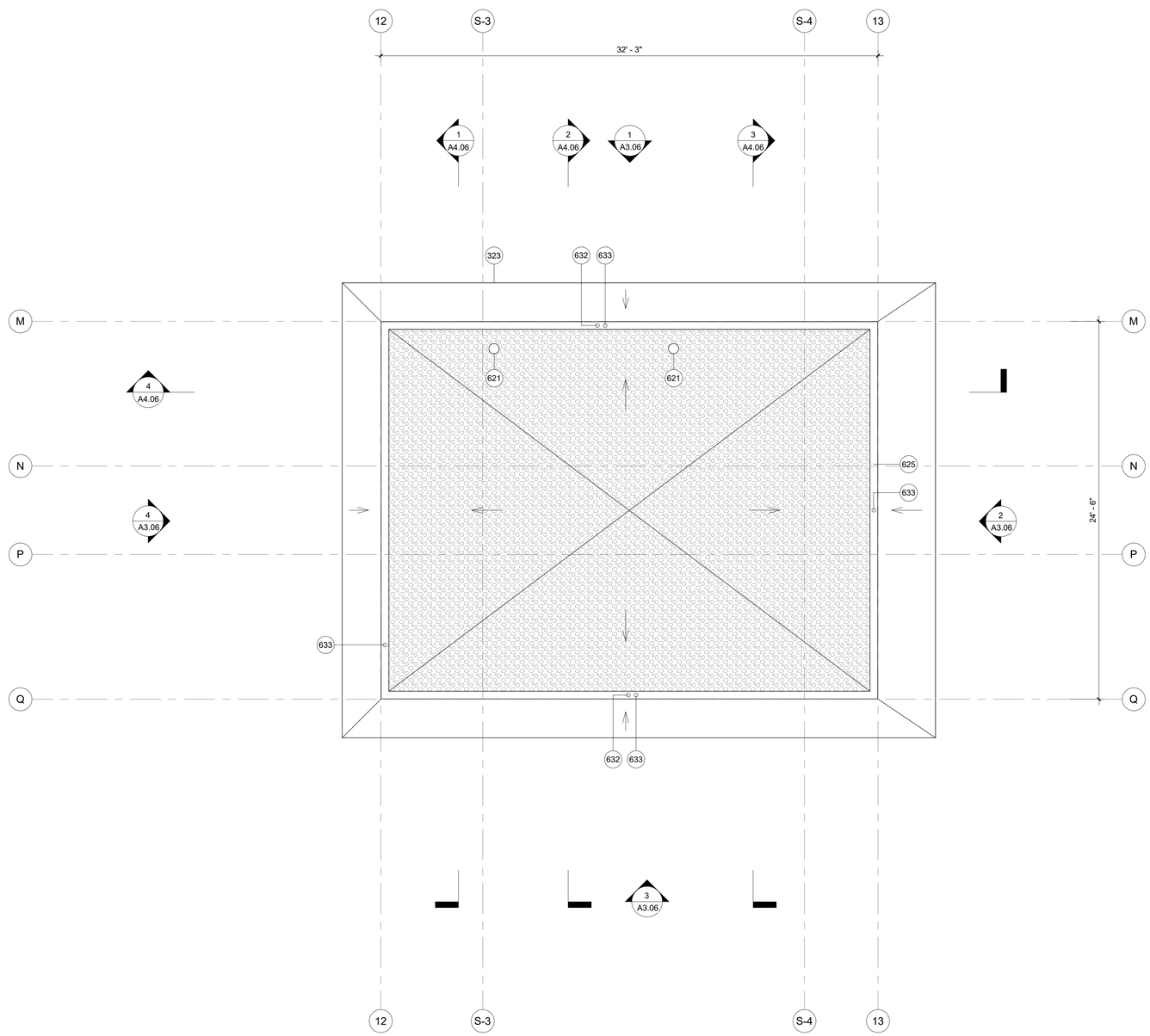
△	DESC.	DATE

0' 2' 4' 8'

TITLE
ROOF PLAN - BEDROOMS AND GARAGE

A2.27
SHEET

5/19/2025 5:34:03 PM



1 ROOF PLAN - HOME OFFICE
1/4" = 1'-0"

5/19/2025 5:34:05 PM

LEGEND

DIRECTION OF SLOPE

KEYNOTE LEGEND

323	MTL FASCIA AT OVERHANG, TYP
621	ROOF VENT
625	INTEGRATED MTL GUTTER
632	OVERFLOW DRAIN AT EXTERIOR WALL
633	RAINWATER LEADER

ROOF PLAN GENERAL NOTES

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5. PROVIDE INDEPENDENTLY PIPED OVERFLOW DRAINS AT ROOF DRAIN LOCATIONS OR OVERFLOW SCUPPERS AS NOTED/REQUIRED.
6. PROVIDE CLEANOUTS AS REQUIRED.
7. PROVIDE BASKET DEBRIS SCREENS AT ROOF DRAINS.
8. FLASH AND SEAL ROOF PENETRATIONS SUCH AS VENTS, FANS, HOODS, ETC. AS REQUIRED FOR A WATER-TIGHT INSTALLATION.
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    (3" THK (R-19) SPRAY APPLIED FOAM-IN-PLACE INSULATION APPLIED TO ROOF DECK W/ R-19 BATT INSULATION, TYP.
    B. ROOF OVER UNCONDITIONED SPACES:
    NO INSULATION, TYP.
    C. PARAPETS:
    FILL CAVITIES W/ SPRAY APPLIED FOAM-IN-PLACE INSULATION, TYP.
    D. FREE-STANDING WALLS:
    FILL CAVITIES W/ SPRAY APPLIED FOAM-IN-PLACE INSULATION, TYP.

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JONATHAN FELDMAN
C-28459
11/30/2025
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WARD RESIDENCE

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CARMEL, CA 93923

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SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

HISTORY

△	DESC.	DATE

0' 2' 4' 8'

TITLE
ROOF PLAN - HOME OFFICES

A2.28
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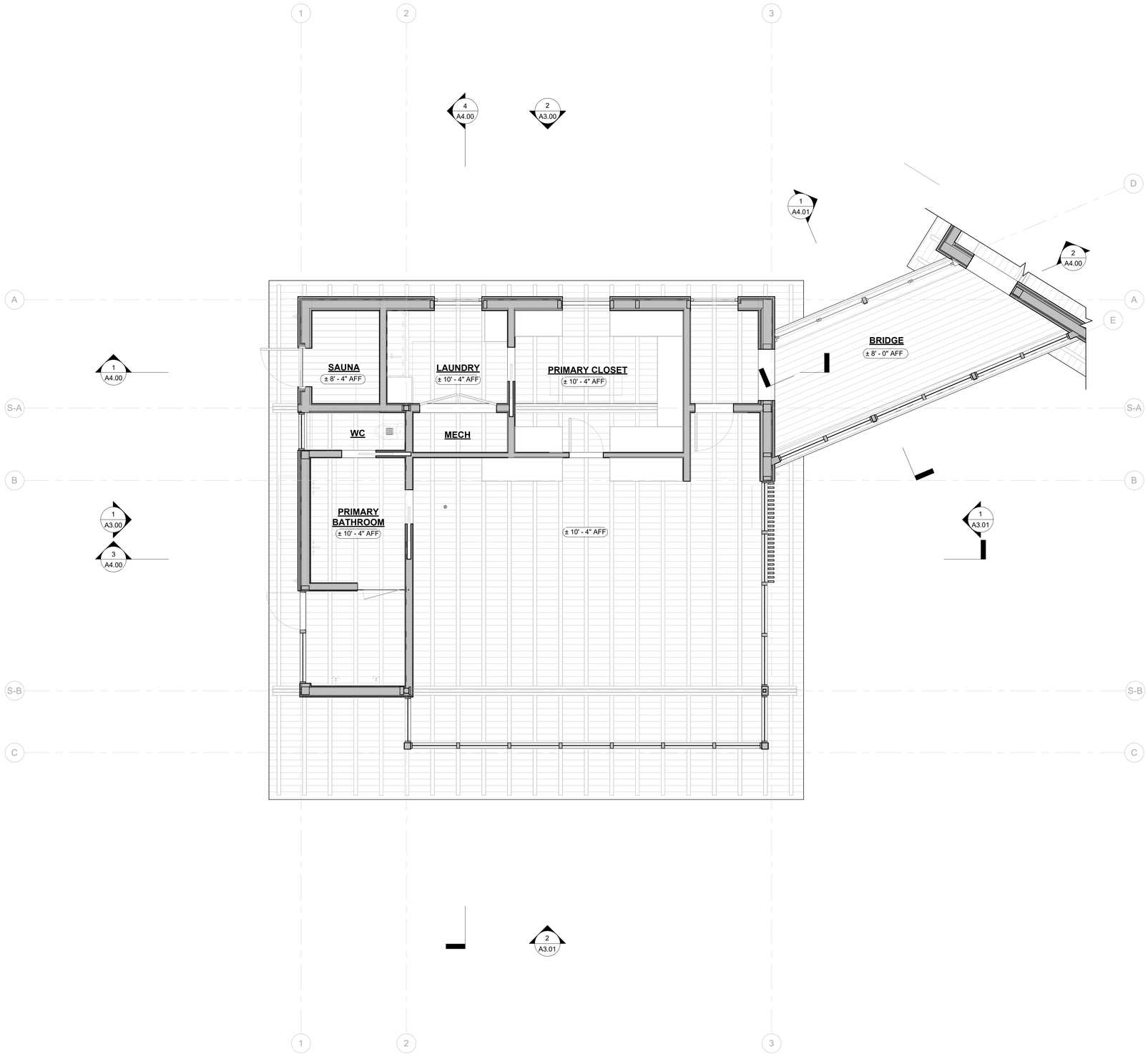

1 MAIN HOUSE - PRIMARY SUITE REFLECTED CEILING PLAN
1/4" = 1'-0"

LEGEND

- GYPSUM BOARD CEILING, PT'D
- WOOD CEILING
- PLYWOOD

KEYNOTE LEGEND

REFLECTED CLG. PLAN GENERAL NOTES

1. CEILING HEIGHTS ARE TO FINISH FLOOR SURFACE, UNLESS OTHERWISE NOTED.
2. LIGHTING IS SHOWN FOR LOCATION AND LAYOUT ONLY, SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR FIXTURE TYPES.
3. GYPSUM BOARD CEILING UNLESS OTHERWISE NOTED.
4. LAYOUT REQUIREMENTS: CONTRACTOR SHALL COORDINATE STRUCTURAL FRAMING WITH ARCHITECTURAL LIGHTING, REFLECTED CEILING PLANS, MECHANICAL, PLUMBING AND ELECTRICAL INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO, RECESSED AND SEMI-RECESSED LIGHTING, MECHANICAL DUCTS AND PIPING, ROOF DRAINS, FIRE SPRINKLER PIPE AND HEADS AND PLUMBING DRAINS, WASTE AND SUPPLY LINES.

KEY PLAN

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JONATHAN FELDMAN
C-28459
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PROJECT ADDRESS
23 VASQUEZ TRAIL,
CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
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DATE
05.16.2025

HISTORY

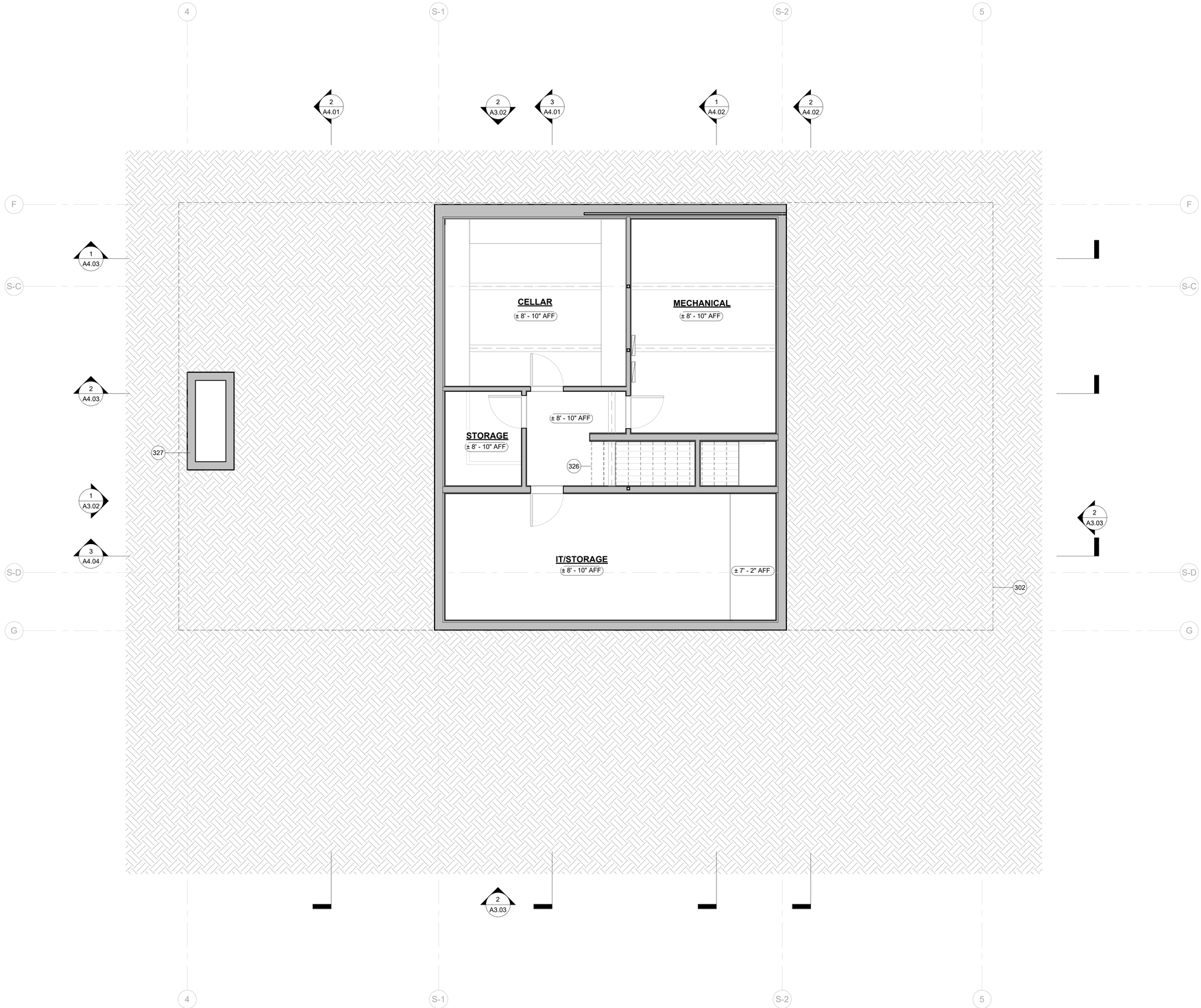
△	DESC.	DATE

0' 2' 4' 8'

TITLE
REFLECTED CEILING PLAN - PRIMARY SUITE

A2.50
SHEET

5/19/2025 5:34:07 PM



1 MAIN HOUSE - BASEMENT REFLECTED CEILING PLAN
1/4" = 1'-0"

LEGEND

- GYPSUM BOARD CEILING, PT'D
- WOOD CEILING
- PLYWOOD

KEYNOTE LEGEND

302 LINE OF FLOOR ABOVE
326 STAIRS ABV
327 TV VAULT

REFLECTED CLG. PLAN GENERAL NOTES

1. CEILING HEIGHTS ARE TO FINISH FLOOR SURFACE, UNLESS OTHERWISE NOTED.
2. LIGHTING IS SHOWN FOR LOCATION AND LAYOUT ONLY, SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR FIXTURE TYPES.
3. GYPSUM BOARD CEILING UNLESS OTHERWISE NOTED.
4. LAYOUT REQUIREMENTS: CONTRACTOR SHALL COORDINATE STRUCTURAL FRAMING WITH ARCHITECTURAL LIGHTING, REFLECTED CEILING PLANS, MECHANICAL, PLUMBING AND ELECTRICAL INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO, RECESSED AND SEMI-RECESSED LIGHTING, MECHANICAL DUCTS AND PIPING, ROOF DRAINS, FIRE SPRINKLER PIPE AND HEADS AND PLUMBING DRAINS, WASTE AND SUPPLY LINES.

KEY PLAN

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24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

HISTORY

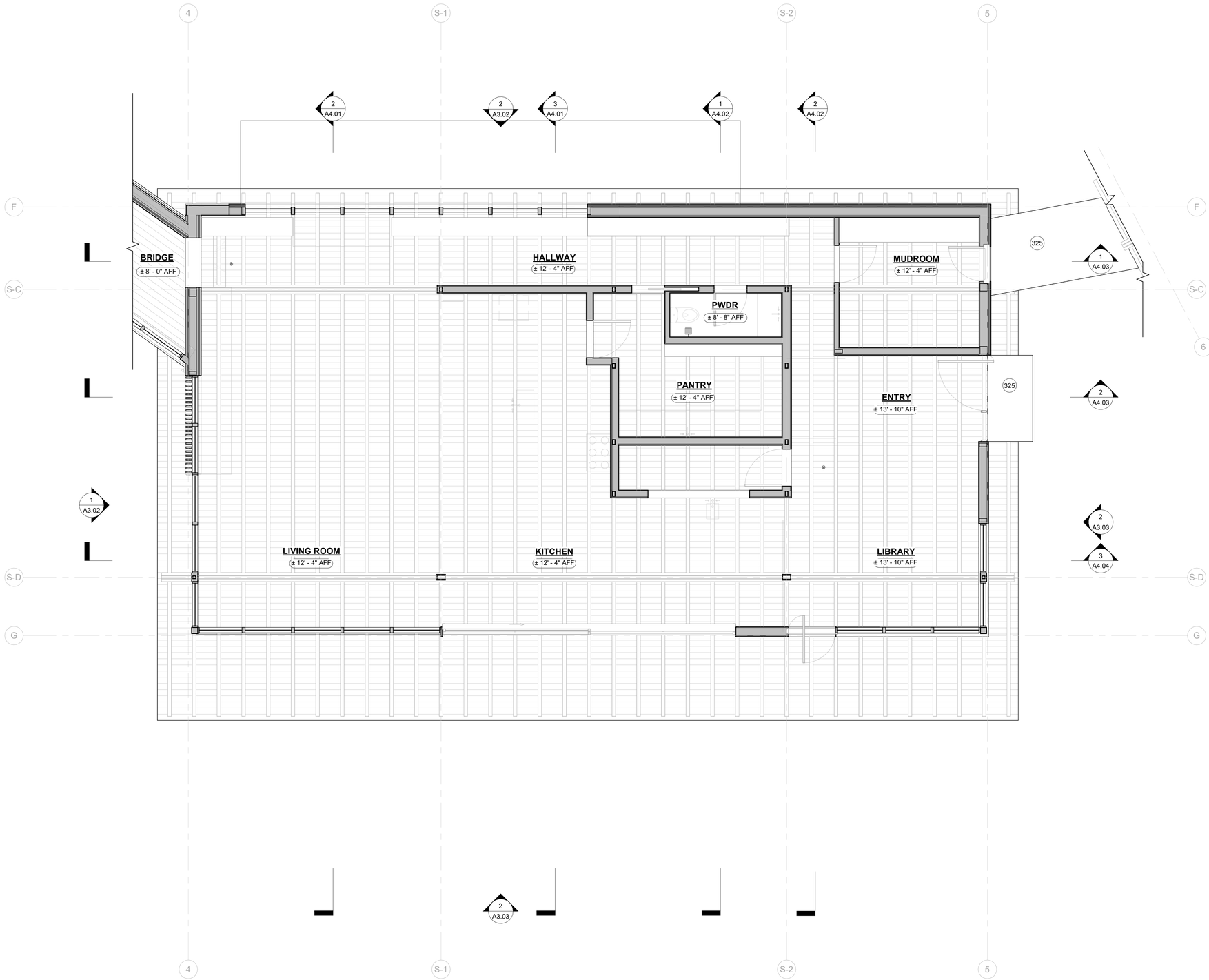
△	DESC.	DATE

0' 2' 4' 8'

TITLE
REFLECTED CEILING PLAN - GREAT ROOM BASEMENT

A2.51
SHEET

5/19/2025 5:34:08 PM



1 MAIN HOUSE - GREAT ROOM PAVILION REFLECTED CEILING PLAN
1/4" = 1'-0"

LEGEND

- GYPSUM BOARD CEILING, PT'D
- WOOD CEILING
- PLYWOOD

KEYNOTE LEGEND

325 FORMED ALUM AWNING, PTD

REFLECTED CLG. PLAN GENERAL NOTES

1. CEILING HEIGHTS ARE TO FINISH FLOOR SURFACE, UNLESS OTHERWISE NOTED.
2. LIGHTING IS SHOWN FOR LOCATION AND LAYOUT ONLY, SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR FIXTURE TYPES.
3. GYPSUM BOARD CEILING UNLESS OTHERWISE NOTED.
4. LAYOUT REQUIREMENTS: CONTRACTOR SHALL COORDINATE STRUCTURAL FRAMING WITH ARCHITECTURAL LIGHTING, REFLECTED CEILING PLANS, MECHANICAL, PLUMBING AND ELECTRICAL INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO, RECESSED AND SEMI-RECESSED LIGHTING, MECHANICAL DUCTS AND PIPING, ROOF DRAINS, FIRE SPRINKLER PIPE AND HEADS AND PLUMBING DRAINS, WASTE AND SUPPLY LINES.

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WARD RESIDENCE

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FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

HISTORY

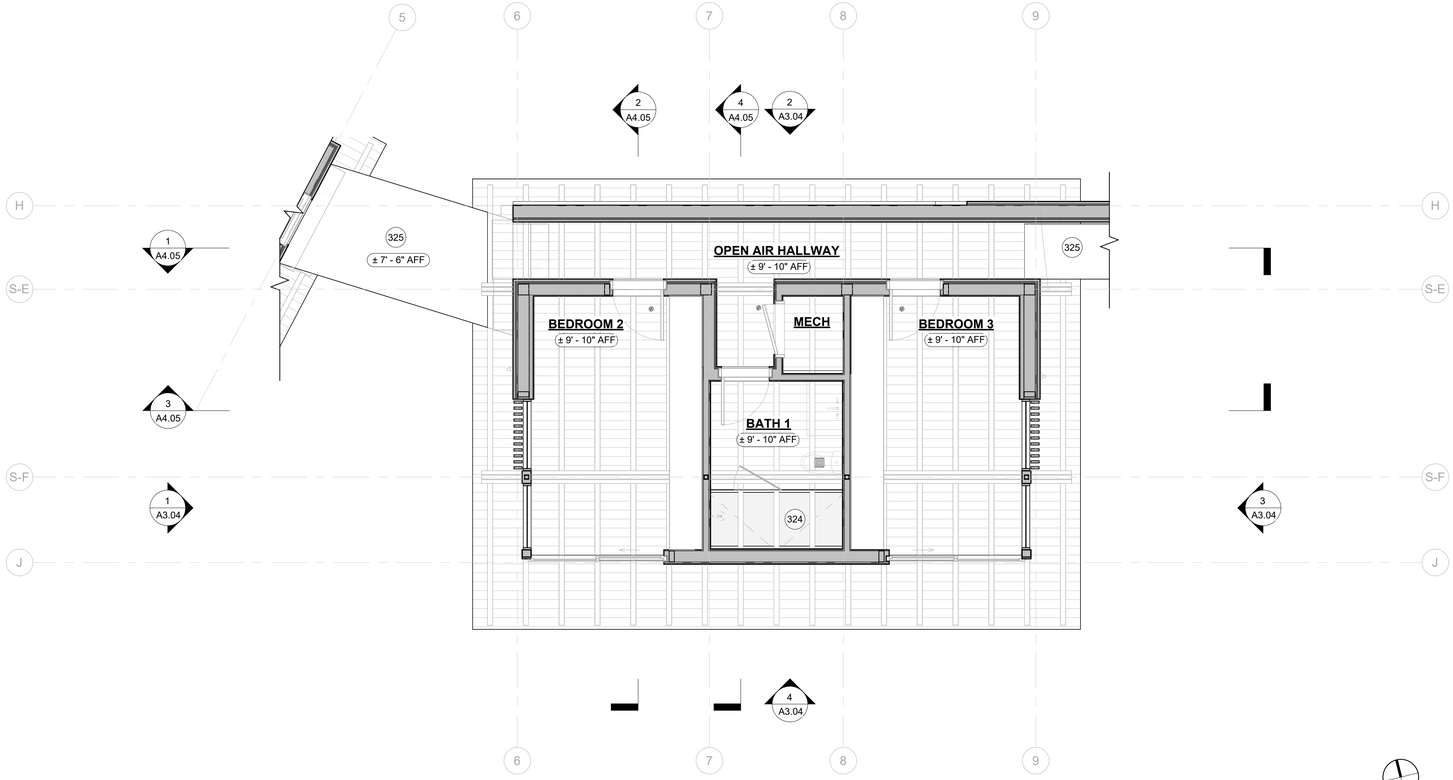
△	DESC.	DATE

0' 2' 4' 8'

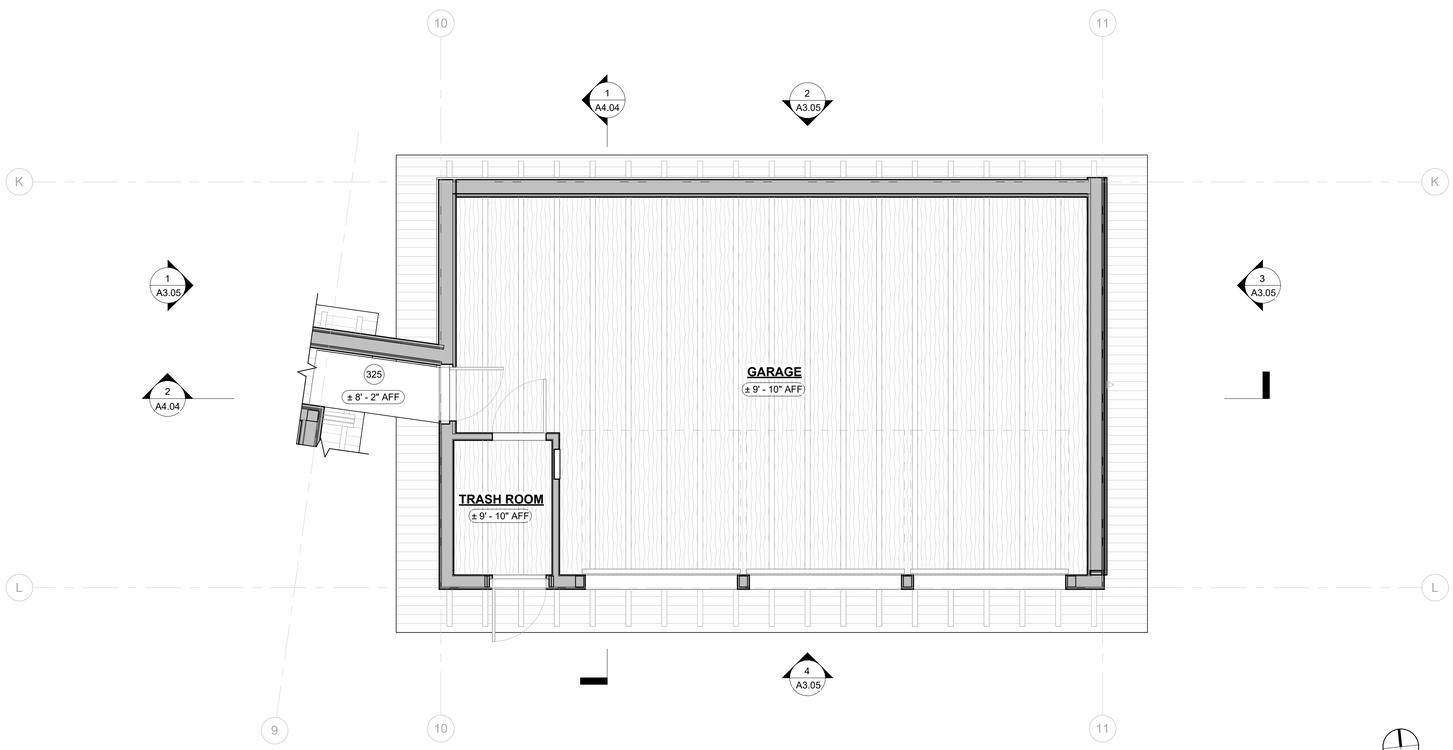
TITLE
REFLECTED CEILING PLAN - GREAT ROOM

A2.52
SHEET

5/19/2025 5:34:10 PM



1 MAIN HOUSE - BEDROOMS REFLECTED CEILING PLAN
1/4" = 1'-0"



2 MAIN HOUSE - GARAGE REFLECTED CEILING PLAN
1/4" = 1'-0"

LEGEND

- GYPSUM BOARD CEILING, PT'D
- WOOD CEILING
- PLYWOOD

KEYNOTE LEGEND

324 MOTORIZED SKYLIGHT
325 FORMED ALUM AWNING, PTD

REFLECTED CLG. PLAN GENERAL NOTES

1. CEILING HEIGHTS ARE TO FINISH FLOOR SURFACE, UNLESS OTHERWISE NOTED.
2. LIGHTING IS SHOWN FOR LOCATION AND LAYOUT ONLY, SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR FIXTURE TYPES.
3. GYPSUM BOARD CEILING UNLESS OTHERWISE NOTED.
4. LAYOUT REQUIREMENTS: CONTRACTOR SHALL COORDINATE STRUCTURAL FRAMING WITH ARCHITECTURAL LIGHTING, REFLECTED CEILING PLANS, MECHANICAL, PLUMBING AND ELECTRICAL INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO, RECESSED AND SEMI-RECESSED LIGHTING, MECHANICAL DUCTS AND PIPING, ROOF DRAINS, FIRE SPRINKLER PIPE AND HEADS AND PLUMBING DRAINS, WASTE AND SUPPLY LINES.

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DATE
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HISTORY

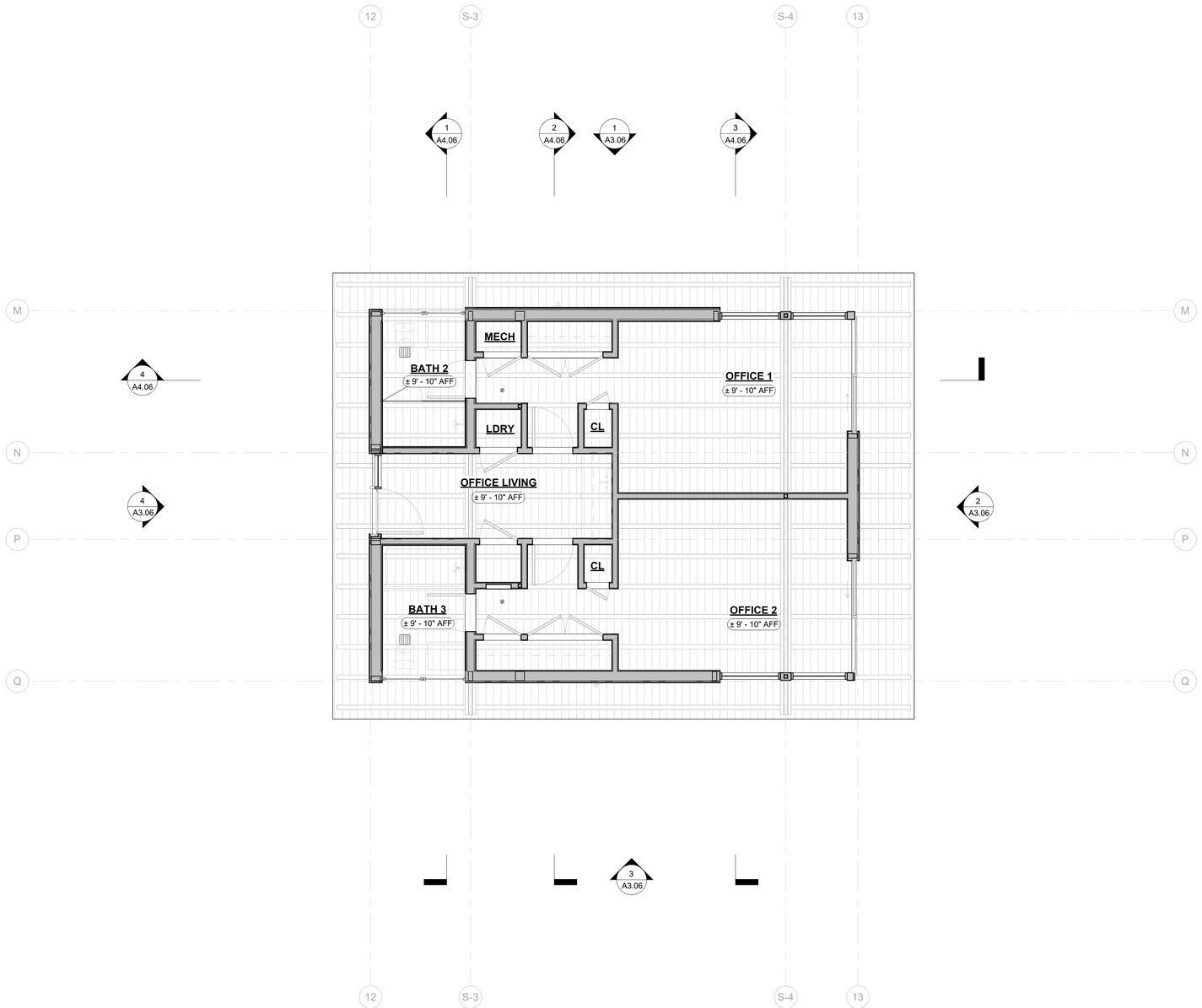
△	DESC.	DATE

0' 2' 4' 8'

TITLE
REFLECTED CEILING PLAN - BEDROOMS AND GARAGE

A2.53
SHEET

5/19/2025 5:34:12 PM



1 HOME OFFICES - REFLECTED CEILING PLAN
1/4" = 1'-0"

LEGEND

- GYPSUM BOARD CEILING, PT'D
- WOOD CEILING
- PLYWOOD

KEYNOTE LEGEND

REFLECTED CLG. PLAN GENERAL NOTES

1. CEILING HEIGHTS ARE TO FINISH FLOOR SURFACE, UNLESS OTHERWISE NOTED.
2. LIGHTING IS SHOWN FOR LOCATION AND LAYOUT ONLY, SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR FIXTURE TYPES.
3. GYPSUM BOARD CEILING UNLESS OTHERWISE NOTED.
4. LAYOUT REQUIREMENTS: CONTRACTOR SHALL COORDINATE STRUCTURAL FRAMING WITH ARCHITECTURAL LIGHTING, REFLECTED CEILING PLANS, MECHANICAL, PLUMBING AND ELECTRICAL INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO, RECESSED AND SEMI-RECESSED LIGHTING, MECHANICAL DUCTS AND PIPING, ROOF DRAINS, FIRE SPRINKLER PIPE AND HEADS AND PLUMBING DRAINS, WASTE AND SUPPLY LINES.

KEY PLAN

FELDMAN
ARCHITECTURE
1648 Pacific Avenue, Suite B
San Francisco, California 94109
415 252 1441
www.feldmanarch.com

LICENSED ARCHITECT
JONATHAN FELDMAN
C-28459
11/30/2025
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT NAME
WARD RESIDENCE

PROJECT ADDRESS
23 VASQUEZ TRAIL,
CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

HISTORY

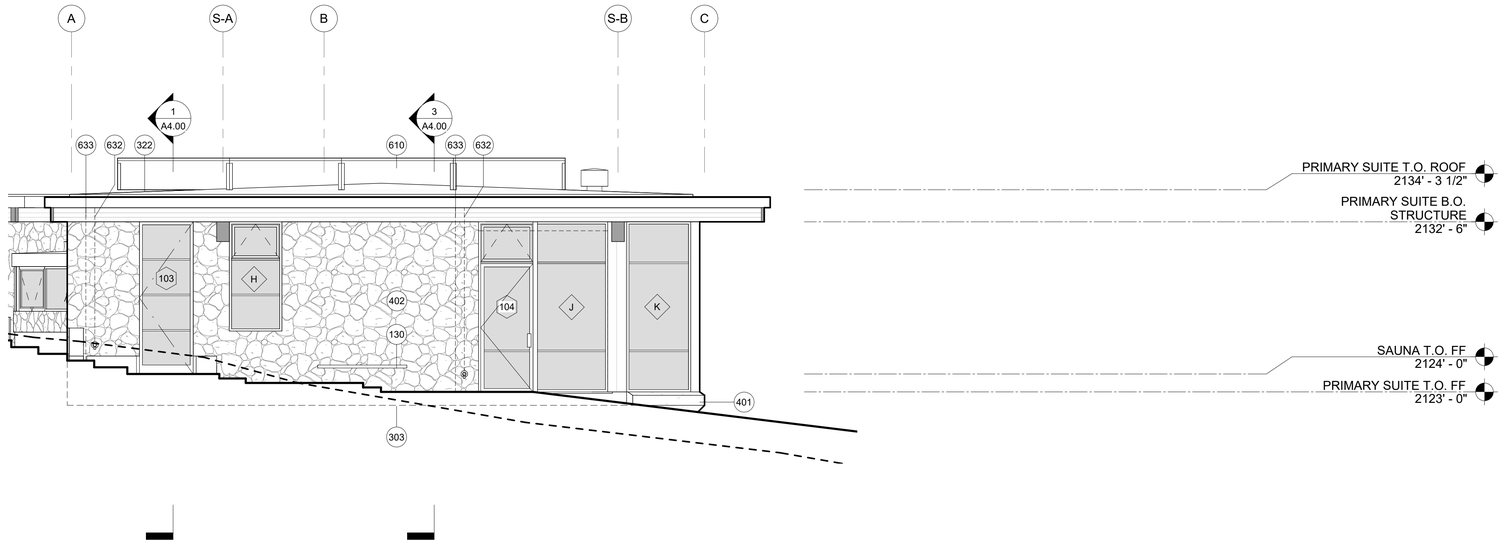
△	DESC.	DATE

0' 2' 4' 8'

TITLE
REFLECTED CEILING PLAN - HOME OFFICES

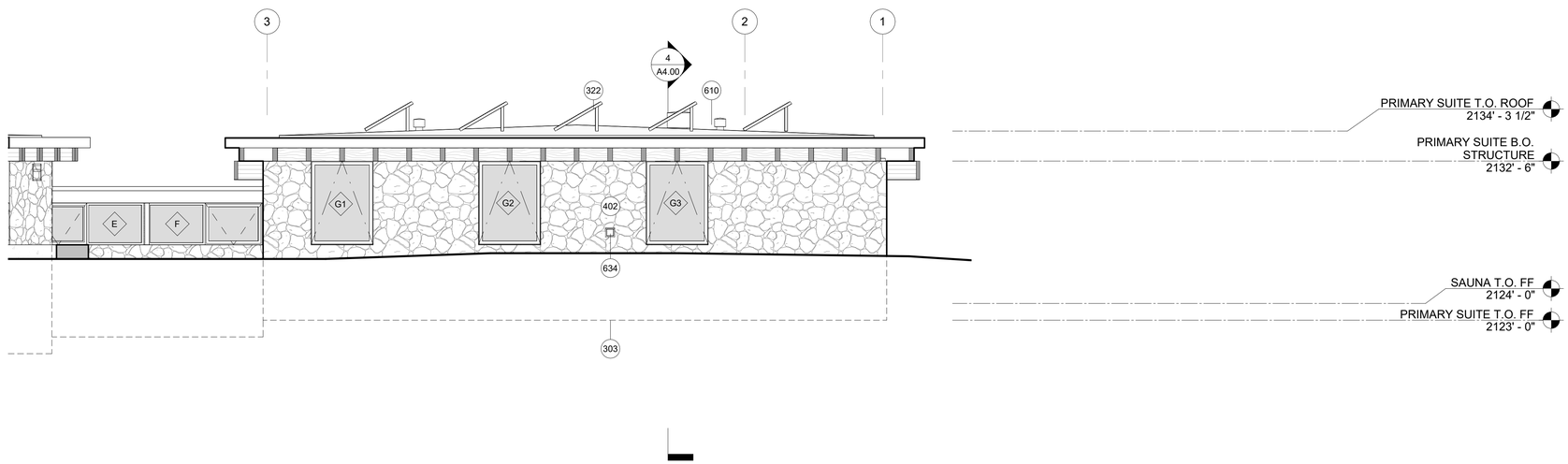
A2.54
SHEET

5/19/2025 5:34:13 PM



1 PRIMARY SUITE - NORTH ELEVATION

1/4" = 1'-0"



2 PRIMARY SUITE - EAST ELEVATION

1/4" = 1'-0"

LEGEND

- VERTICAL WOOD SIDING
- CONCRETE
- GLASS
- BRAKE METAL PANEL/ CLADDING
- STONE CLADDING
- EXISTING NATURAL GRADE

KEYNOTE LEGEND

130	EXT BENCH
303	LINE OF BLDG BELOW GRADE
322	SKYLIGHT
401	EXPOSED ARCHITECTURAL CONCRETE
402	EXTERIOR STONE CLADDING
610	SOLAR PV ARRAY
632	OVERFLOW DRAIN AT EXTERIOR WALL
633	RAINWATER LEADER
634	DRYER VENT

ELEVATION GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, TYP.
2. GRADE FOR ESTABLISHING DAYLIGHT PLANE SHALL BE AN AVERAGE OF THE GRADE AT THE MIDPOINT OF THE BUILDING AND GRADE AT THE CLOSEST POINT ON THE ADJACENT LOT.

5/19/2025 5:34:15 PM

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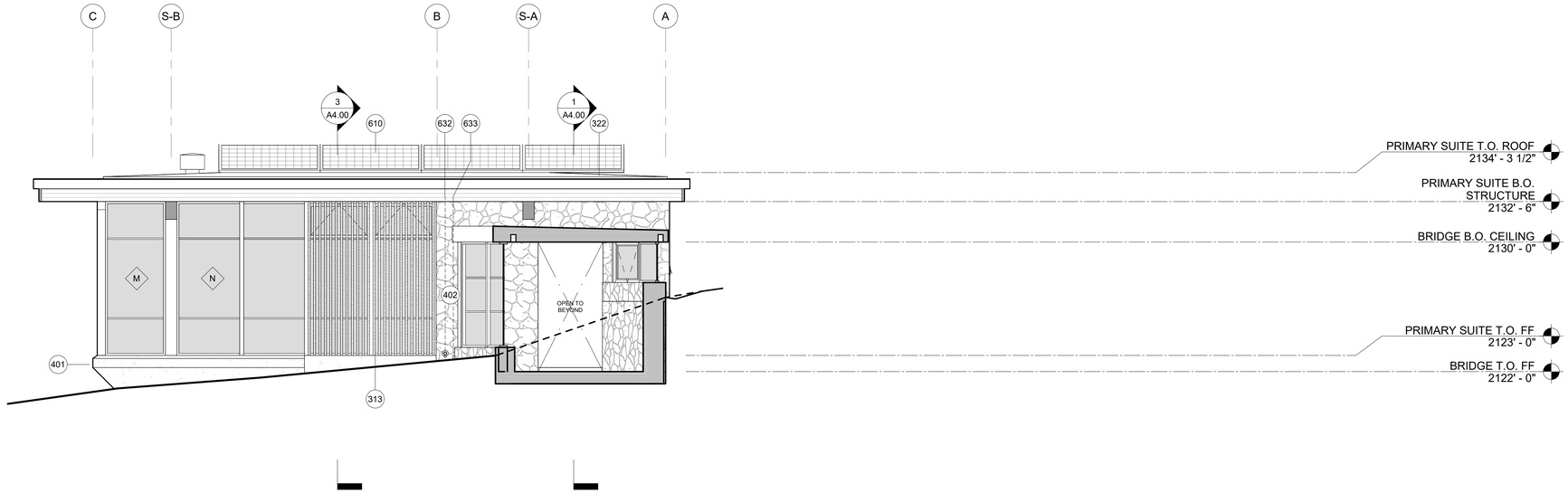
0' 2' 4' 8'

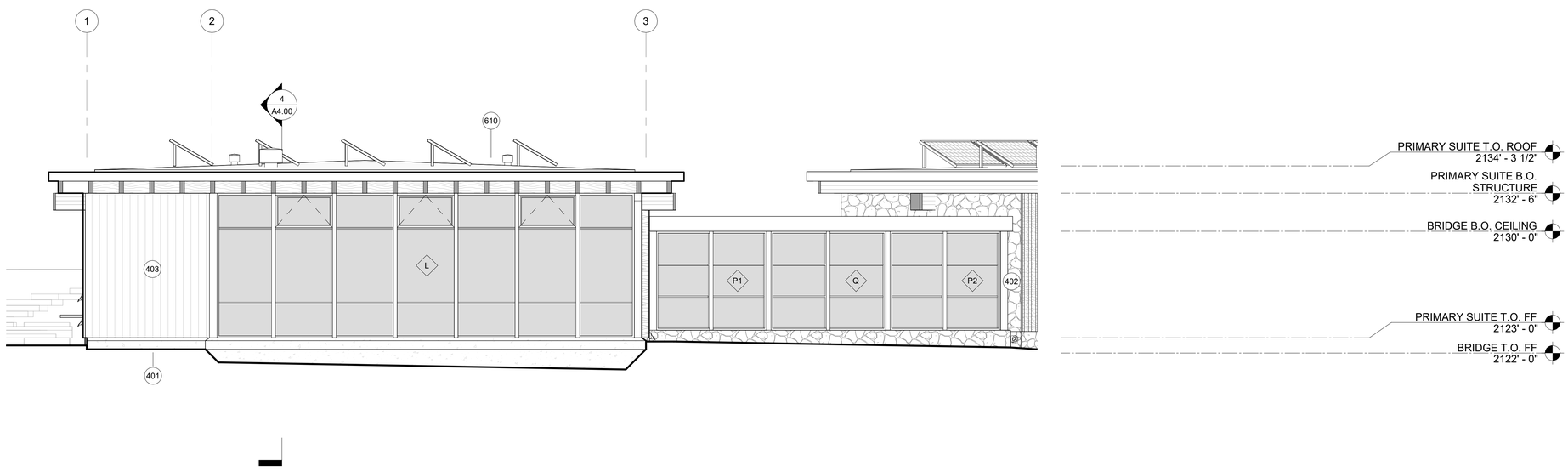
TITLE
EXTERIOR ELEVATIONS - PRIMARY SUITE

A3.00
SHEET



1 PRIMARY SUITE- SOUTH ELEVATION

1/4" = 1'-0"



2 PRIMARY SUITE - WEST ELEVATION

1/4" = 1'-0"

LEGEND

- VERTICAL WOOD SIDING
- CONCRETE
- GLASS
- BRAKE METAL PANEL/ CLADDING
- STONE CLADDING
- EXISTING NATURAL GRADE

KEYNOTE LEGEND

313	LOUVERED WD SCREEN
322	SKYLIGHT
401	EXPOSED ARCHITECTURAL CONCRETE
402	EXTERIOR STONE CLADDING
403	EXTERIOR WOOD SIDING
610	SOLAR PV ARRAY
632	OVERFLOW DRAIN AT EXTERIOR WALL
633	RAINWATER LEADER

ELEVATION GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, TYP.
2. GRADE FOR ESTABLISHING DAYLIGHT PLANE SHALL BE AN AVERAGE OF THE GRADE AT THE MIDPOINT OF THE BUILDING AND GRADE AT THE CLOSEST POINT ON THE ADJACENT LOT.

5/19/2025 5:34:17 PM

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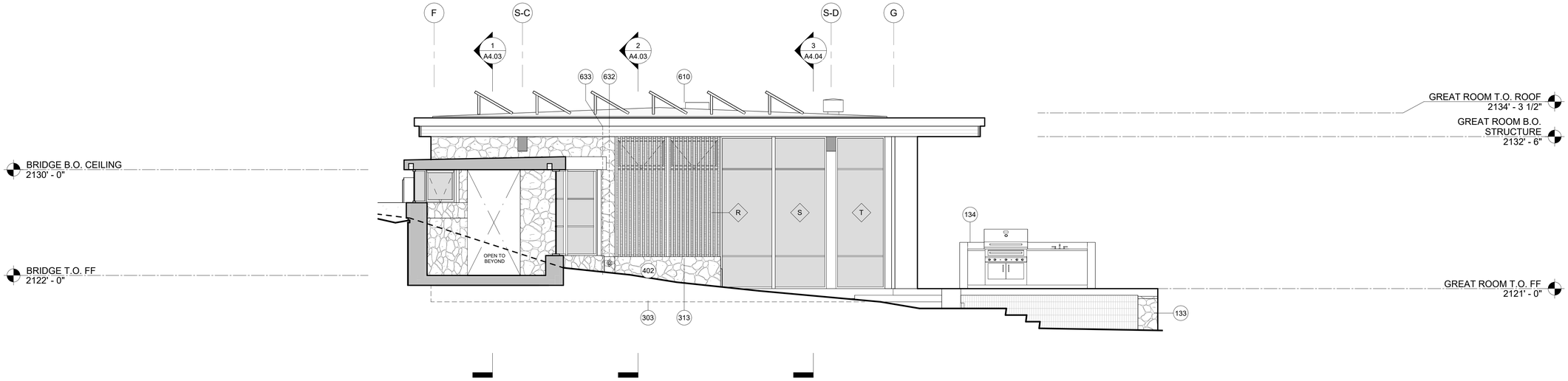
0' 2' 4' 8'

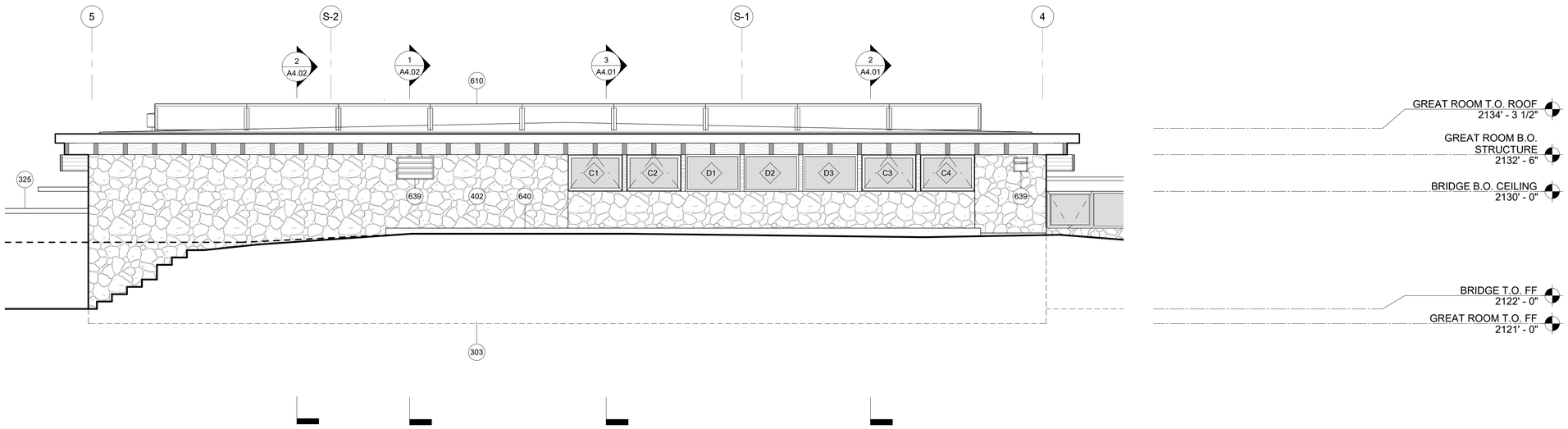
TITLE
EXTERIOR ELEVATIONS - PRIMARY SUITE

A3.01
SHEET



1 MAIN PAVILION - NORTH ELEVATION

1/4" = 1'-0"



2 MAIN PAVILION - EAST ELEVATION

1/4" = 1'-0"

LEGEND

- VERTICAL WOOD SIDING
- CONCRETE
- GLASS
- BRAKE METAL PANEL/ CLADDING
- STONE CLADDING
- EXISTING NATURAL GRADE

KEYNOTE LEGEND

133	SITE RETAINING WALL, SLD
134	OUTDOOR KITCHEN
303	LINE OF BLDG BELOW GRADE
313	LOUVERED WD SCREEN
325	FORMED ALUM AWNING, PTD
402	EXTERIOR STONE CLADDING
610	SOLAR PV ARRAY
632	OVERFLOW DRAIN AT EXTERIOR WALL
633	RAINWATER LEADER
639	EXTERIOR EXHAUST VENT
640	POOL AND SPA EQUIPMENT VAULT

ELEVATION GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, TYP.
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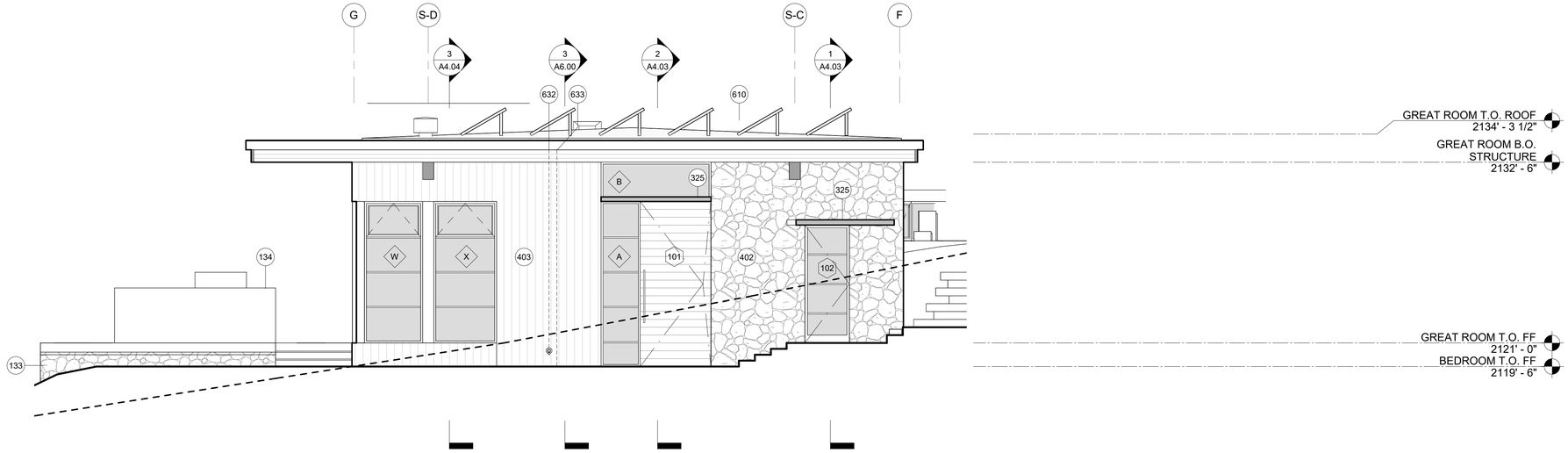
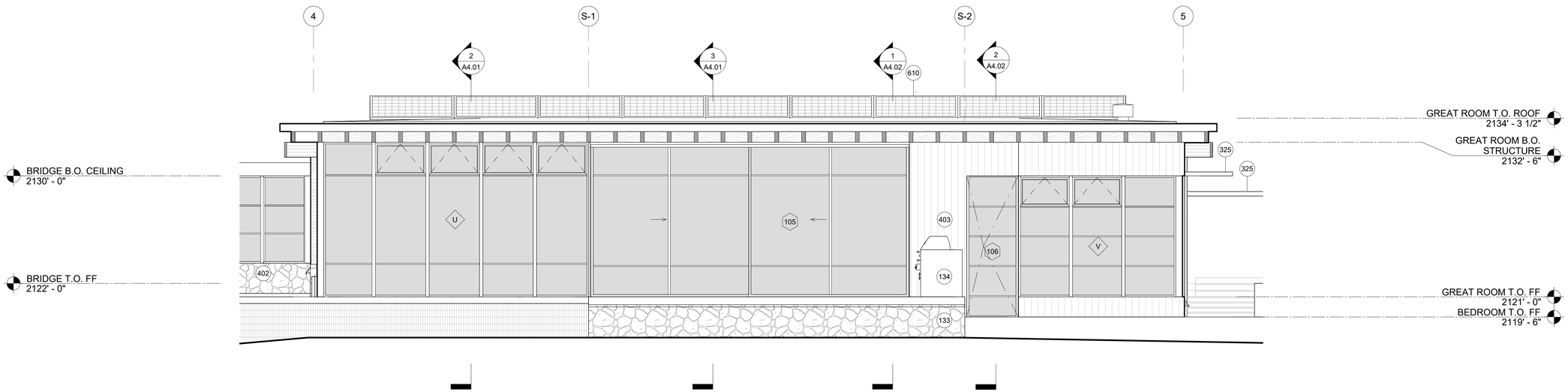
TITLE
EXTERIOR ELEVATIONS - GREAT ROOM PAVILION

A3.02
SHEET



1 MAIN PAVILION - SOUTH ELEVATION
1/4" = 1'-0"



2 MAIN PAVILION - WEST ELEVATION
1/4" = 1'-0"

LEGEND

- VERTICAL WOOD SIDING
- CONCRETE
- GLASS
- BRAKE METAL PANEL/ CLADDING
- STONE CLADDING
- EXISTING NATURAL GRADE

KEYNOTE LEGEND

133	SITE RETAINING WALL, SLD
134	OUTDOOR KITCHEN
325	FORMED ALUM AWNING, PTD
402	EXTERIOR STONE CLADDING
403	EXTERIOR WOOD SIDING
610	SOLAR PV ARRAY
632	OVERFLOW DRAIN AT EXTERIOR WALL
633	RAINWATER LEADER

ELEVATION GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, TYP.
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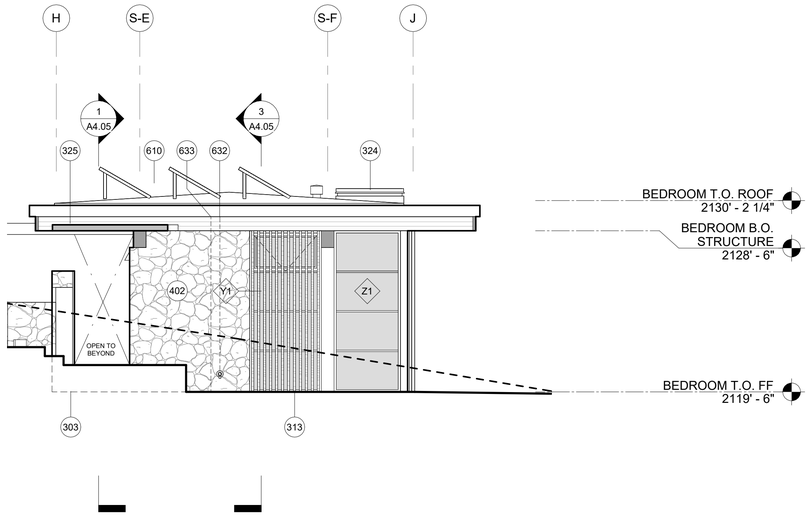
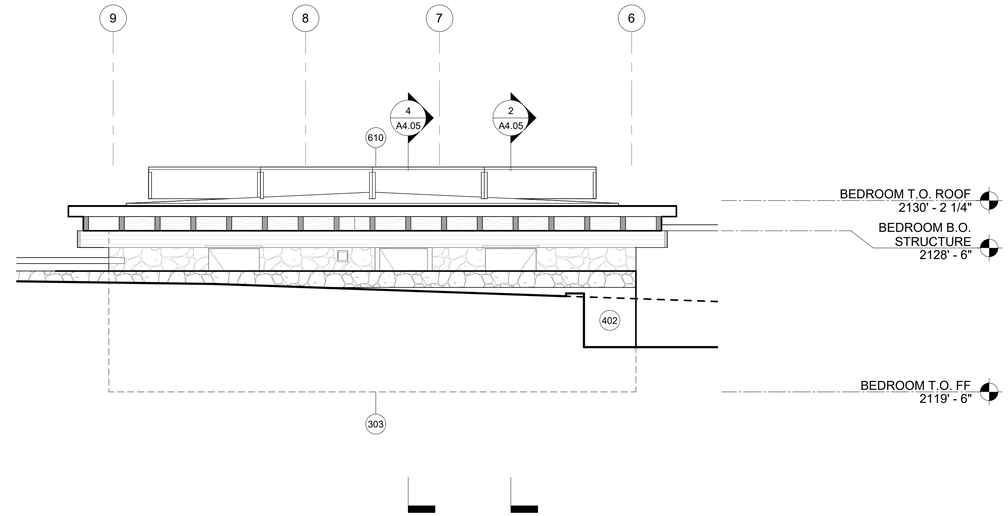
TITLE
EXTERIOR ELEVATIONS - GREAT ROOM PAVILION

A3.03
SHEET



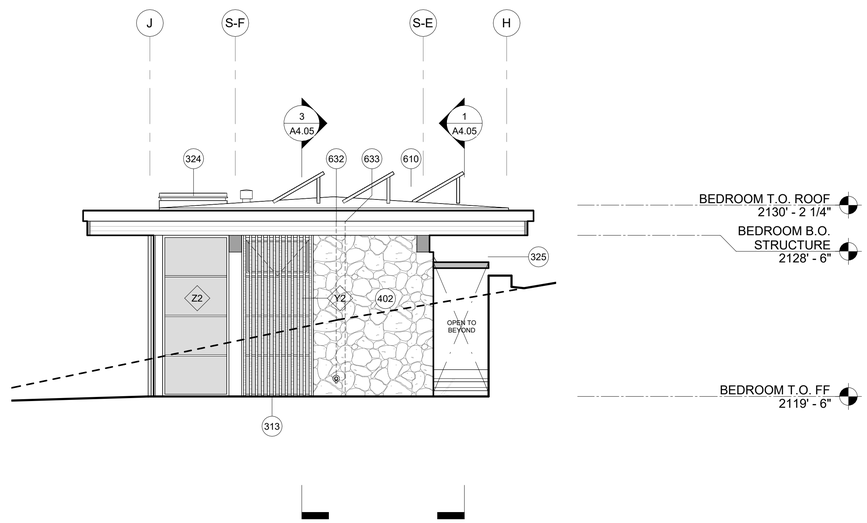
1 OFFICE PAVILION - NORTH ELEVATION

1/4" = 1'-0"



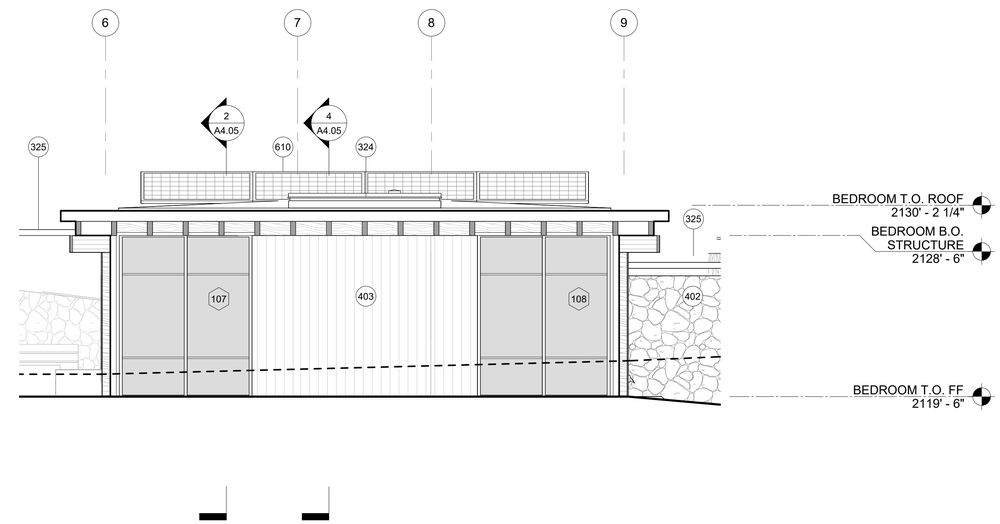
2 OFFICE PAVILION - EAST ELEVATION

1/4" = 1'-0"



3 OFFICE PAVILION - SOUTH ELEVATION

1/4" = 1'-0"



4 OFFICE PAVILION - WEST ELEVATION

1/4" = 1'-0"

LEGEND

- VERTICAL WOOD SIDING
- CONCRETE
- GLASS
- BRAKE METAL PANEL/ CLADDING
- STONE CLADDING
- EXISTING NATURAL GRADE

KEYNOTE LEGEND

303	LINE OF BLDG BELOW GRADE
313	LOUVERED WD SCREEN
324	MOTORIZED SKYLIGHT
325	FORMED ALUM AWNING, PTD
402	EXTERIOR STONE CLADDING
403	EXTERIOR WOOD SIDING
610	SOLAR PV ARRAY
632	OVERFLOW DRAIN AT EXTERIOR WALL
633	RAINWATER LEADER

ELEVATION GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, TYP.
2. GRADE FOR ESTABLISHING DAYLIGHT PLANE SHALL BE AN AVERAGE OF THE GRADE AT THE MIDPOINT OF THE BUILDING AND GRADE AT THE CLOSEST POINT ON THE ADJACENT LOT.

5/19/2025 5:34:24 PM

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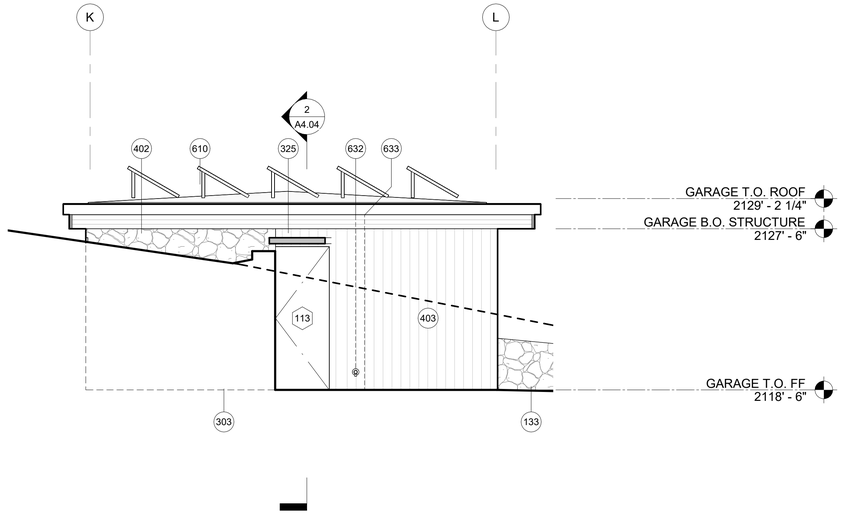
0' 2' 4' 8'

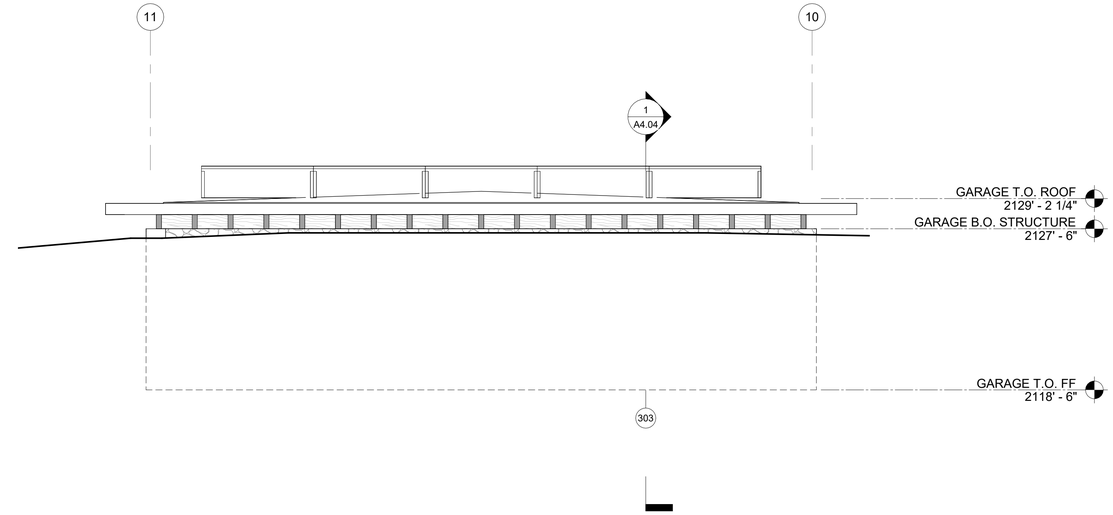
TITLE
EXTERIOR ELEVATIONS - BEDROOMS

A3.04
SHEET



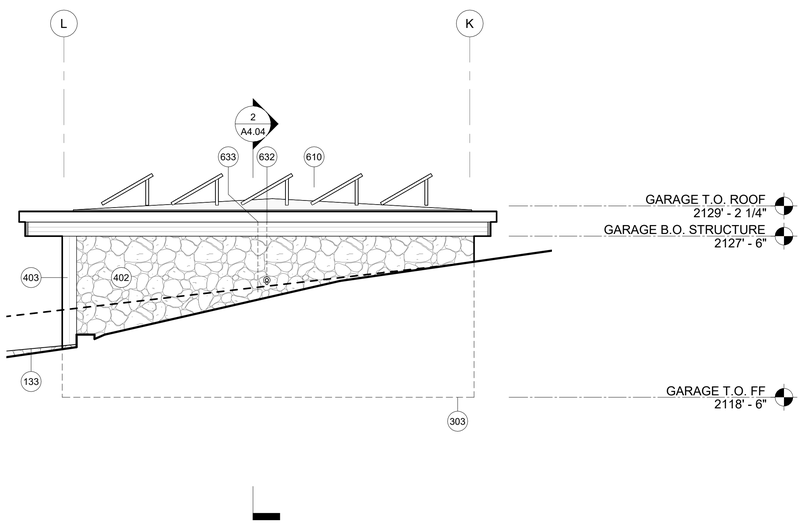
1 GARAGE - NORTH ELEVATION

1/4" = 1'-0"



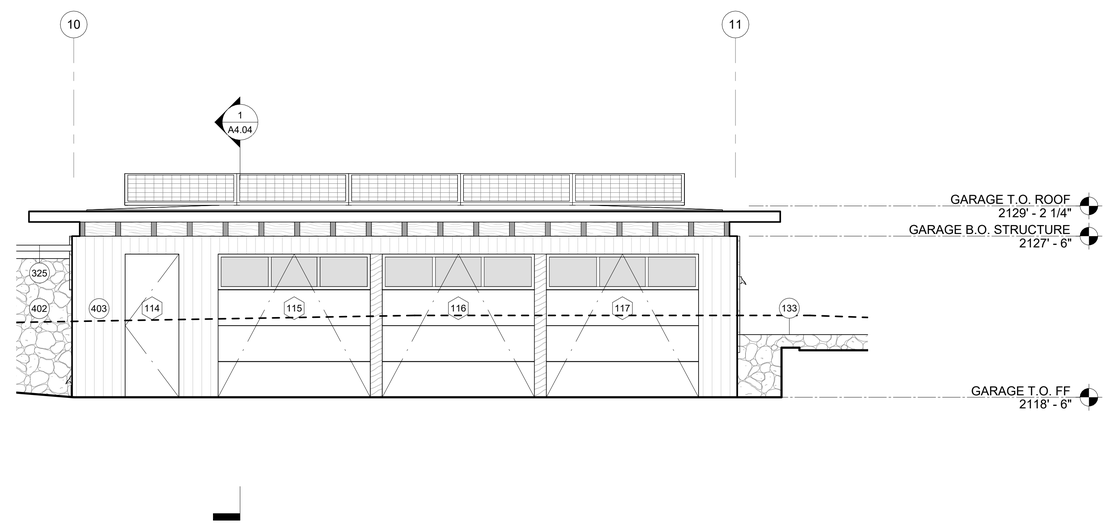
2 GARAGE - EAST ELEVATION

1/4" = 1'-0"



3 GARAGE - SOUTH ELEVATION

1/4" = 1'-0"



4 GARAGE - WEST ELEVATION

1/4" = 1'-0"

LEGEND

- VERTICAL WOOD SIDING
- CONCRETE
- GLASS
- BRAKE METAL PANEL/ CLADDING
- STONE CLADDING
- EXISTING NATURAL GRADE

KEYNOTE LEGEND

133	SITE RETAINING WALL, SLD
303	LINE OF BLDG BELOW GRADE
325	FORMED ALUM AWNING, PTD
402	EXTERIOR STONE CLADDING
403	EXTERIOR WOOD SIDING
610	SOLAR PV ARRAY
632	OVERFLOW DRAIN AT EXTERIOR WALL
633	RAINWATER LEADER

ELEVATION GENERAL NOTES

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2. GRADE FOR ESTABLISHING DAYLIGHT PLANE SHALL BE AN AVERAGE OF THE GRADE AT THE MIDPOINT OF THE BUILDING AND GRADE AT THE CLOSEST POINT ON THE ADJACENT LOT.

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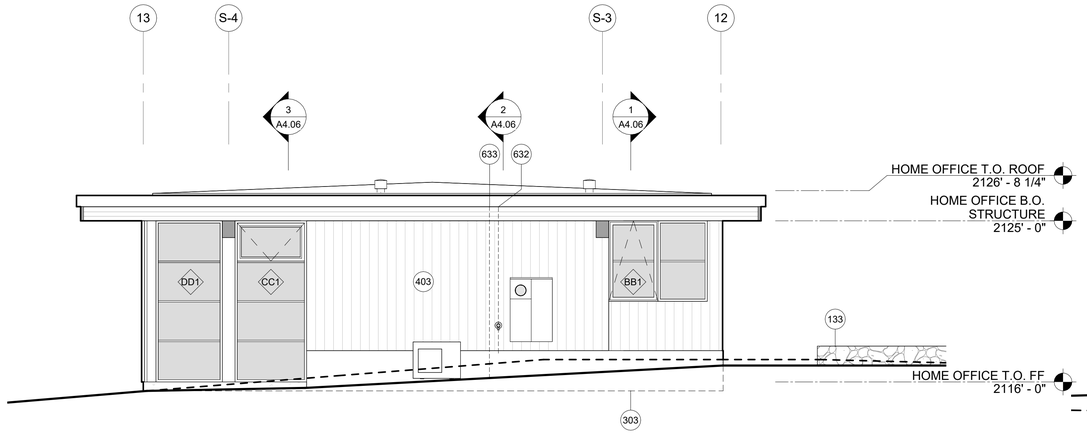
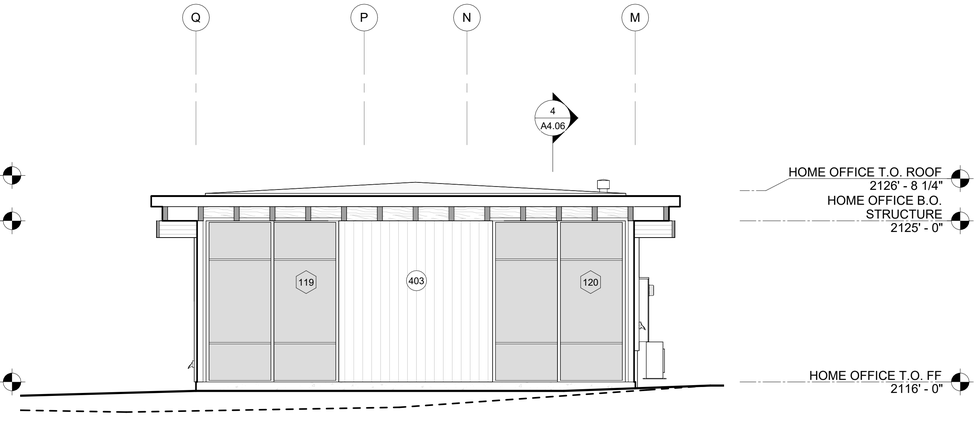
TITLE
EXTERIOR ELEVATIONS - GARAGE

A3.05
SHEET



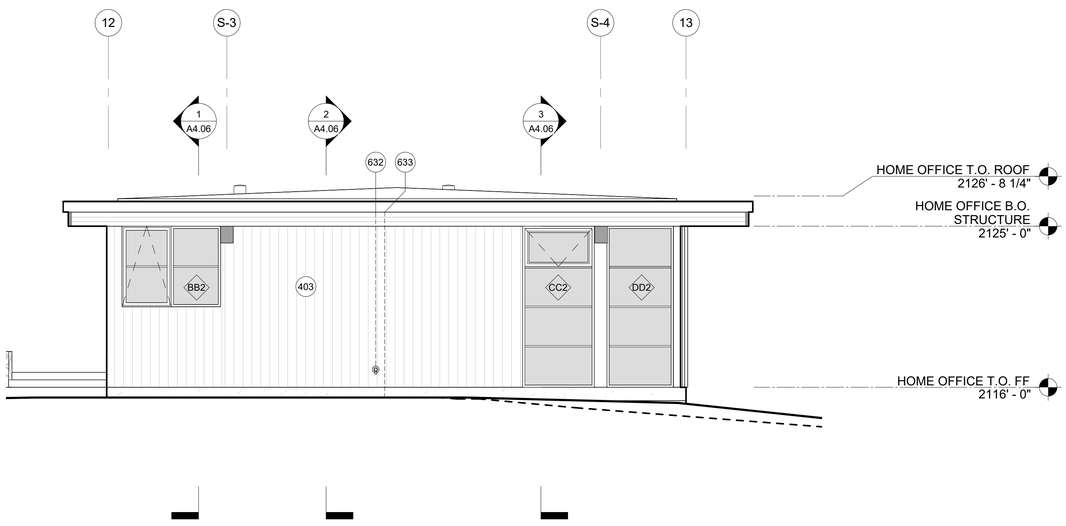
1 GUEST HOUSE - NORTH ELEVATION

1/4" = 1'-0"



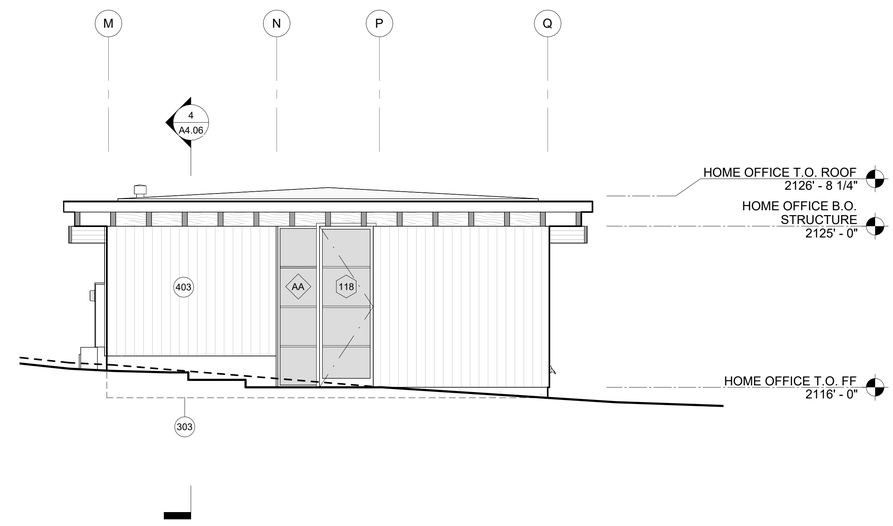
2 GUEST HOUSE - EAST ELEVATION

1/4" = 1'-0"



3 GUEST HOUSE - SOUTH ELEVATION

1/4" = 1'-0"



4 GUEST HOUSE - WEST ELEVATION

1/4" = 1'-0"

LEGEND

- VERTICAL WOOD SIDING
- CONCRETE
- GLASS
- BRAKE METAL PANEL/ CLADDING
- STONE CLADDING
- EXISTING NATURAL GRADE

KEYNOTE LEGEND

133	SITE RETAINING WALL, SLD
303	LINE OF BLDG BELOW GRADE
403	EXTERIOR WOOD SIDING
632	OVERFLOW DRAIN AT EXTERIOR WALL
633	RAINWATER LEADER

ELEVATION GENERAL NOTES

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TITLE
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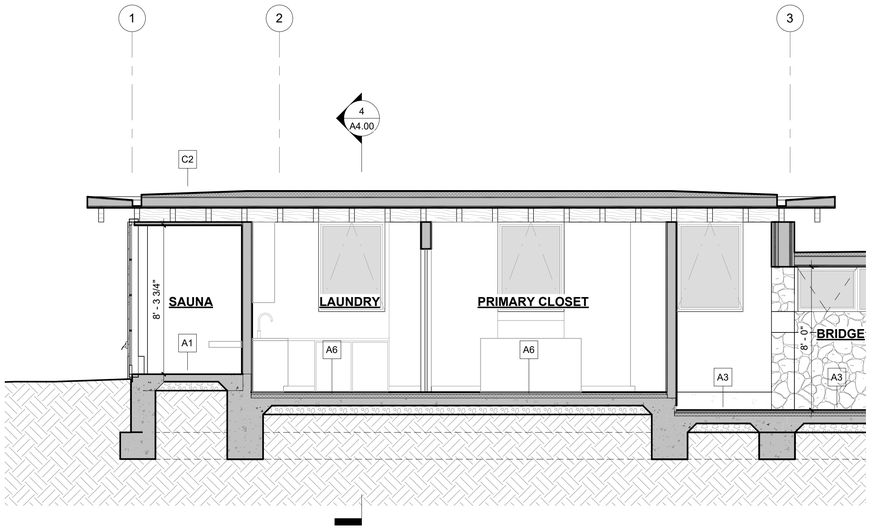
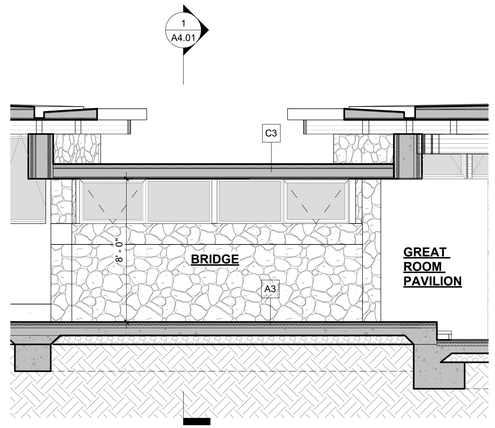
A3.06
SHEET

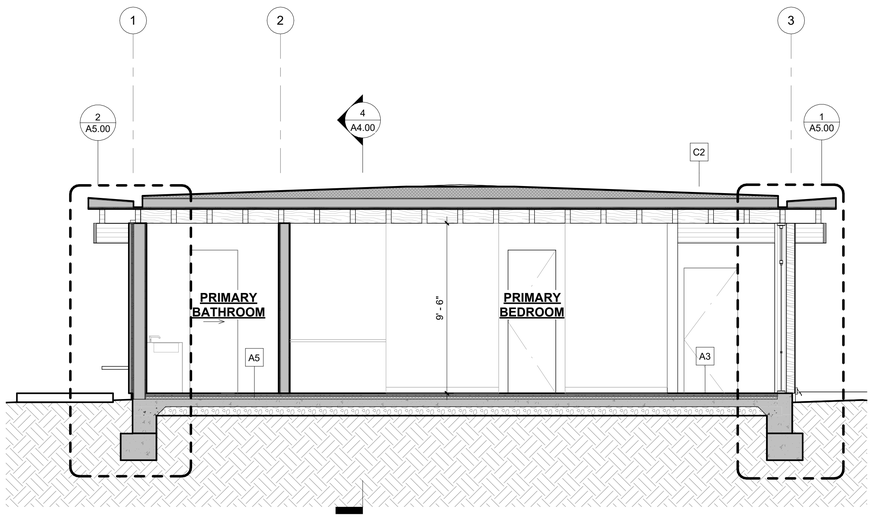
5/19/2025 5:34:29 PM



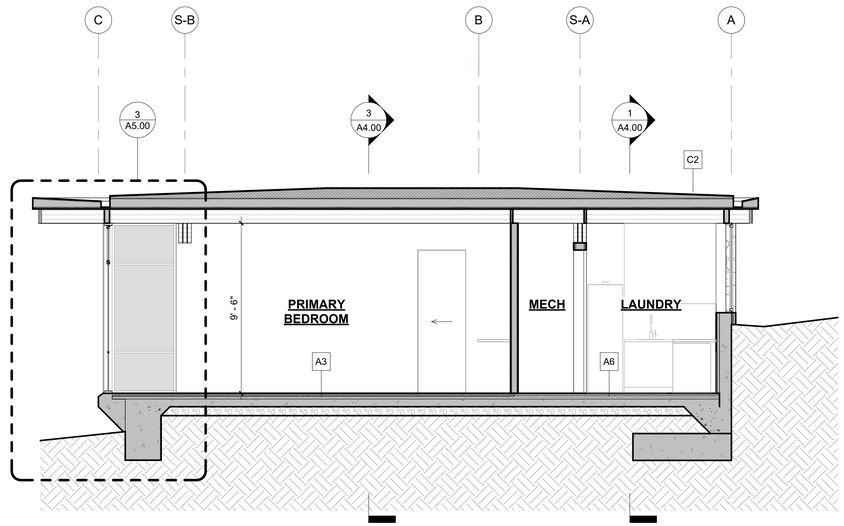
1 PRIMARY SUITE - LONGITUDINAL SECTION @ SAUNA, LAUNDRY, & CLOSET
1/4" = 1'-0"



2 PRIMARY BRIDGE - LONGITUDINAL SECTION
1/4" = 1'-0"



3 PRIMARY SUITE - LONGITUDINAL SECTION @ BEDROOM & BATH
1/4" = 1'-0"



4 PRIMARY SUITE - TRANSVERSE SECTION @ BEDROOM AND CLOSET
1/4" = 1'-0"

LEGEND

NEW FRAMING, SSD

CONCRETE

KEYNOTE LEGEND

5/19/2025 5:34:31 PM

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C-28459
11/30/2025
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT NAME
WARD RESIDENCE

PROJECT ADDRESS
23 VASQUEZ TRAIL,
CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

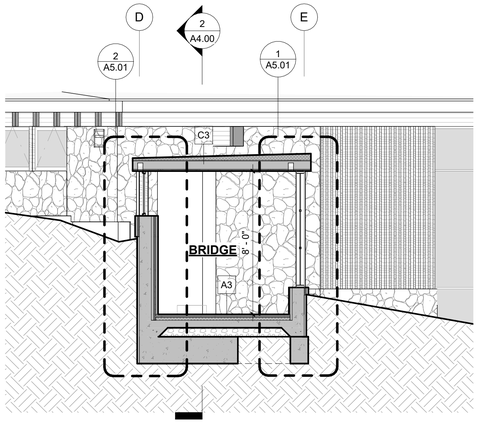
HISTORY

△	DESC.	DATE

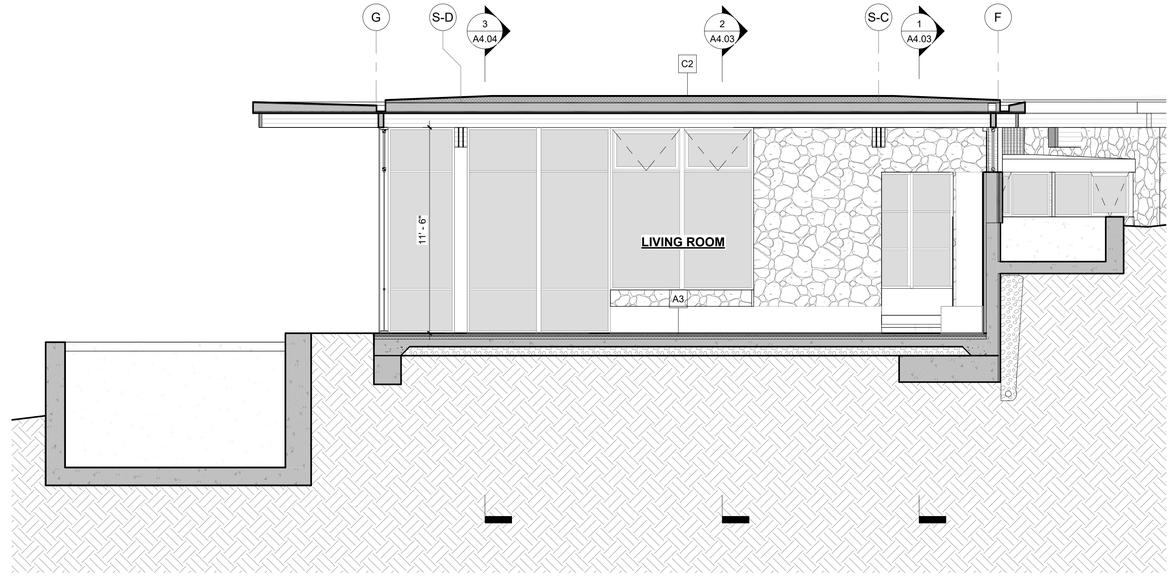
0' 2' 4' 8'

TITLE
BUILDING SECTIONS - PRIMARY SUITE

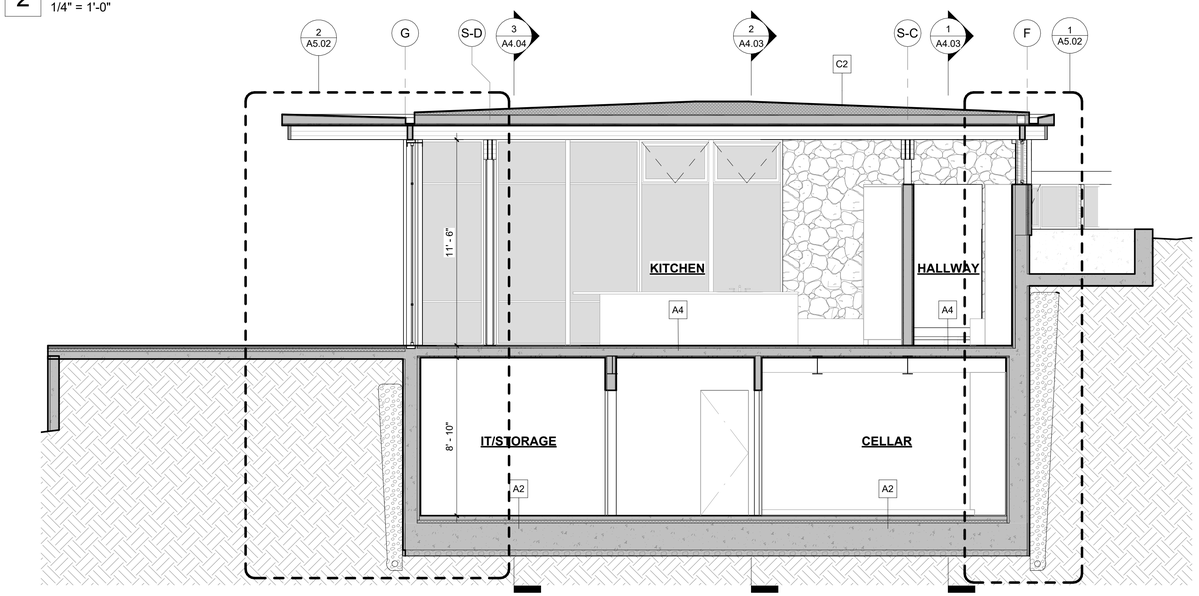
A4.00
SHEET



1 PRIMARY BRIDGE - TRANSVERSE SECTION
1/4" = 1'-0"



2 GREAT ROOM PAVILION - TRANSVERSE SECTION @ LIVING ROOM
1/4" = 1'-0"



3 GREAT ROOM PAVILION - TRANSVERSE SECTION @ GREAT ROOM / BASEMENT 1
1/4" = 1'-0"

LEGEND

NEW FRAMING, SSD

CONCRETE

KEYNOTE LEGEND

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HISTORY

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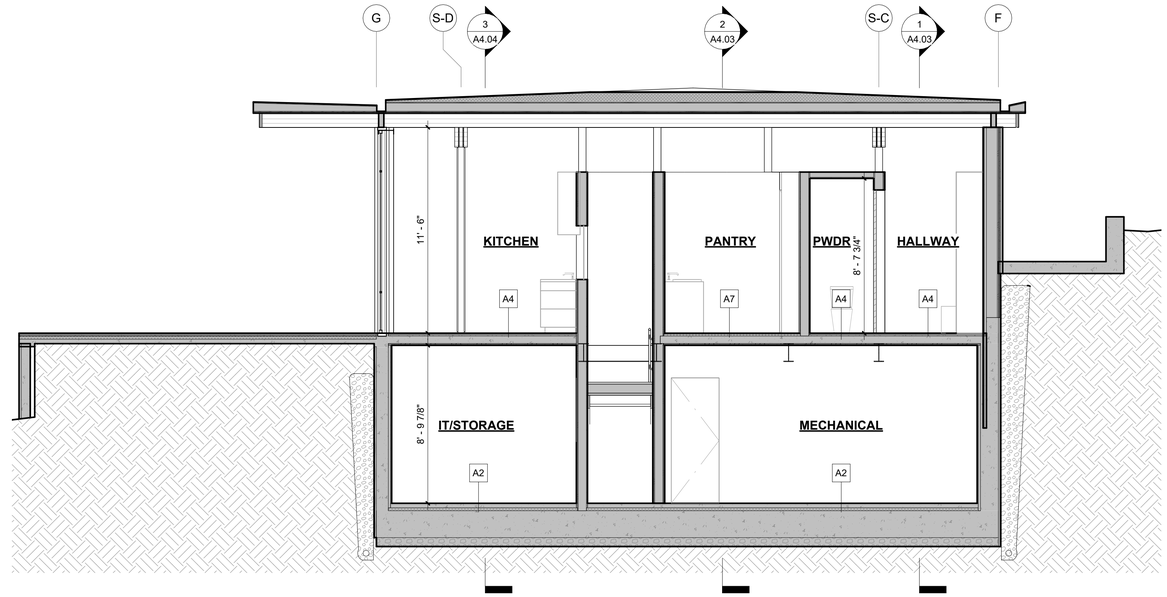
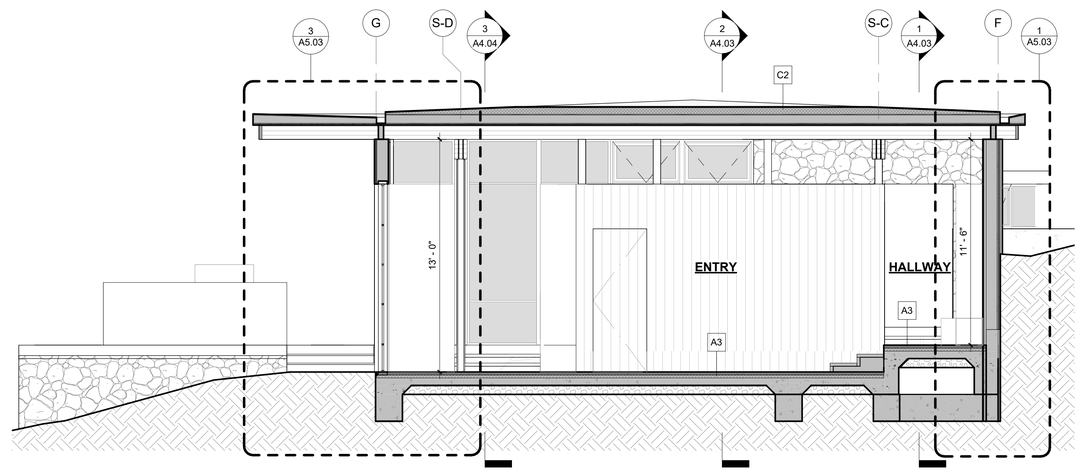
0' 2' 4' 8'

TITLE
BUILDING SECTIONS - GREAT ROOM PAVILION

A4.01
SHEET



1 GREAT ROOM PAVILION - TRANSVERSE SECTION @ GREAT ROOM / BASEMENT 2
1/4" = 1'-0"



2 GREAT ROOM PAVILION - TRANSVERSE SECTION @ READING ROOM / ENTRY
1/4" = 1'-0"

LEGEND

NEW FRAMING, SSD

CONCRETE

KEYNOTE LEGEND

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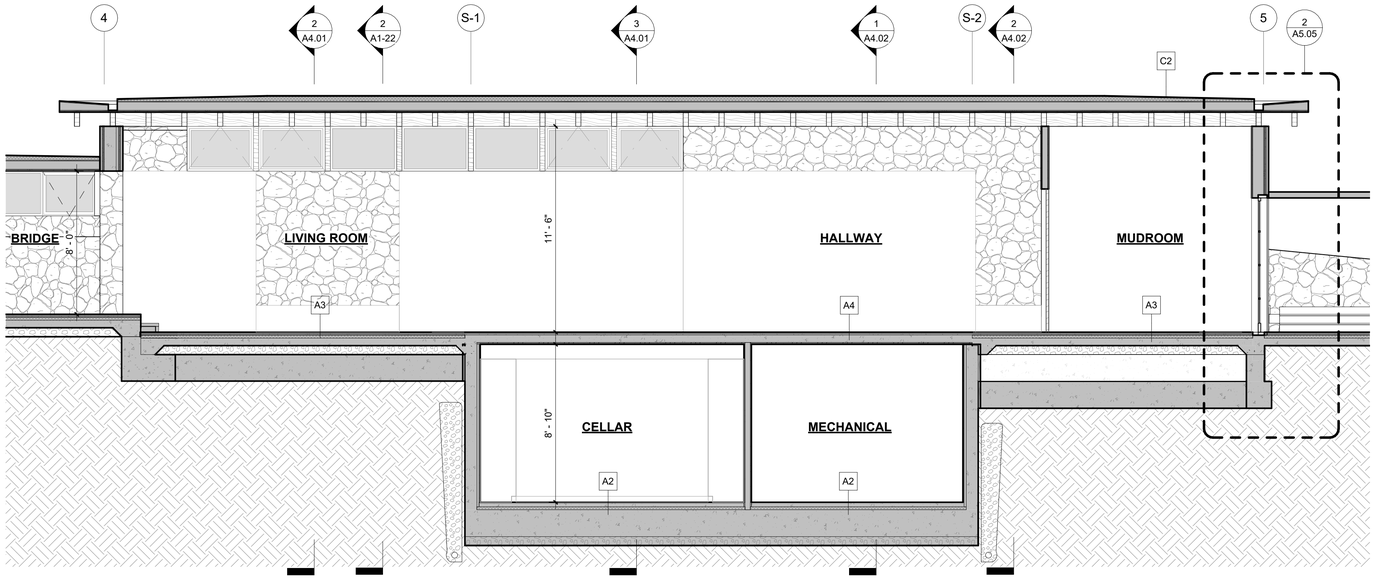
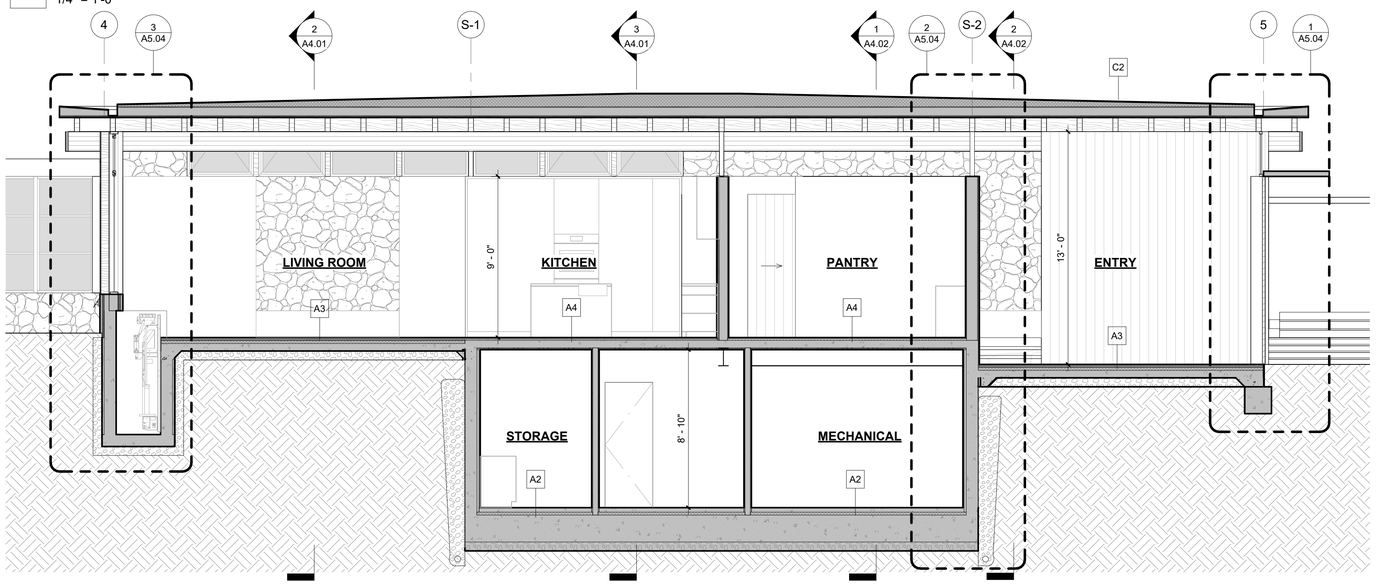
0' 2' 4' 8'

TITLE
BUILDING SECTIONS - GREAT ROOM PAVILION

A4.02
SHEET



1 GREAT ROOM PAVILION - LONGITUDINAL SECTION @ GREAT ROOM/BASEMENT 1
1/4" = 1'-0"



2 GREAT ROOM PAVILION - LONGITUDINAL SECTION @ GREAT ROOM/BASEMENT 2
1/4" = 1'-0"

LEGEND

NEW FRAMING, SSD

CONCRETE

KEYNOTE LEGEND

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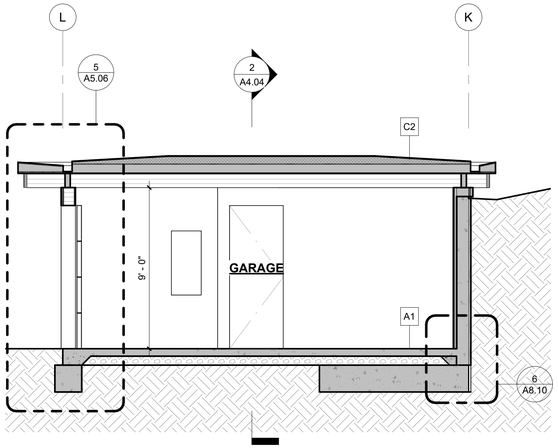
△	DESC.	DATE

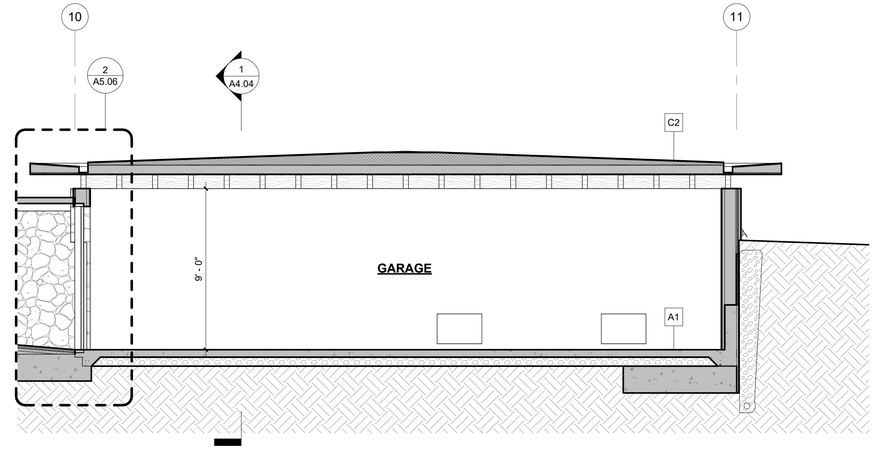
0' 2' 4' 8'

TITLE
BUILDING SECTIONS - GREAT ROOM PAVILION

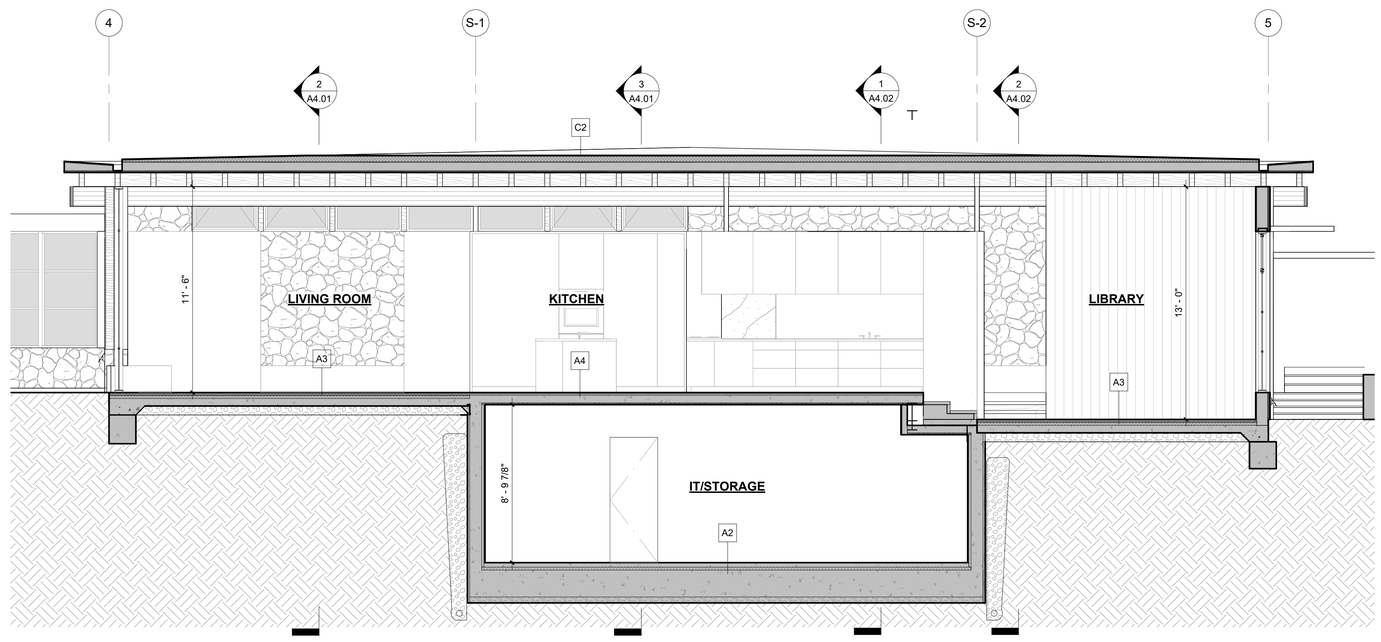
A4.03
SHEET



1 GARAGE - TRANSVERSE SECTION
1/4" = 1'-0"



2 GARAGE - LONGITUDNAL SECTION
1/4" = 1'-0"



3 GREAT ROOM PAVILION - LONGITUDINAL SECTION @ GREAT ROOM/BASEMENT 3
1/4" = 1'-0"

LEGEND

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KEYNOTE LEGEND

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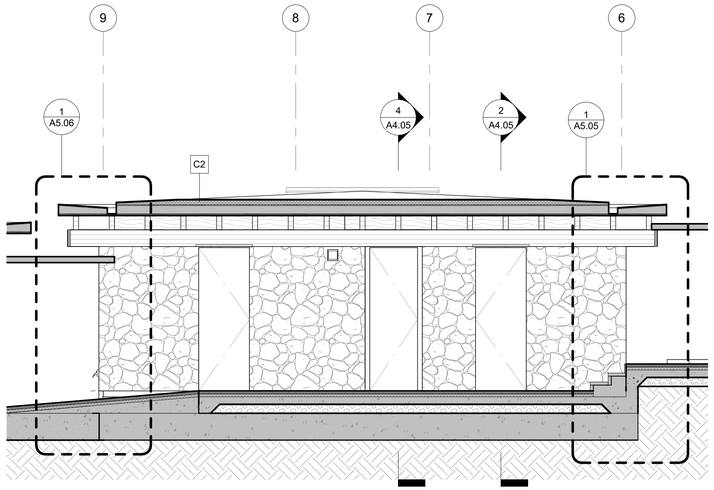
HISTORY

△	DESC.	DATE

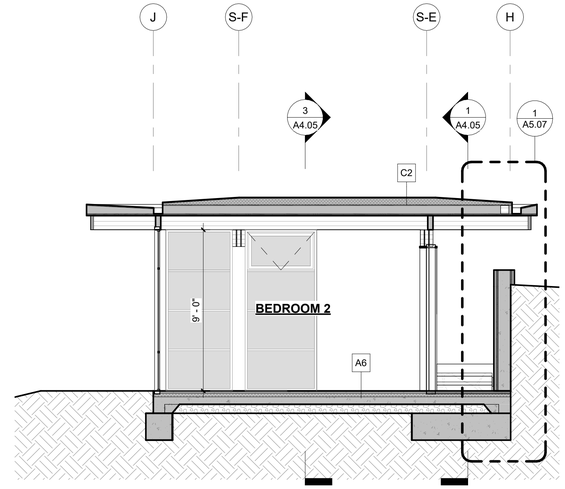
0' 2' 4' 8'

TITLE
BUILDING SECTIONS - GREAT ROOM PAVILION & GARAGE

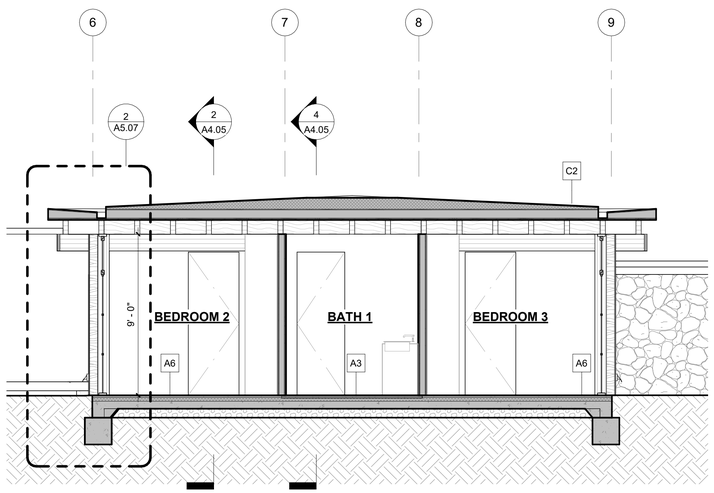
A4.04
SHEET



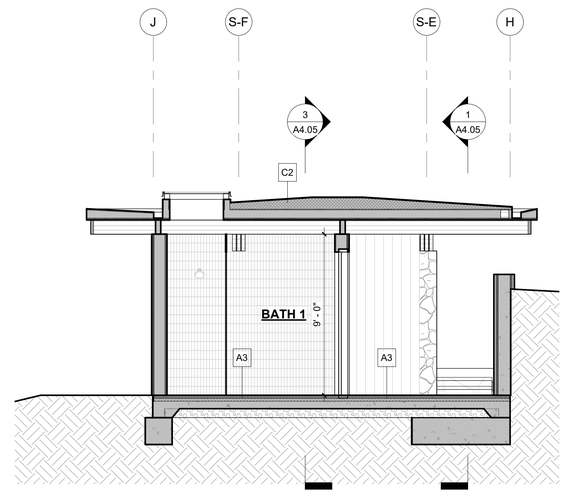
1 BEDROOMS - LONGITUDINAL SECTION 1
1/4" = 1'-0"



2 BEDROOMS - TRANSVERSE SECTION 1
1/4" = 1'-0"



3 BEDROOMS - LONGITUDINAL SECTION 2
1/4" = 1'-0"



4 BEDROOMS - TRANSVERSE SECTION 2
1/4" = 1'-0"

LEGEND

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KEYNOTE LEGEND

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CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

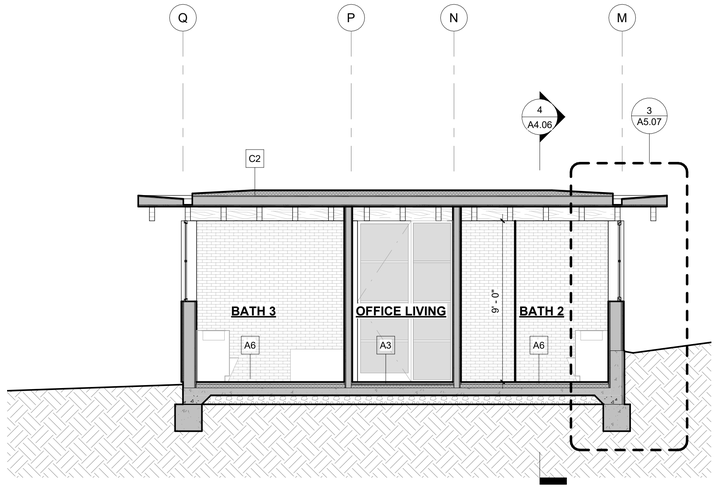
HISTORY

△	DESC.	DATE

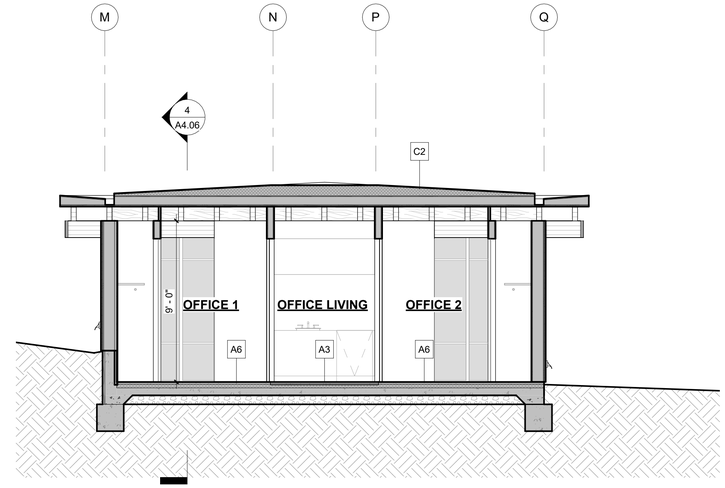
0' 2' 4' 8'

TITLE
BUILDING SECTIONS - BEDROOMS

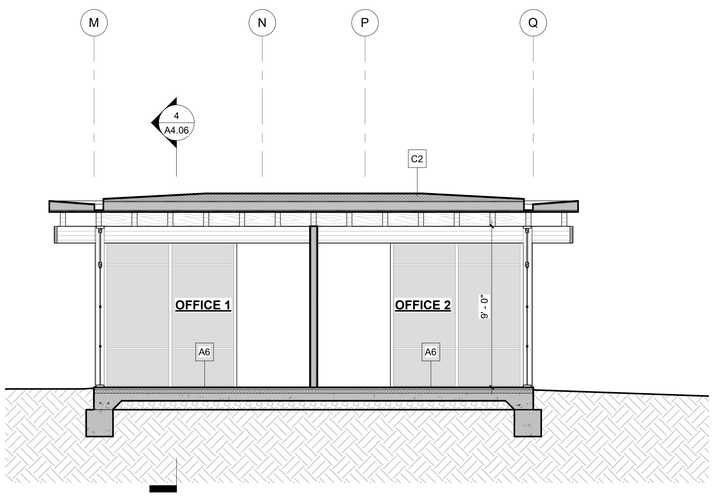
A4.05
SHEET



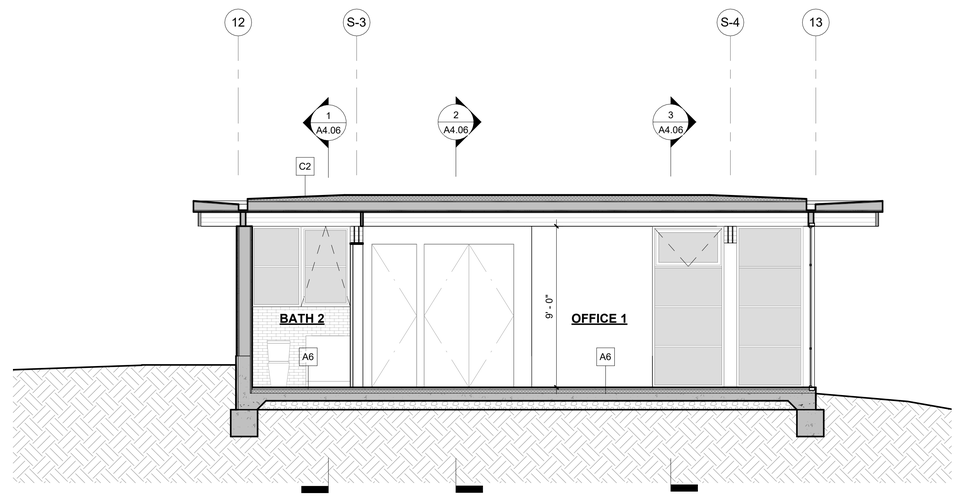
1 HOME OFFICE - TRANSVERSE SECTION @ BATHS
1/4" = 1'-0"



2 HOME OFFICE - TRANSVERSE SECTION
1/4" = 1'-0"



3 HOME OFFICE - TRANSVERSE SECTION @ OFFICES
1/4" = 1'-0"



4 HOME OFFICE - LONGITUDINAL SECTION
1/4" = 1'-0"

LEGEND

NEW FRAMING, SSD

CONCRETE

KEYNOTE LEGEND

5/19/2025 5:34:43 PM

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DATE
05.16.2025

HISTORY

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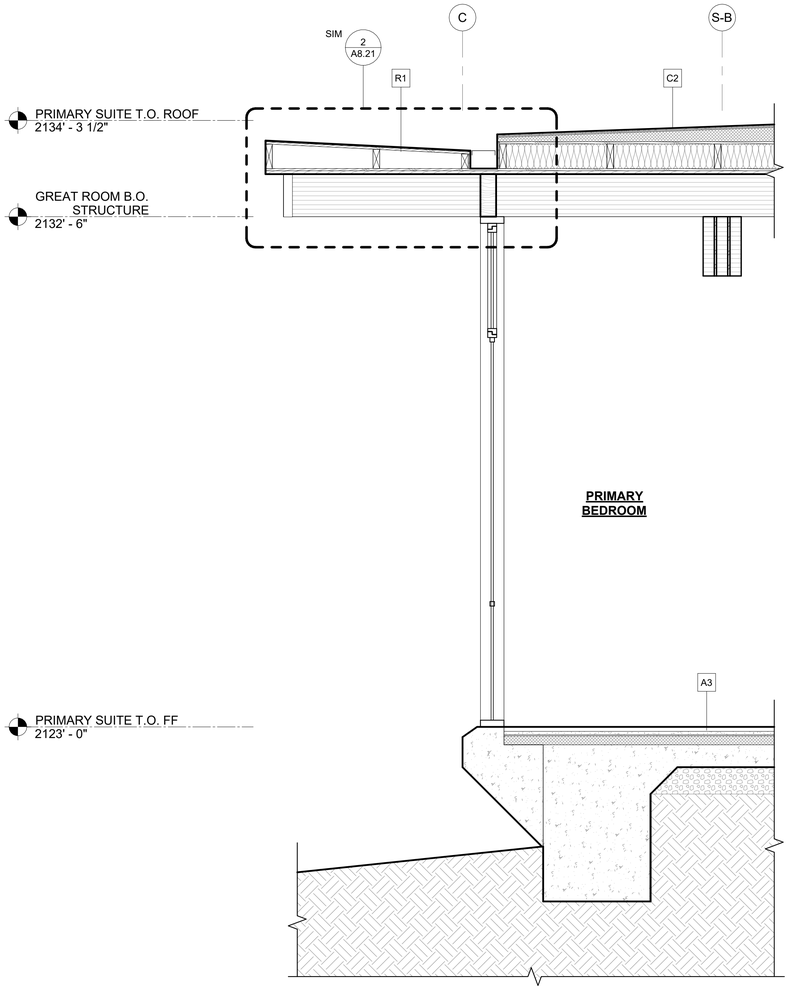
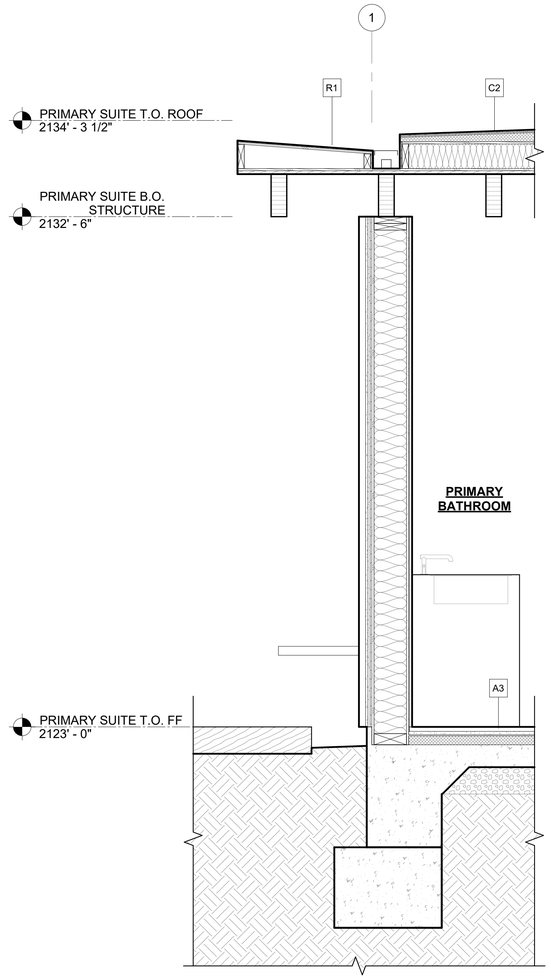
0' 2' 4' 8'

TITLE
BUILDING SECTIONS - HOME OFFICES

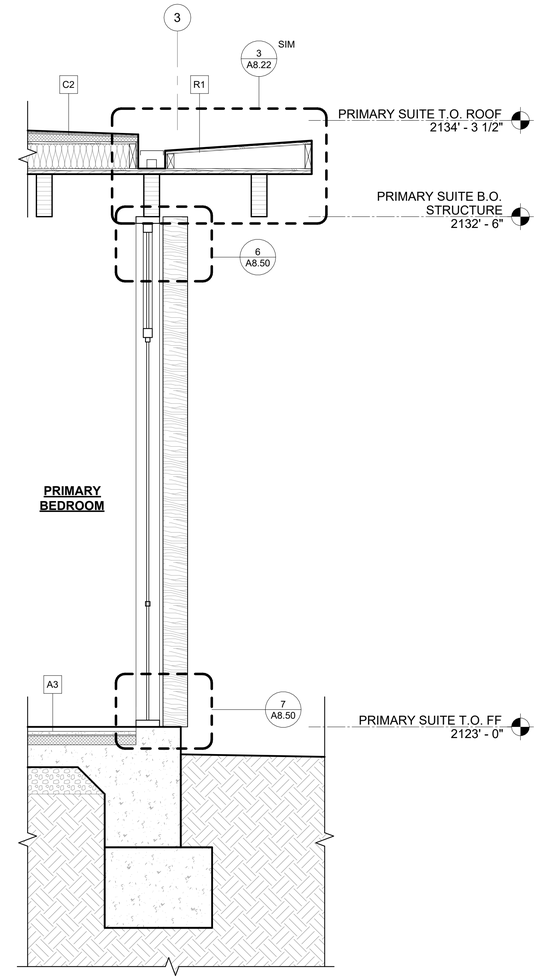
A4.06
SHEET



3 WALL SECTION 2 @ PRIMARY BEDROOM
3/4" = 1'-0"



2 WALL SECTION @ PRIMARY BATH
3/4" = 1'-0"



1 WALL SECTION 1 @ PRIMARY BEDROOM
3/4" = 1'-0"

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DATE
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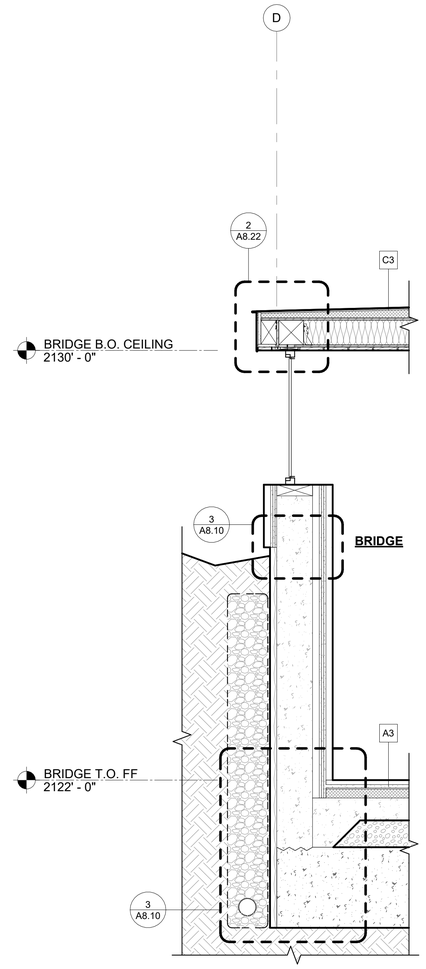
HISTORY

△	DESC.	DATE

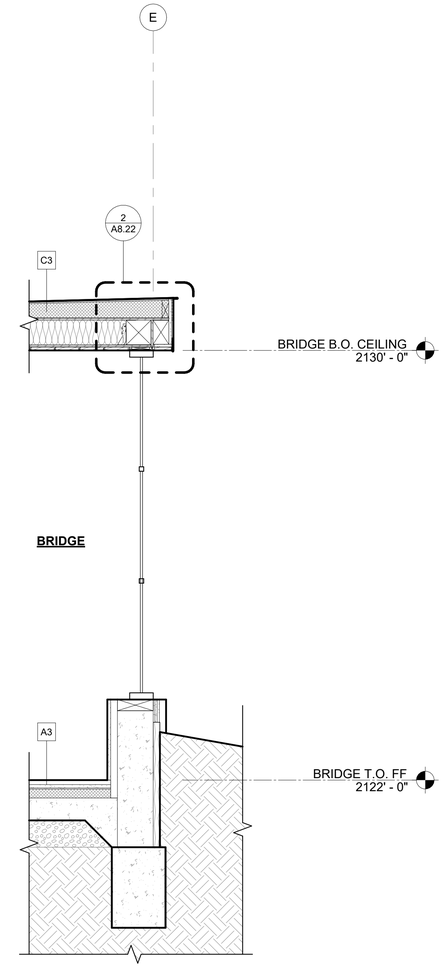
TITLE
WALL SECTIONS

A5.00
SHEET

5/19/2025 5:34:45 PM



2 WALL SECTION 2 @ BRIDGE
3/4" = 1'-0"



1 WALL SECTION 1 @ BRIDGE
3/4" = 1'-0"

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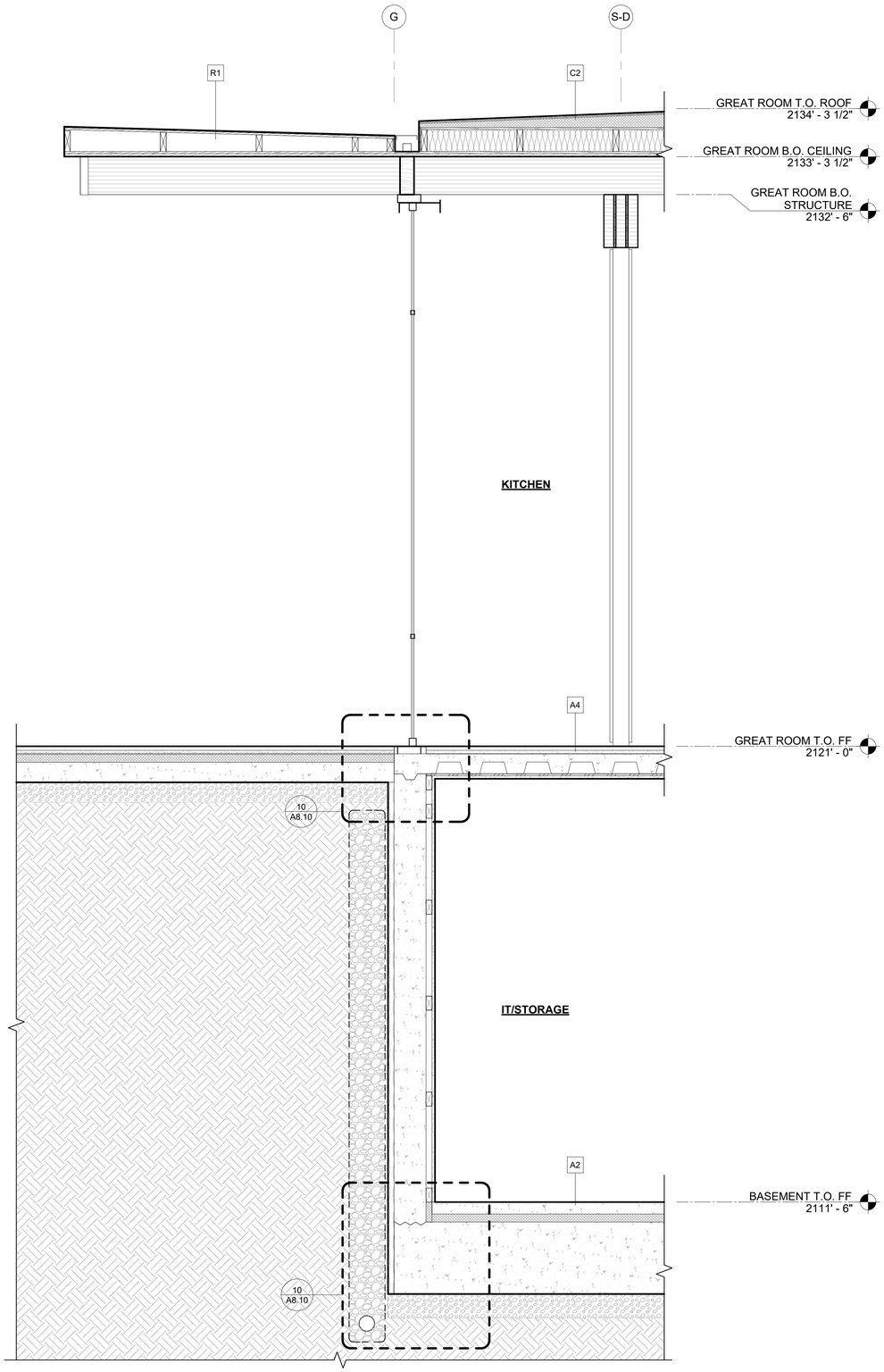
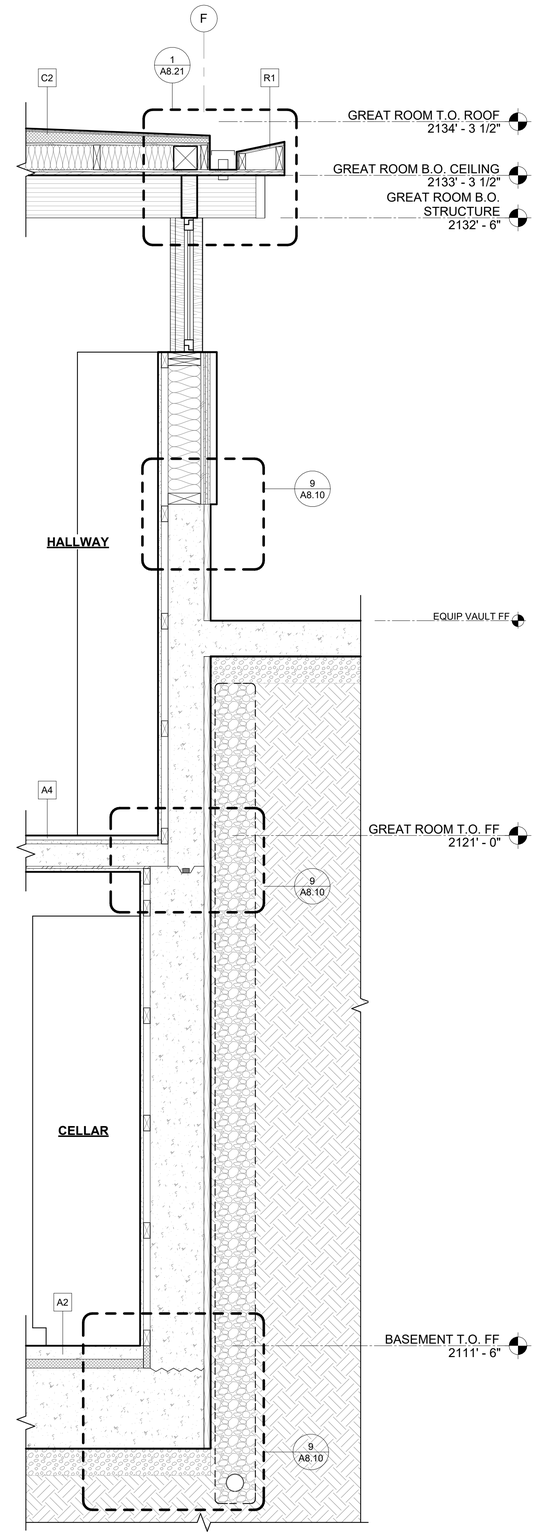
TITLE
WALL SECTIONS

A5.01
SHEET

5/19/2025 5:34:46 PM



2 WALL SECTION @ KITCHEN, DECK, & IT STORAGE
3/4" = 1'-0"



1 WALL SECTION @ HALLWAY & CELLAR
3/4" = 1'-0"

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TITLE
WALL SECTIONS

A5.02
SHEET

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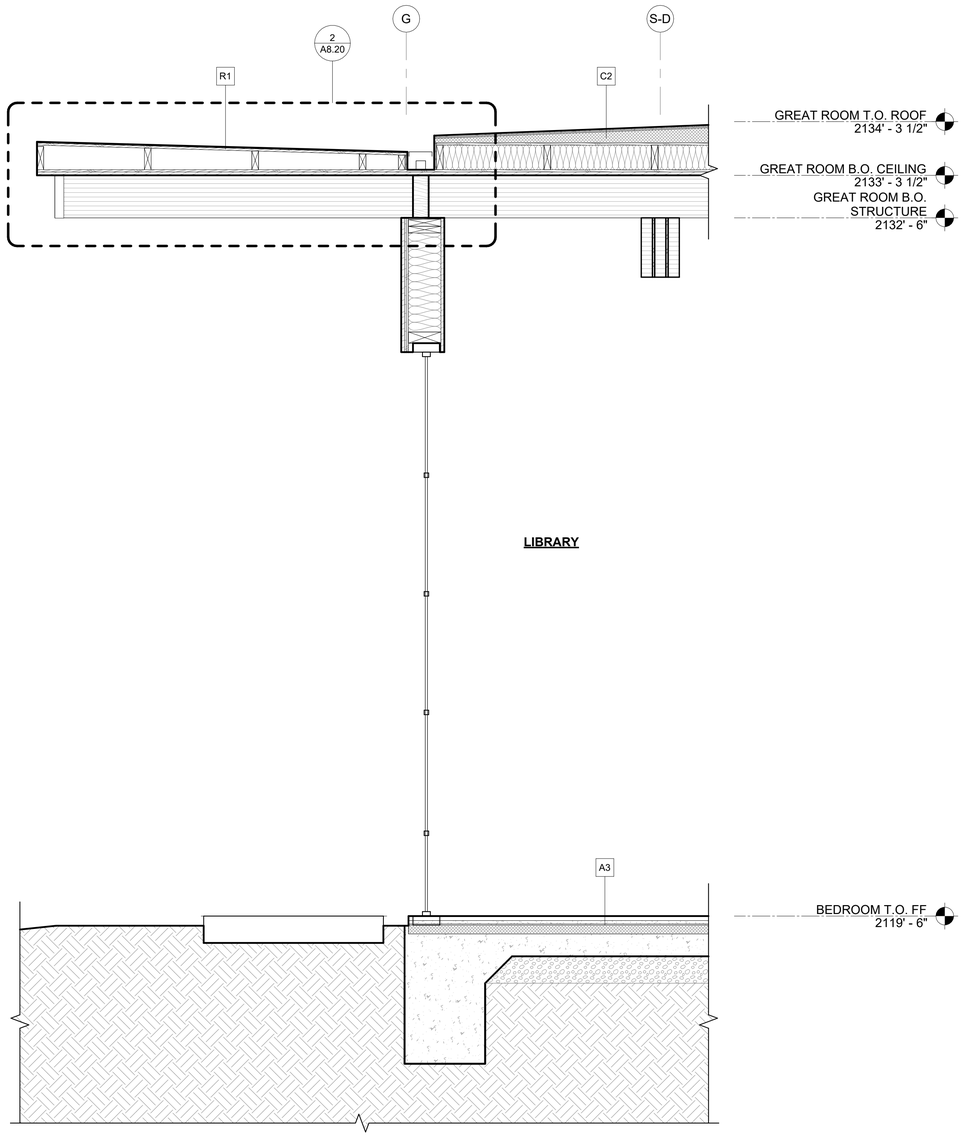
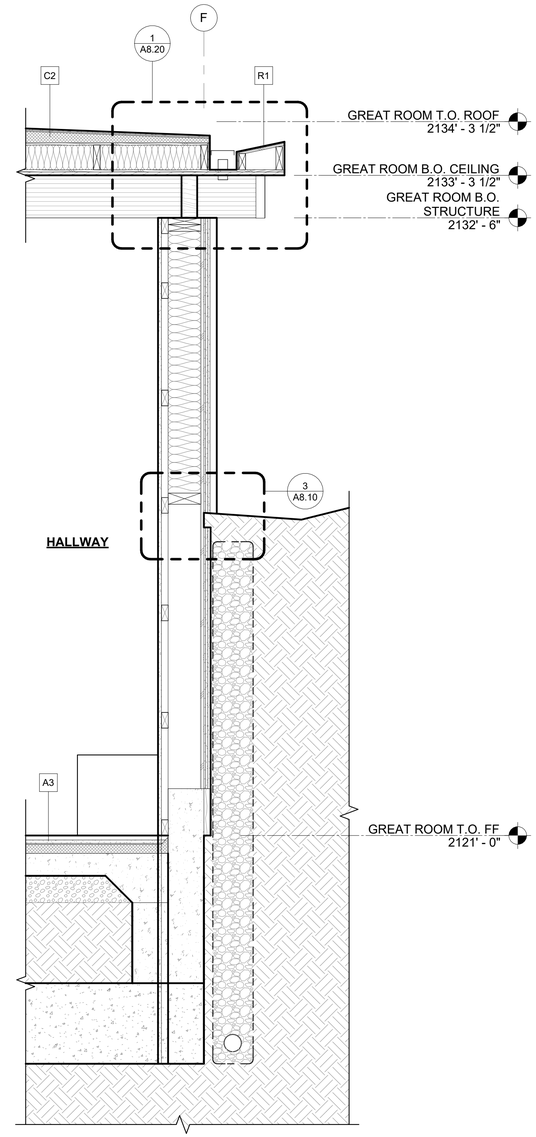


3 WALL SECTION @ LIBRARY
3/4" = 1'-0"



1 WALL SECTION @ HALLWAY
3/4" = 1'-0"

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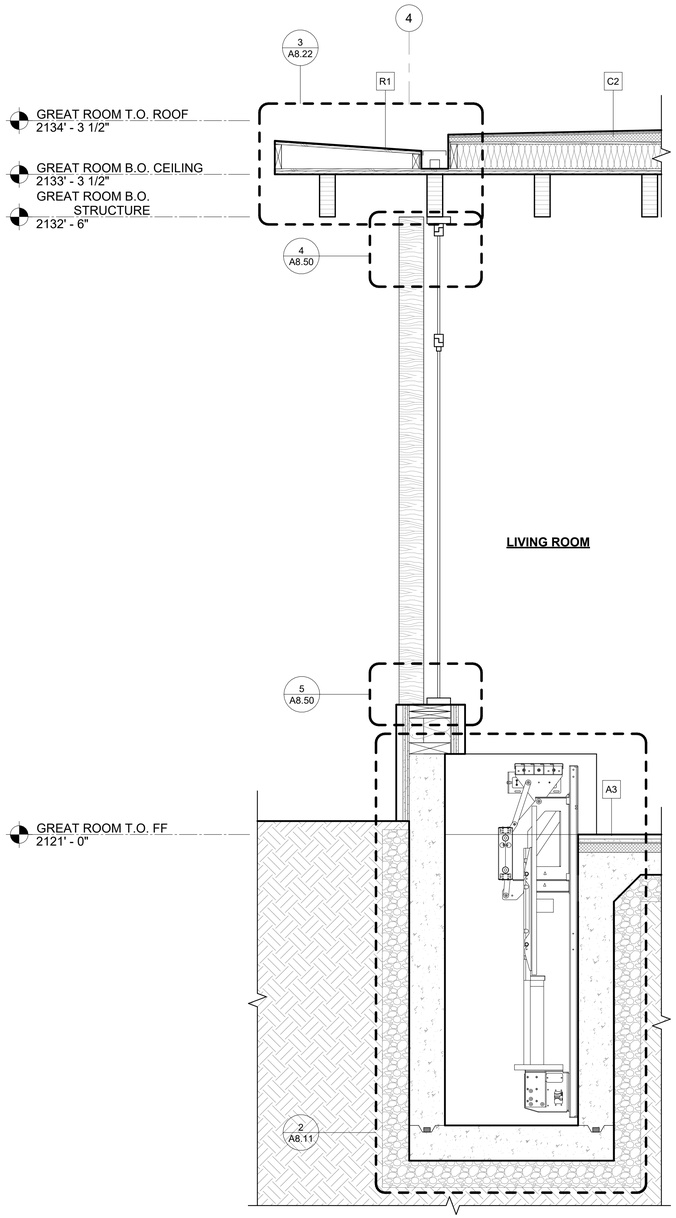
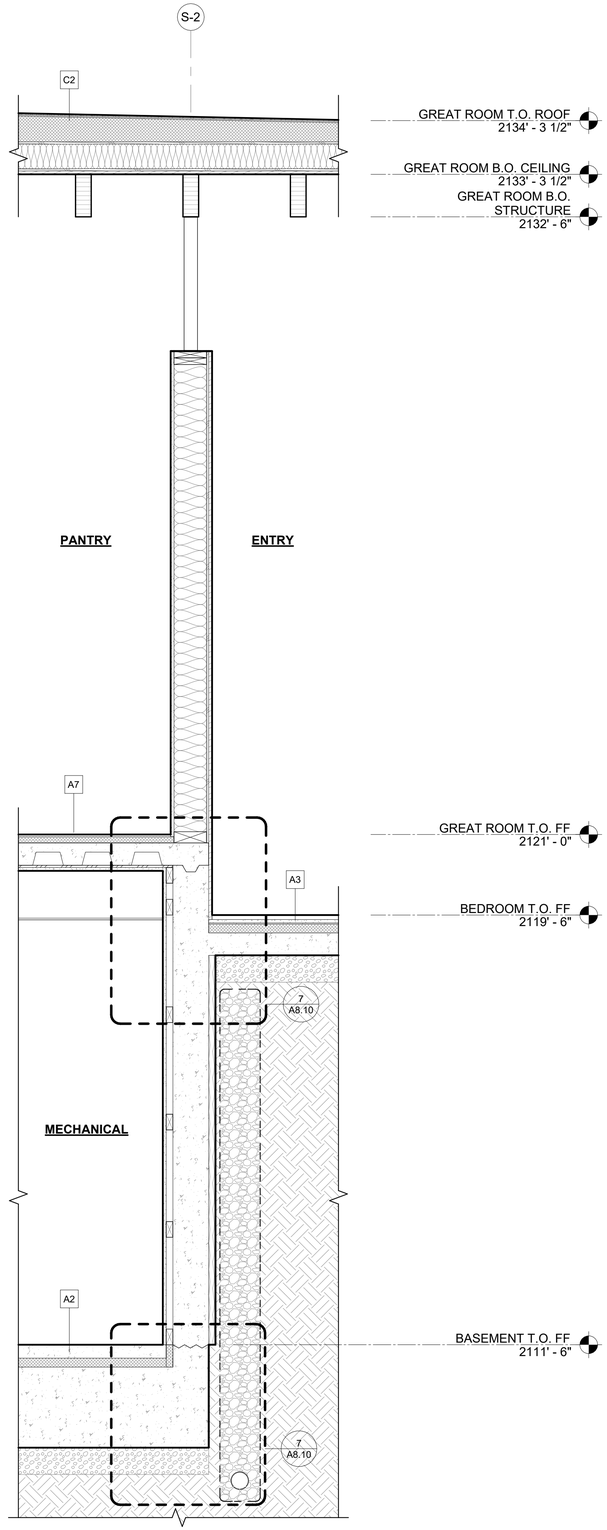
A5.03
SHEET

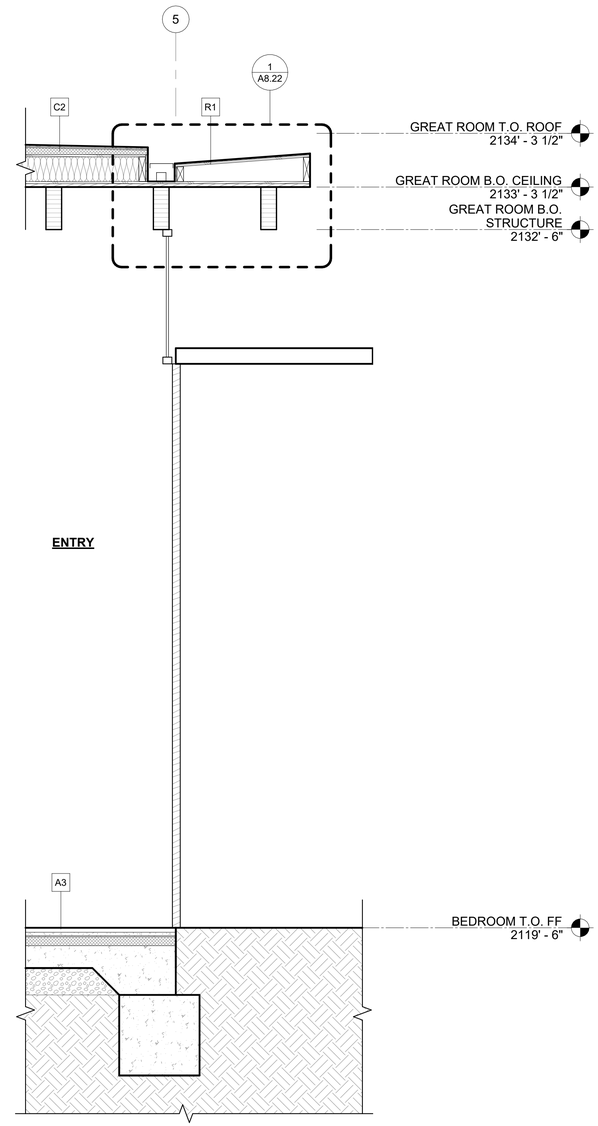
5/19/2025 5:34:48 PM



3 WALL SECTION @ LIVING ROOM
3/4" = 1'-0"



2 WALL SECTION @ PANTRY, ENTRY & MECHANICAL
3/4" = 1'-0"



1 WALL SECTION @ ENTRY
3/4" = 1'-0"

5/19/2025 5:34:50 PM

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LICENSED ARCHITECT
JONATHAN FELDMAN
C-28459
11/30/2025
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT NAME
WARD RESIDENCE

PROJECT ADDRESS
23 VASQUEZ TRAIL,
CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

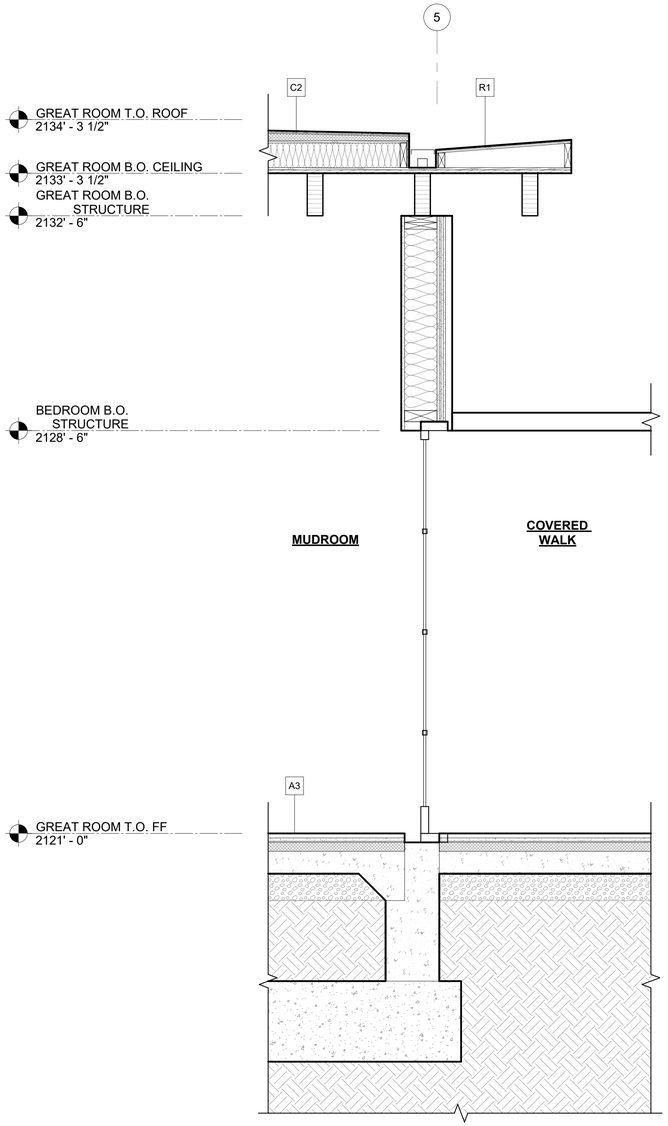
DATE
05.16.2025

HISTORY

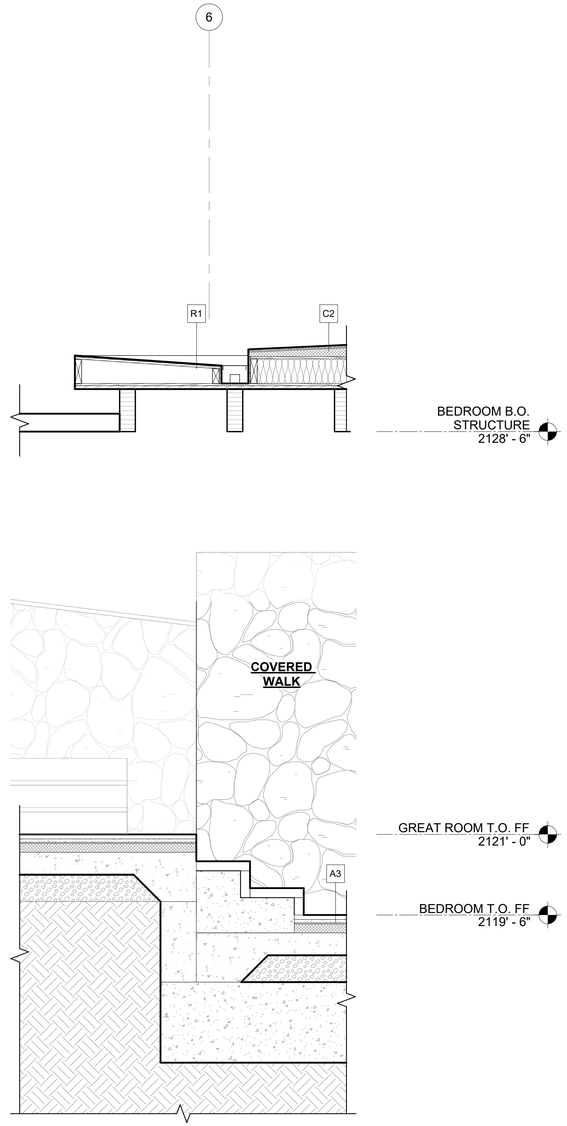
△	DESC.	DATE

TITLE
WALL SECTIONS

A5.04
SHEET



2 WALL SECTION @ MUDROOM & COVERED WALK
3/4" = 1'-0"



1 WALL SECTION 2 @ COVERED WALK & OPEN AIR HALLWAY
3/4" = 1'-0"

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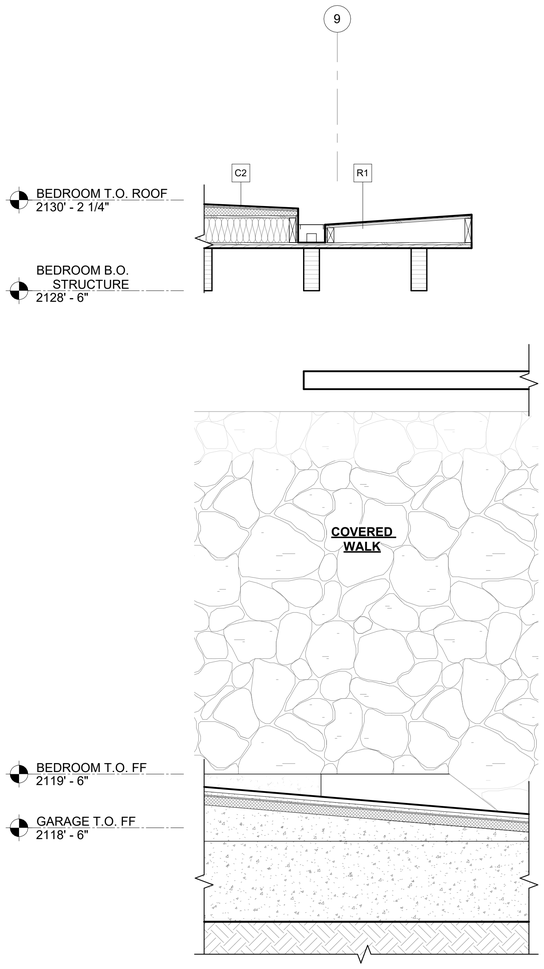
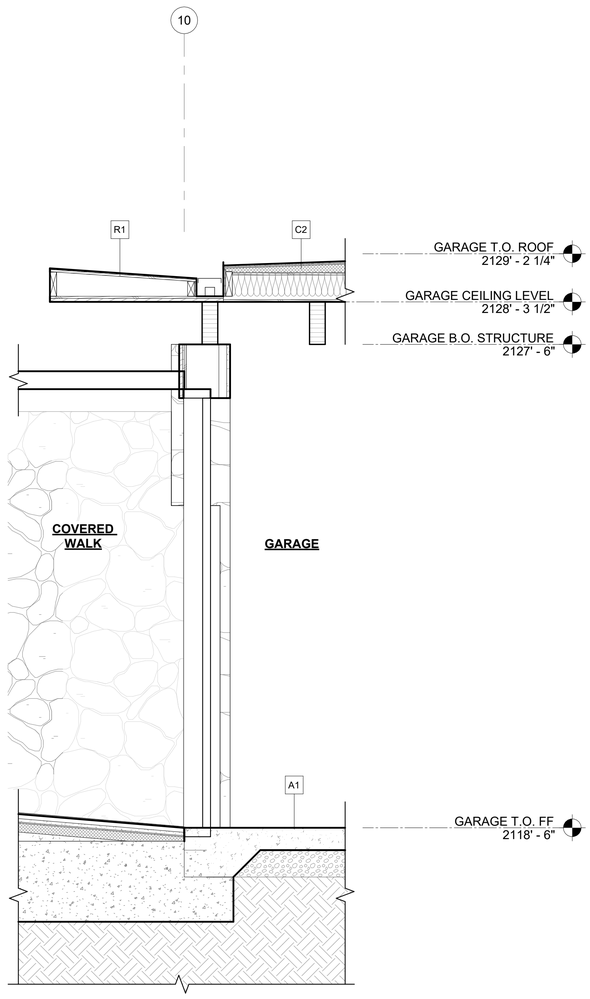
TITLE
WALL SECTIONS

A5.05
SHEET

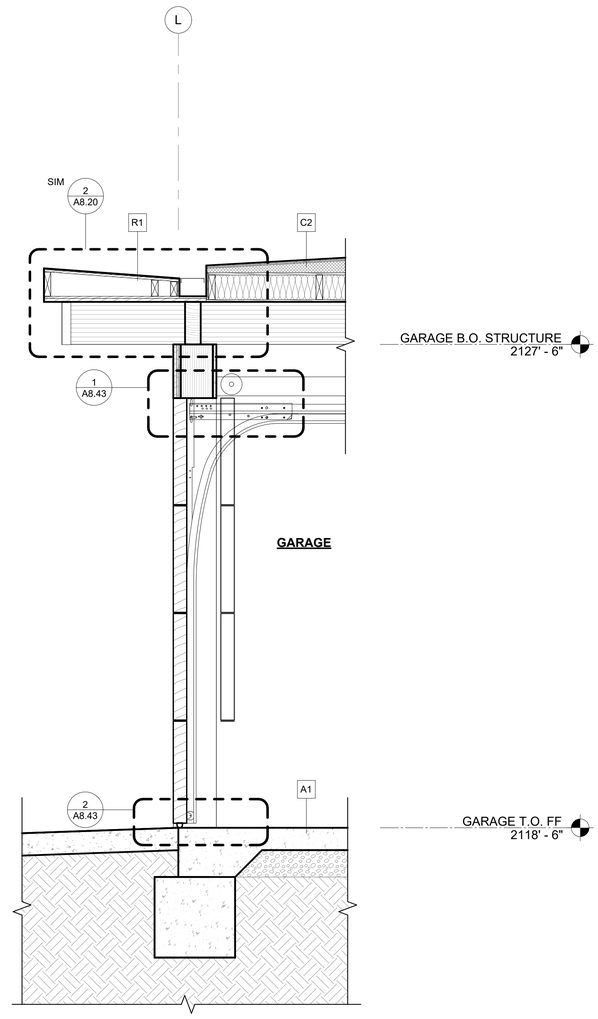
5/19/2025 5:34:51 PM



1 WALL SECTION 1 @ COVERED WALK & OPEN AIR HALL
3/4" = 1'-0"



2 WALL SECTION @ COVERED WALK & GARAGE
3/4" = 1'-0"



5 WALL SECTION @ GARAGE
3/4" = 1'-0"

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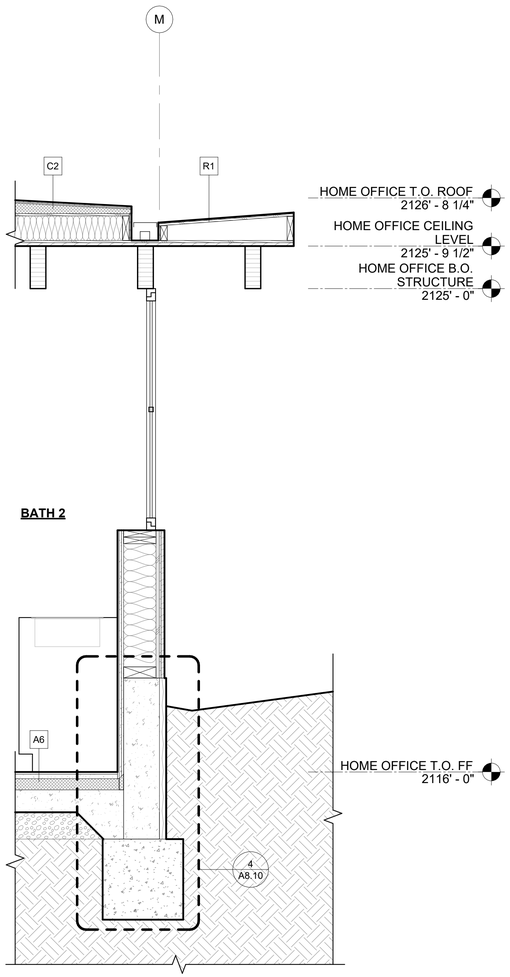
HISTORY

△	DESC.	DATE

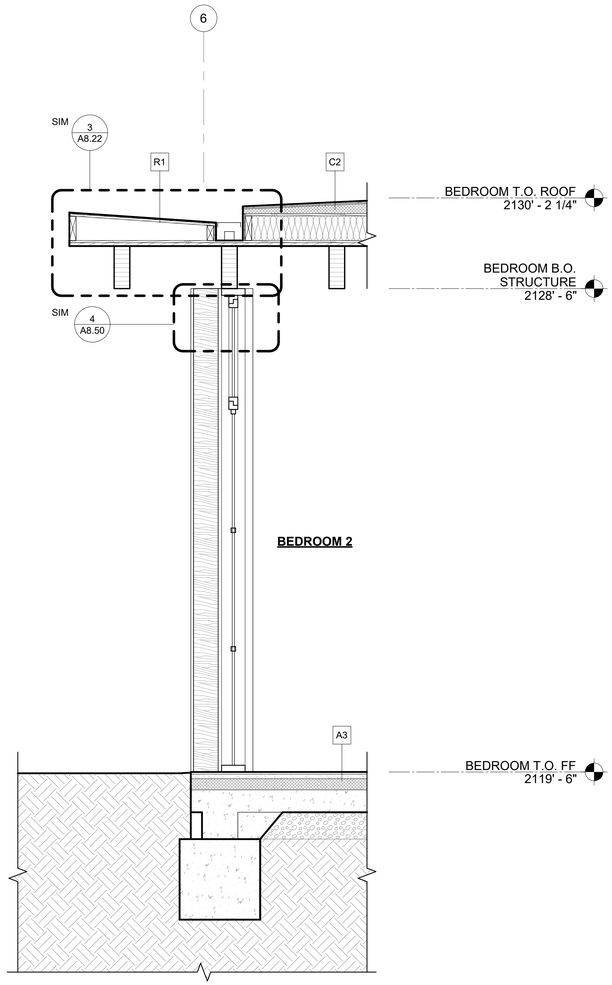
TITLE
WALL SECTIONS

A5.06
SHEET

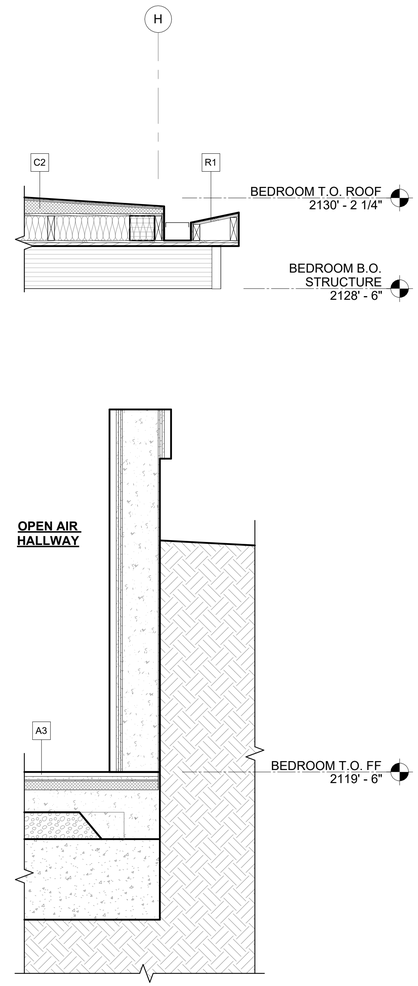
5/19/2025 5:34:52 PM



3 WALL SECTION @ BATH 2
3/4" = 1'-0"



2 WALL SECTION @ BEDROOM 2
3/4" = 1'-0"



1 WALL SECTION @ OPEN AIR HALLWAY
3/4" = 1'-0"

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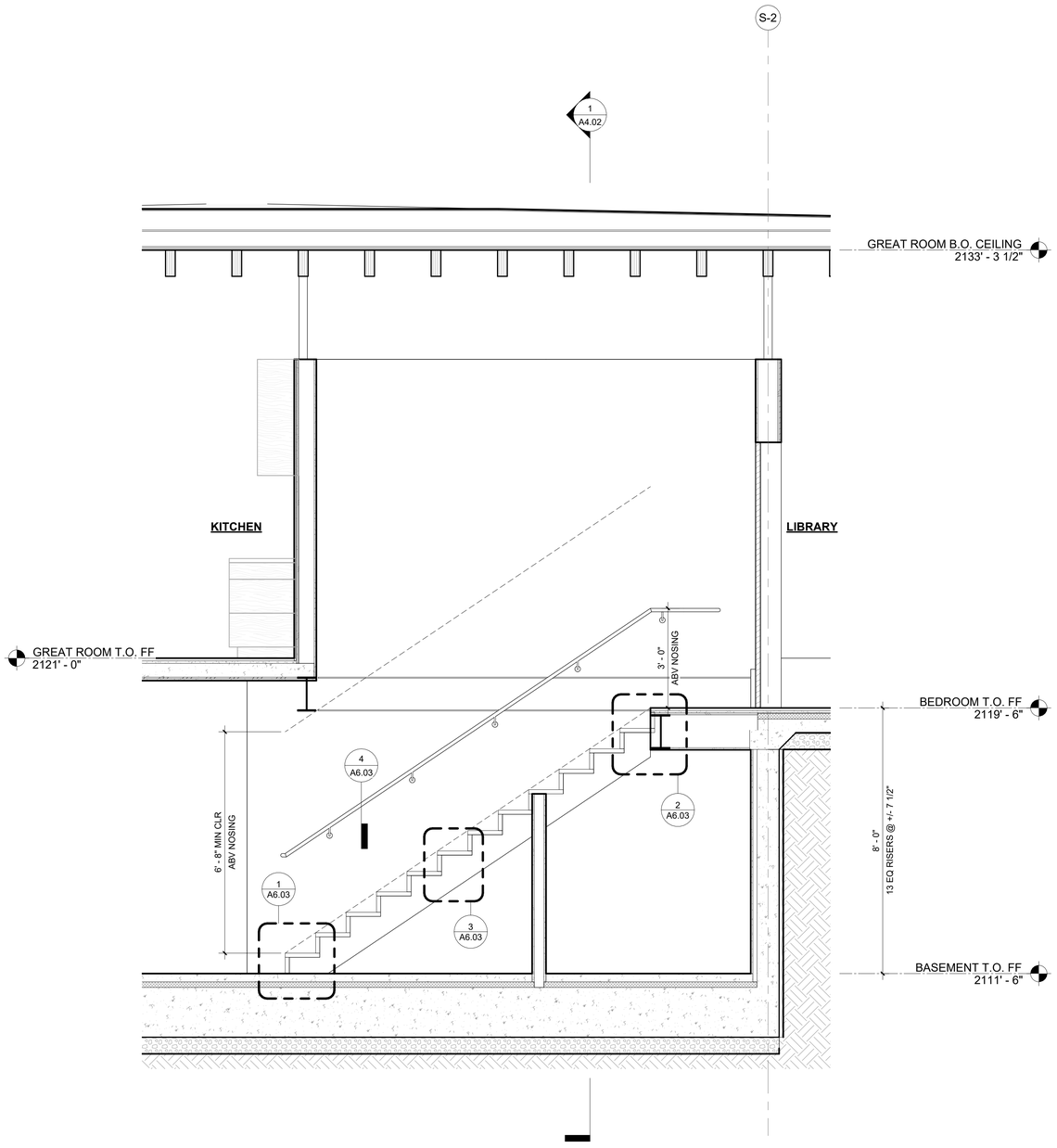
△	DESC.	DATE

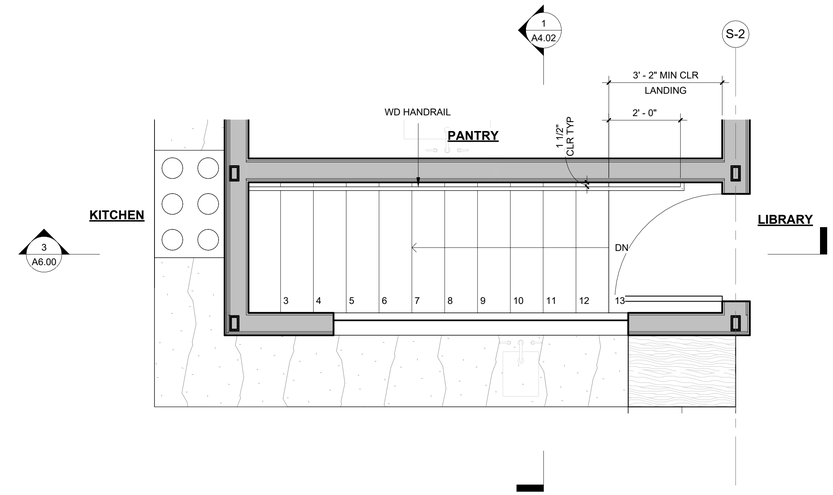
TITLE
WALL SECTIONS

A5.07
SHEET

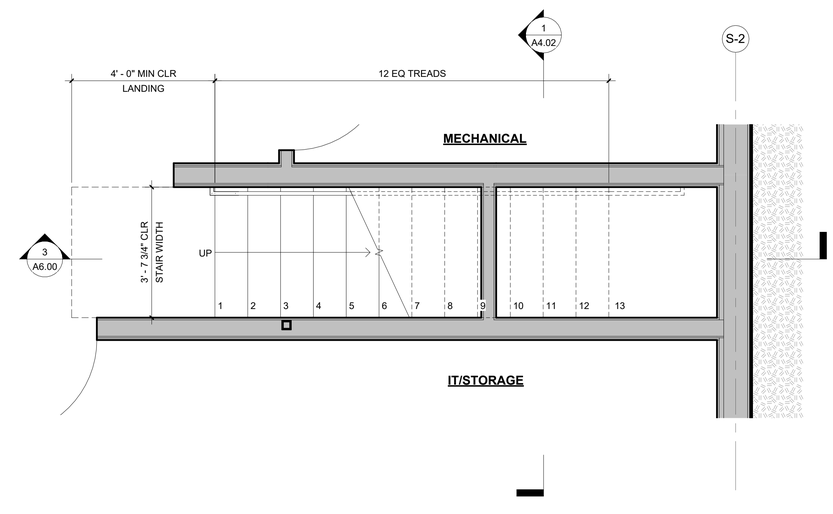
5/19/2025 5:34:54 PM



3 STAIR SECTION - GREAT ROOM
1/2" = 1'-0"



1 STAIR PLAN - GREAT ROOM LEVEL 1
1/2" = 1'-0"



2 STAIR PLAN - GREAT ROOM LEVEL 0
1/2" = 1'-0"

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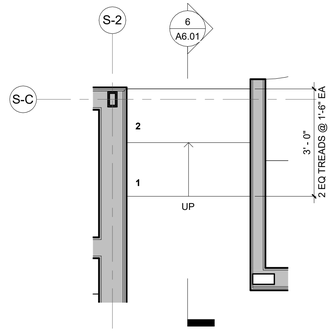
HISTORY

△	DESC.	DATE

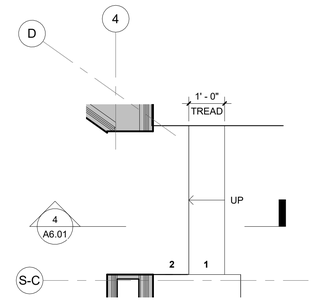
TITLE
STAIR PLANS & SECTIONS - BASEMENT STAIR

A6.00
SHEET

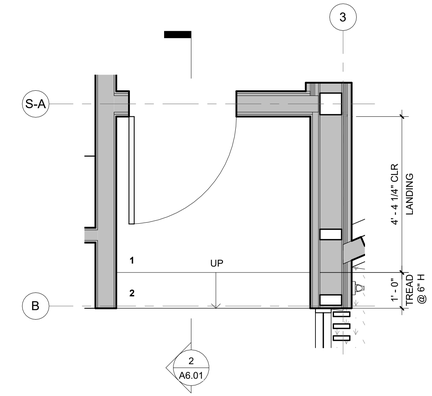
5/19/2025 5:34:55 PM



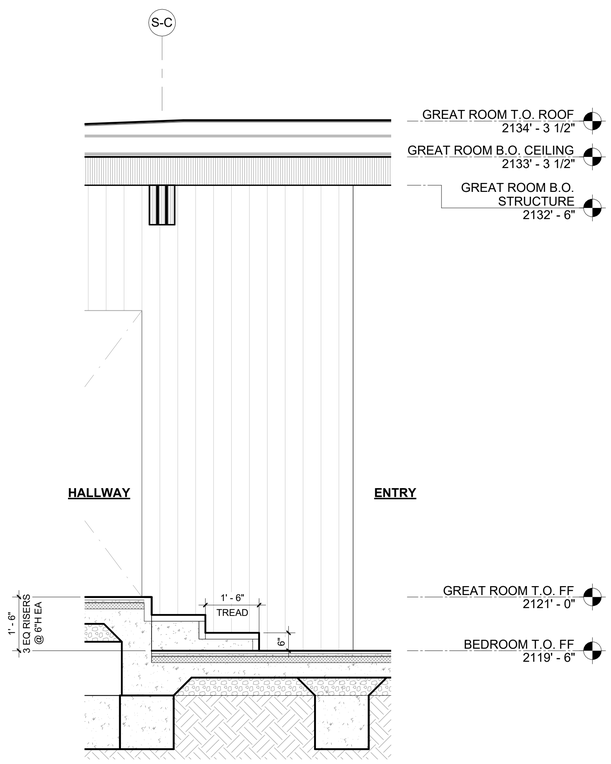
5 PLAN - ENTRY TO HALLWAY STAIR
1/2" = 1'-0"



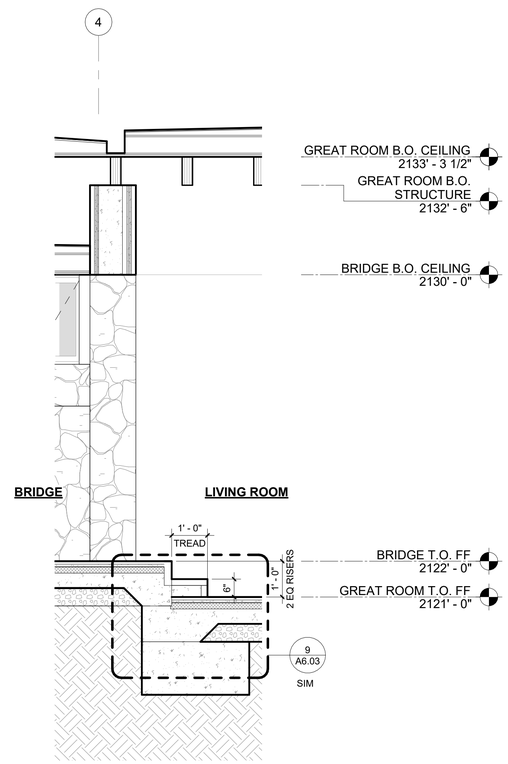
3 PLAN - HALLWAY TO BRIDGE STAIR
1/2" = 1'-0"



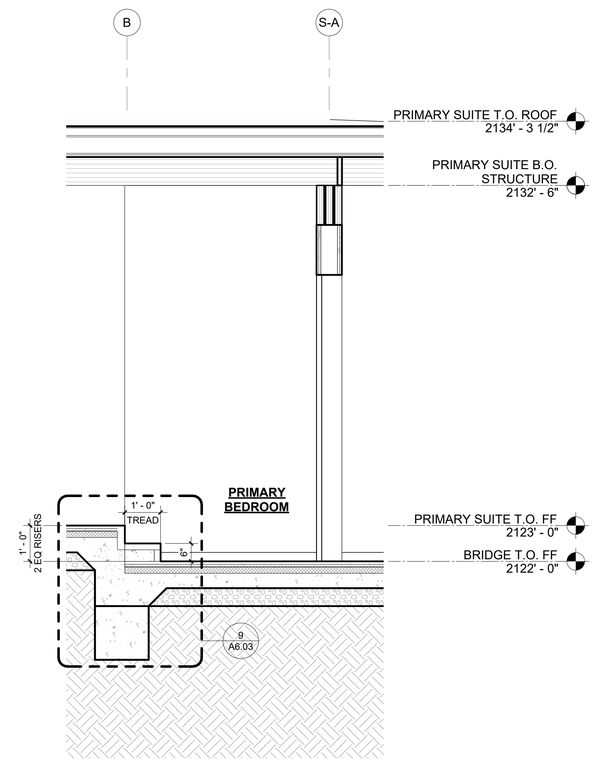
1 PLAN - PRIMARY SUITE STAIR
1/2" = 1'-0"



6 STAIR SECTION - ENTRY TO HALLWAY STAIR
1/2" = 1'-0"



4 STAIR SECTION - HALLWAY TO BRIDGE STAIR
1/2" = 1'-0"



2 STAIR SECTION - PRIMARY SUITE STAIR
1/2" = 1'-0"

5/19/2025 5:34:58 PM

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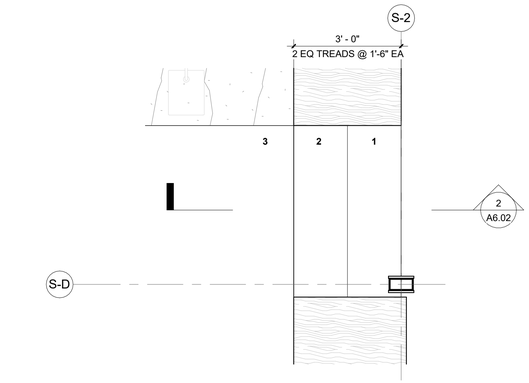
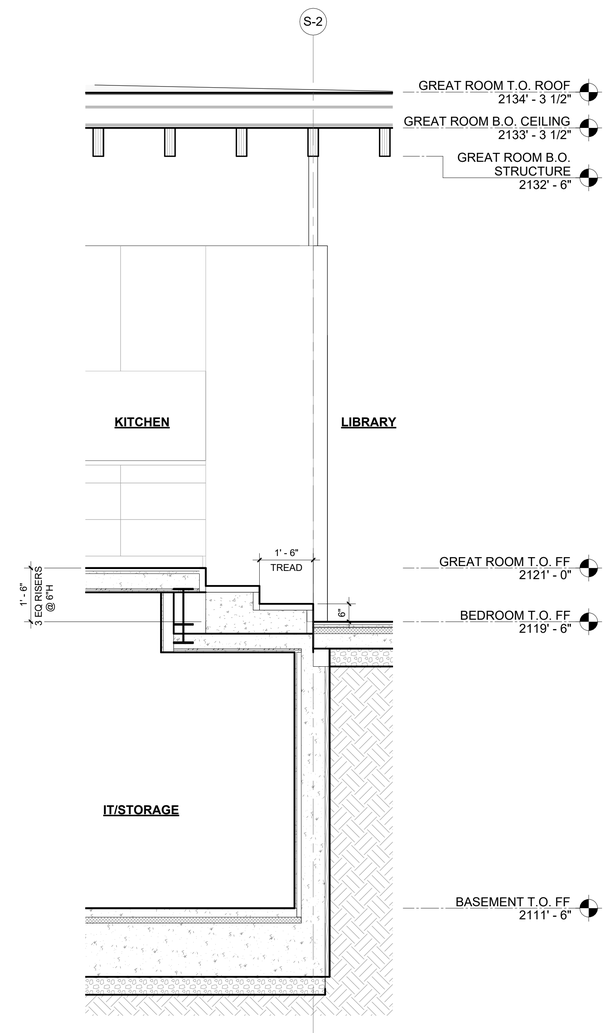
△	DESC.	DATE

TITLE
STAIR PLANS & SECTIONS - PRIMARY SUITE & GREAT ROOM

A6.01
SHEET



1 PLAN - LIBRARY TO KITCHEN STAIR
1/2" = 1'-0"



2 STAIR SECTION - LIBRARY TO KITCHEN STAIR
1/2" = 1'-0"

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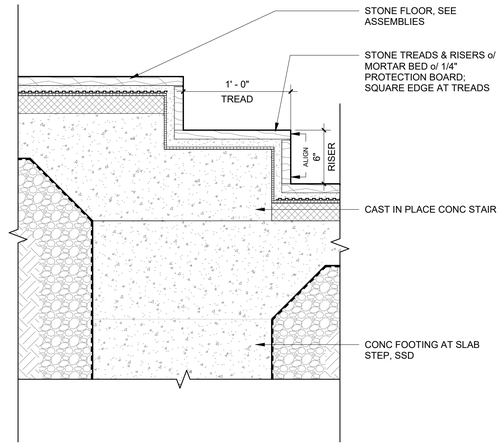
HISTORY

△	DESC.	DATE

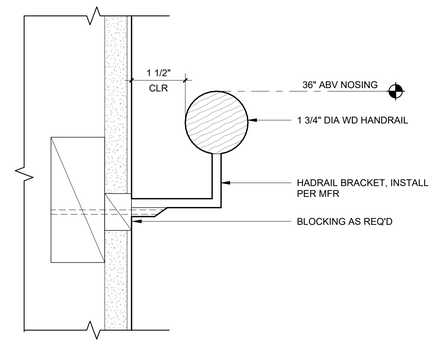
TITLE
STAIR PLANS & SECTIONS - GREAT ROOM

A6.02
SHEET

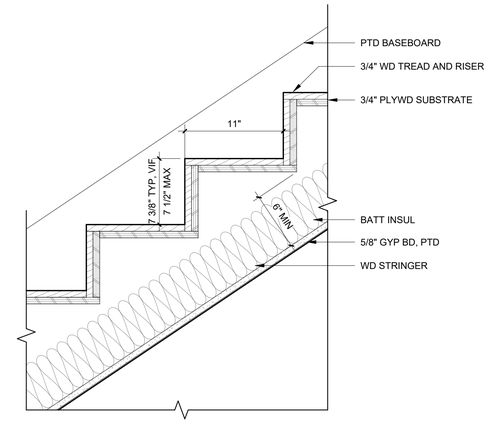
5/19/2025 5:34:59 PM



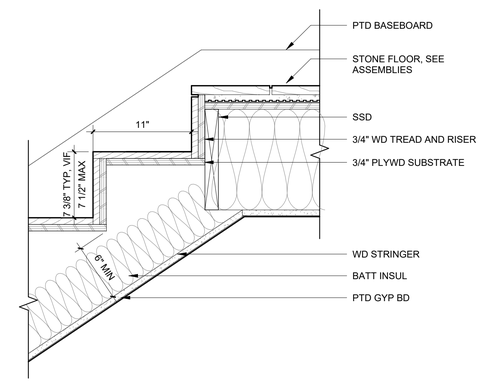
9 INTERIOR CONC STAIR DETAIL, TYP
1 1/2" = 1'-0"



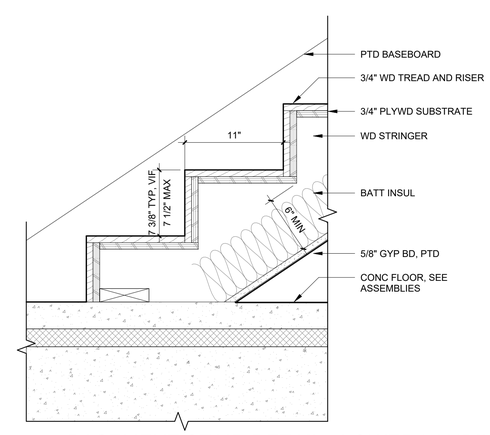
4 HANDRAIL DETAIL
6" = 1'-0"



3 BASEMENT STAIR DETAIL - STRINGER
1 1/2" = 1'-0"



2 BASEMENT STAIR DETAIL - TOP LANDING
1 1/2" = 1'-0"



1 BASEMENT STAIR DETAIL - LOWER LANDING
1 1/2" = 1'-0"

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△	DESC.	DATE

TITLE
STAIR DETAILS

A6.03
SHEET

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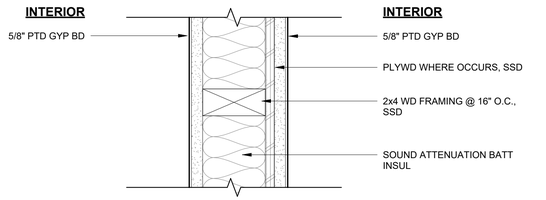
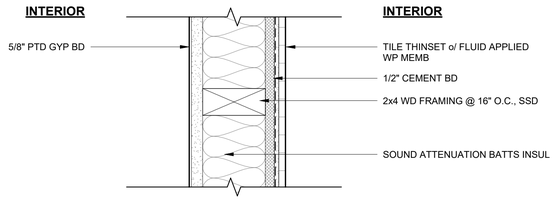
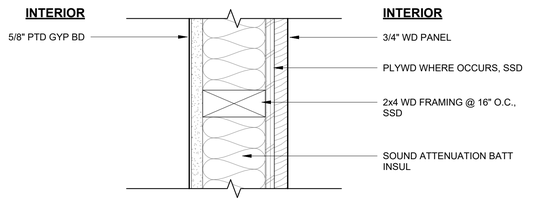


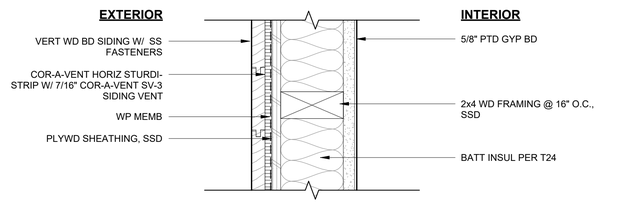
B1 2X4 - GYP BD/ GYP BD
3" = 1'-0"



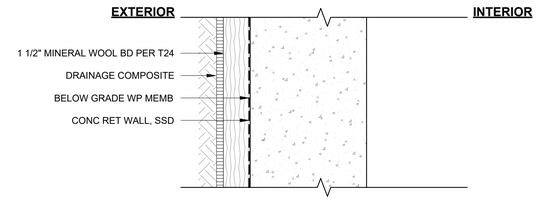
B2 2X4 - GYP BD / TILE
3" = 1'-0"



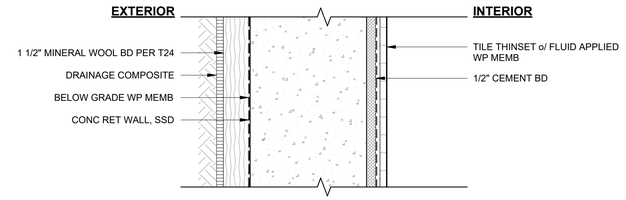
B4 2X4 - GYP BD/ WD
3" = 1'-0"



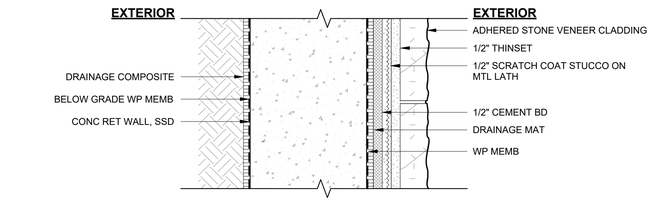
B5 2X4 - WD SIDING/GYP BD
3" = 1'-0"



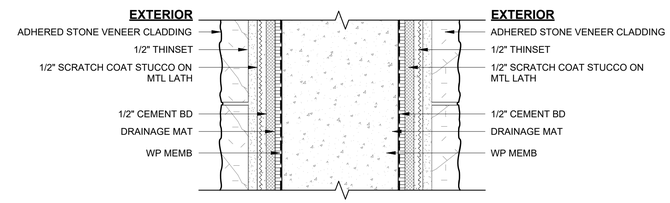
A7 CONC - RETAINING/TV VAULT
3" = 1'-0"



A8 CONC - RETAINING/TILE
3" = 1'-0"



A9 CONC - RETAINING/STONE EXTERIOR
3" = 1'-0"



A10 CONC - STONE/STONE EXTERIOR
3" = 1'-0"

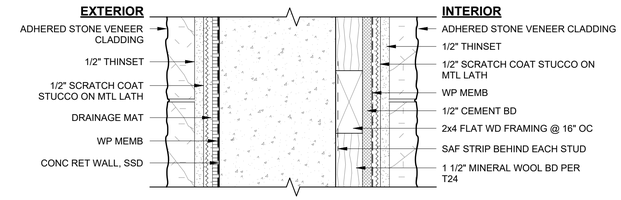
CORE DESIGNATOR: X00 **ASSEMBLY NUMBER**

A = CONCRETE / MASONRY
B = 2x4 STUD FRAMING
C = 2x6 STUD FRAMING
D = MISC. STUD FRAMING
E = MODIFIED (E) WALL

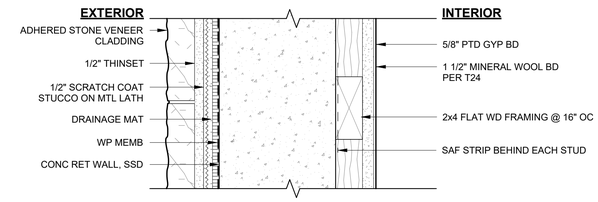
SOUND TRANSMISSION CLASS (IF APPLIES)
FIRE RATING (IF APPLIES)
UL LISTING (IF APPLIES)

UL:	FIRE:	STC:
--	--	--

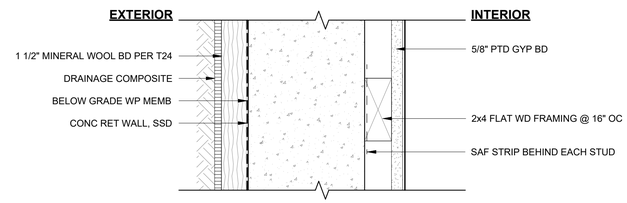
X KEY
3" = 1'-0"



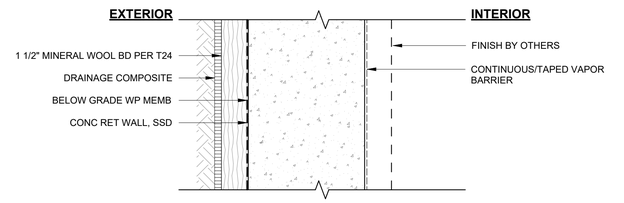
A1 CONC - STONE VENEER/STONE VENEER
3" = 1'-0"



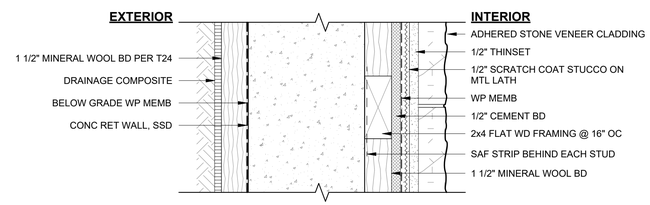
A2 CONC - STONE VENEER/GYP BD
3" = 1'-0"



A3 CONC - RETAINING/GYP BD
3" = 1'-0"



A4 CONC - RETAINING/SAUNA
3" = 1'-0"



A6 CONC - RETAINING/STONE
3" = 1'-0"

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TITLE
WALL ASSEMBLIES

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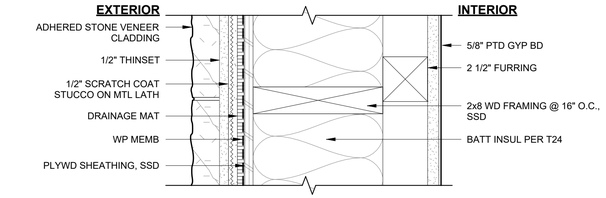
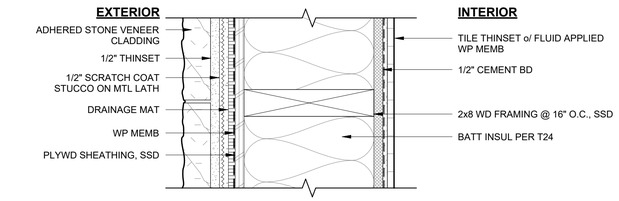
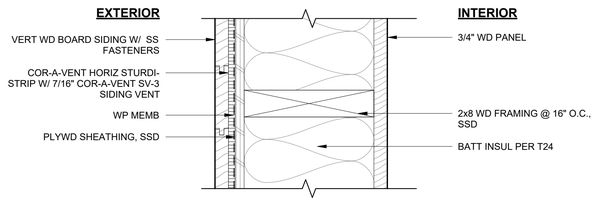


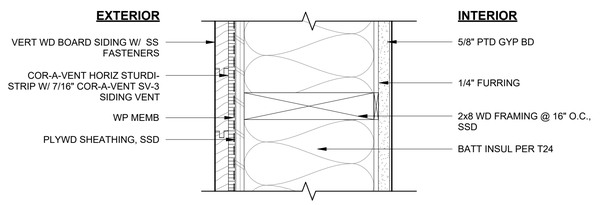
D7 2X8 + FURRING - STONE VENEER / GYP BD
3" = 1'-0"



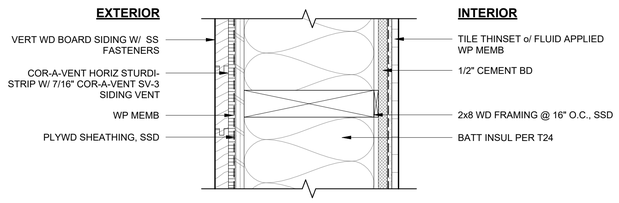
D8 2X8 - STONE VENEER / TILE
3" = 1'-0"



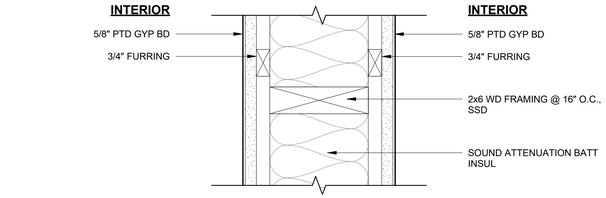
D9 2X8 - WD SIDING / WD
3" = 1'-0"



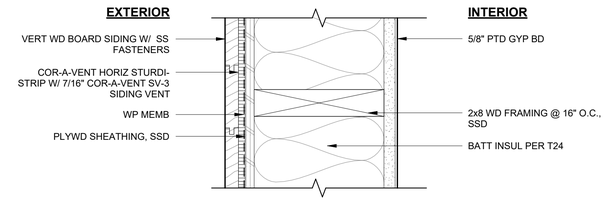
D10 2X8 + FURRING - WD SIDING / GYP BD
3" = 1'-0"



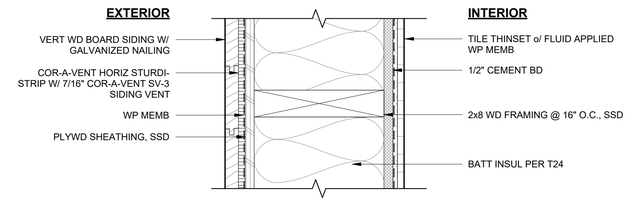
D11 2X8 + FURRING - WD SIDING / TILE
3" = 1'-0"



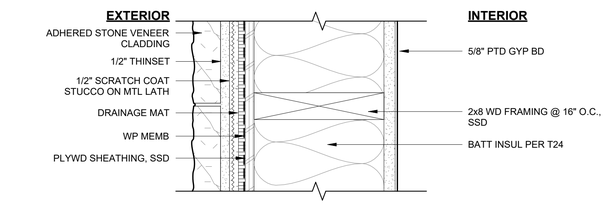
C9 2X6 + FURRING - GYP BD/ GYP BD
3" = 1'-0"



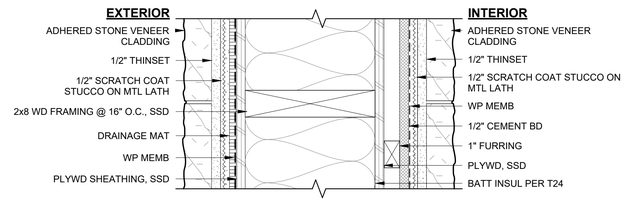
D1 2X8 - WD SIDING / GYP BD
3" = 1'-0"



D2 2X8 - WD SIDING / TILE
3" = 1'-0"



D3 2X8 - STONE VENEER / GYP BD
3" = 1'-0"



D5 2X8 + FURRING - STONE VENEER / STONE VENEER
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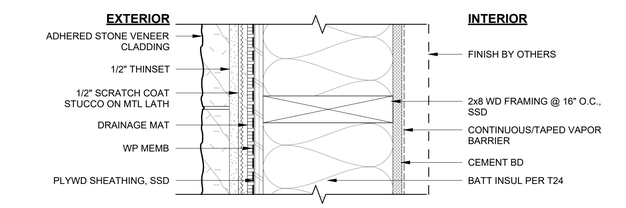
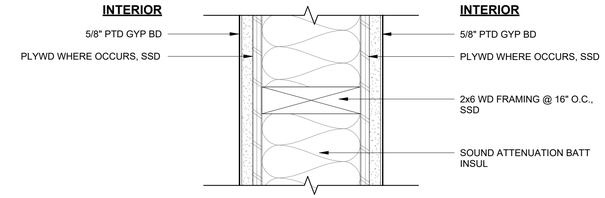
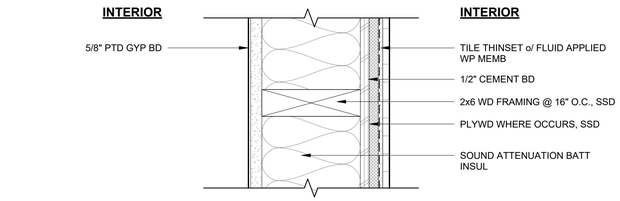


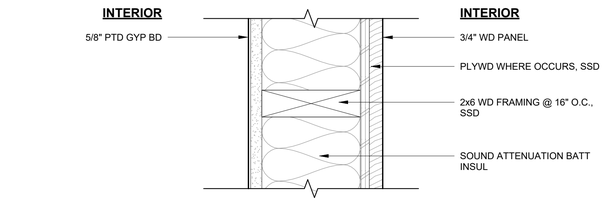
D6 2X8 - STONE VENEER / SAUNA GYP BD
3" = 1'-0"



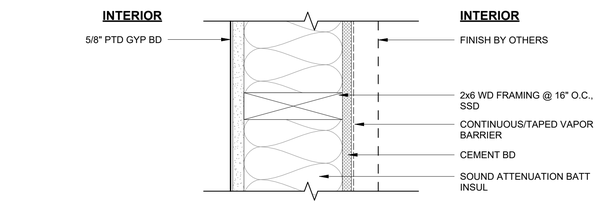
C1 2X6 - GYP BD/ GYP BD
3" = 1'-0"



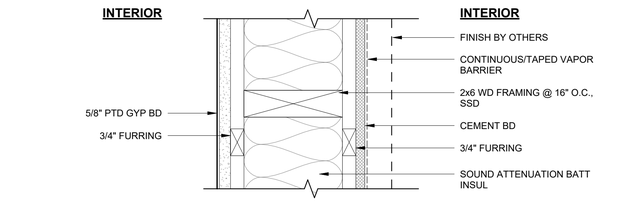
C2 2X6 - GYP BD/ TILE
3" = 1'-0"



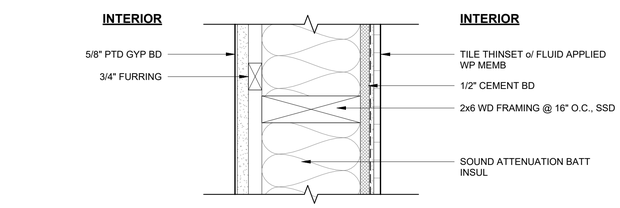
C3 2X6 - GYP BD/ WD
3" = 1'-0"



C5 2X6 - GYP BD/ SAUNA
3" = 1'-0"



C6 2X6 + FURRING - GYP BD/ SAUNA
3" = 1'-0"



C8 2X6 + FURRING - GYP BD/ TILE
3" = 1'-0"

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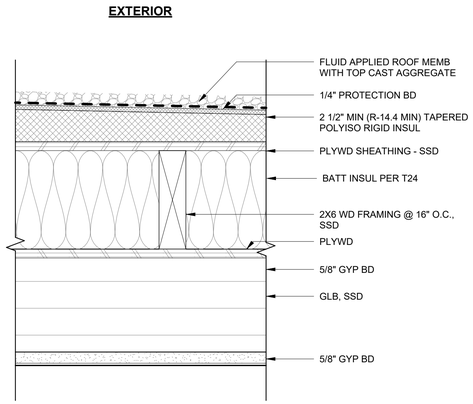
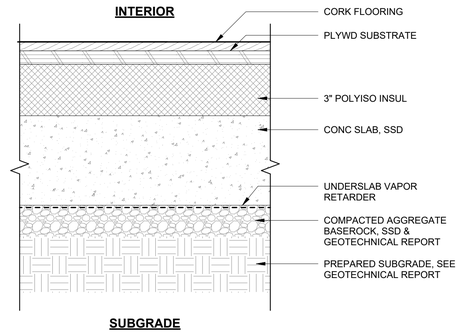
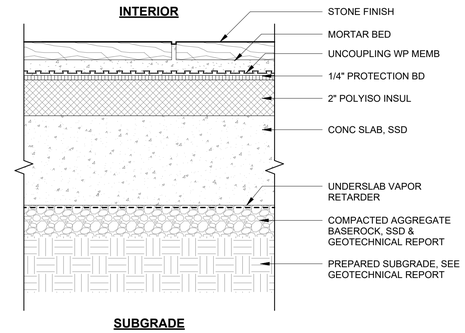


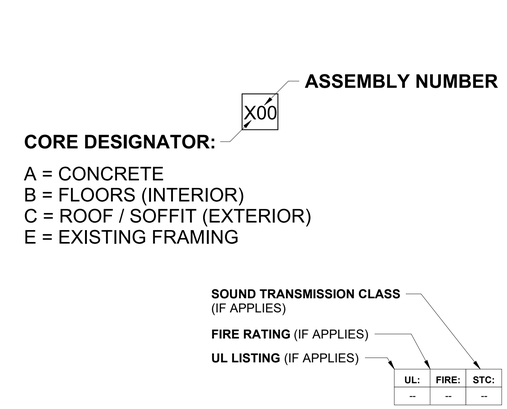
C1 CAST AGGREGATE/ GYP CEILING
3" = 1'-0"



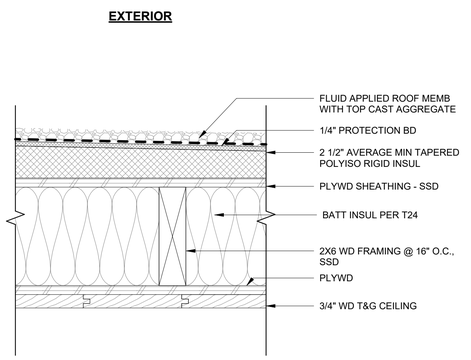
A6 CORK FLOOR/ INT SLAB ON GRADE
3" = 1'-0"



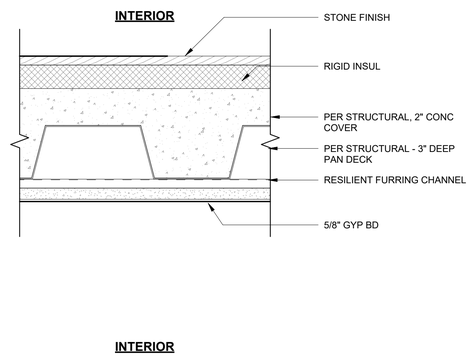
A3 STONE FLOOR/ INT SLAB ON GRADE
3" = 1'-0"



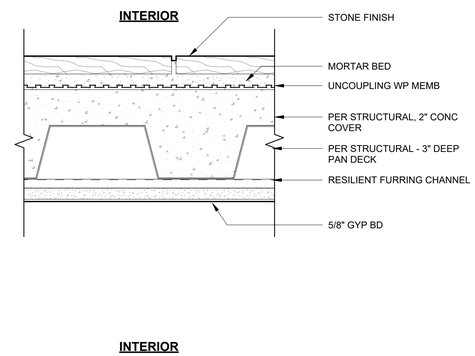
X KEY
3" = 1'-0"



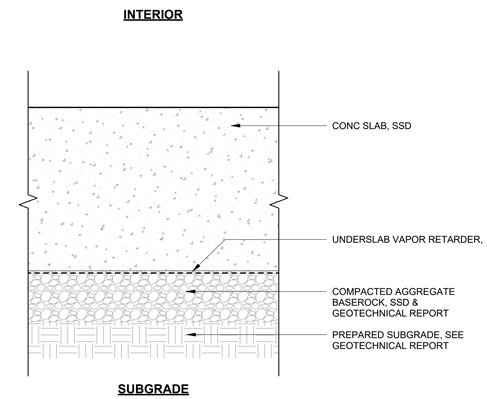
C2 CAST AGGREGATE/ WD CEILING
3" = 1'-0"



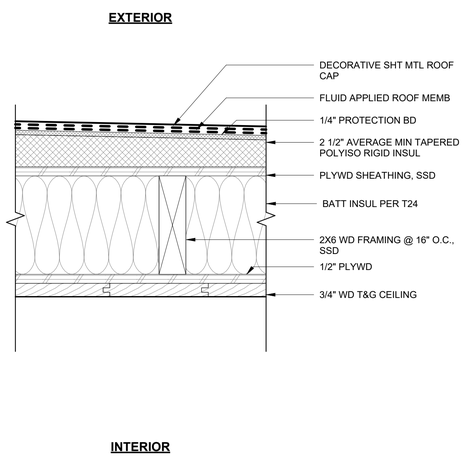
A7 CORK FLOOR/ CONCRETE OVER MTL DECK
3" = 1'-0"



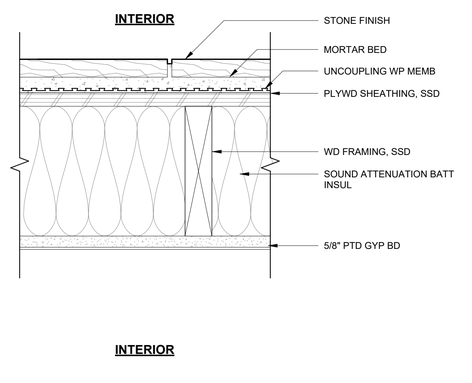
A4 STONE FLOOR/ CONCRETE OVER MTL DECK
3" = 1'-0"



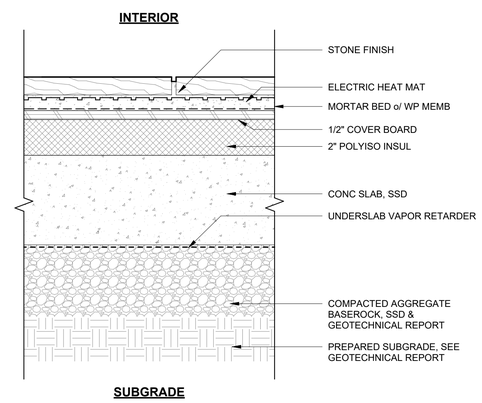
A1 INTERIOR SLAB ON GRADE
3" = 1'-0"



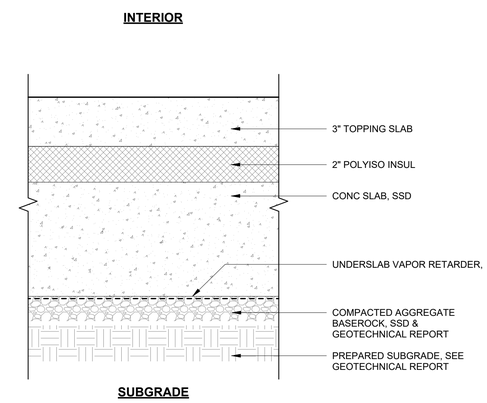
C3 MEMBRANE ROOF/ T&G CEILING
3" = 1'-0"



B1 STONE FLOOR/ WD FRAMING
3" = 1'-0"



A5 STONE FLOOR/ RADIANT/ INT SLAB ON GRADE
3" = 1'-0"



A2 INTERIOR SLAB ON GRADE /TOPPING SLAB
3" = 1'-0"

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FLOOR / ROOF ASSEMBLIES

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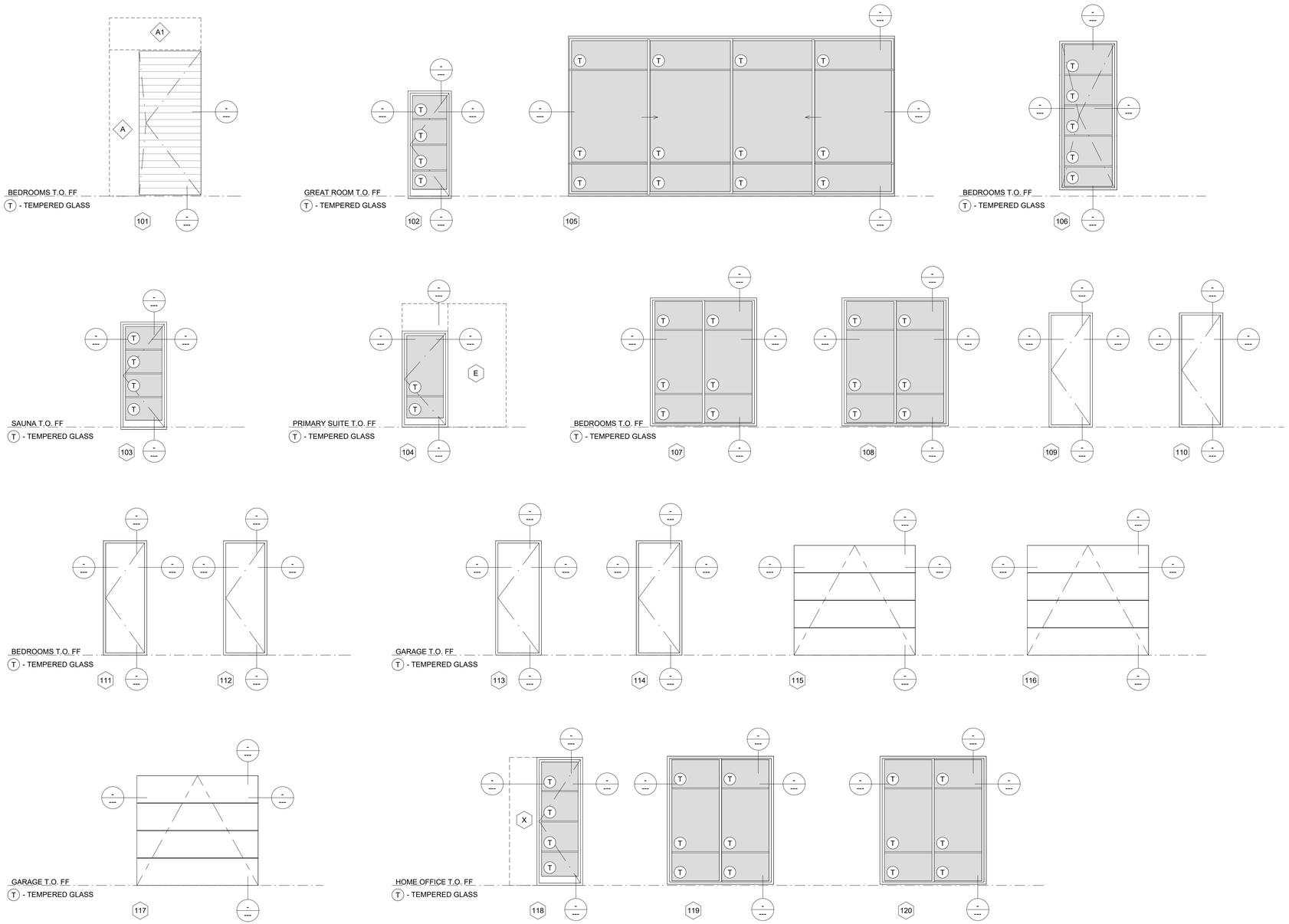
EXTERIOR DOOR SCHEDULE

MARK	LOCATION	DOOR OPERATION	DOOR MATERIAL	DOOR FINISH	DOOR THICKNESS	FRAME WIDTH	FRAME HEIGHT	FRAME MATERIAL	FRAME FINISH	GLASS TYPE	PRODUCT MANUFACTURER	PRODUCT SERIES	NOTES
HOME OFFICE T.O. FF													
118	OFFICE LIVING	SW	GLASS		0' - 1 3/4"	3' - 4"	9' - 4"			TP			
119	OFFICE 2	SL	GLASS		0' - 1 3/4"	7' - 9"	9' - 4"			TP			
120	OFFICE 1	SL	GLASS		0' - 1 3/4"	7' - 9"	9' - 4"			TP			
GARAGE T.O. FF													
113	GARAGE	SW			0' - 1 3/4"	3' - 4"	8' - 4"						
114	TRASH ROOM	SW			0' - 1 3/4"	3' - 4"	8' - 4"						
115	GARAGE	OH			0' - 3"	8' - 6"	8' - 0"						
116	GARAGE	OH			0' - 3"	8' - 6"	8' - 0"						
117	GARAGE	OH			0' - 3"	8' - 6"	8' - 0"						
BEDROOM T.O. FF													
101	ENTRY	PV			0' - 1 3/4"	4' - 10"	10' - 10"						
106	LIBRARY	PV	GLASS		0' - 1 3/4"	4' - 2"	10' - 10"			TP			
107	BEDROOM 2	SL	GLASS		0' - 1 3/4"	7' - 9"	9' - 4"			TP			
108	BEDROOM 3	SL	GLASS		0' - 1 3/4"	7' - 9"	9' - 4"			TP			
109	BEDROOM 3	SW			0' - 1 3/4"	3' - 2"	8' - 4"						
110	MECH	SW			0' - 1 3/4"	3' - 2"	8' - 4"						
111	BATH 1	SW			0' - 1 3/4"	3' - 0"	8' - 4"						
112	BEDROOM 2	SW			0' - 1 3/4"	3' - 2"	8' - 4"						
GREAT ROOM T.O. FF													
102	MUDROOM	SW	GLASS		0' - 1 3/4"	3' - 2"	7' - 10"			TP			
105	KITCHEN	MS	GLASS		0' - 1 3/4"	23' - 9 1/4"	11' - 8"			TP			
PRIMARY SUITE T.O. FF													
104	PRIMARY BATHROOM	SW	GLASS		0' - 1 3/4"	3' - 4"	7' - 0"			TP			
SAUNA T.O. FF													
103	SAUNA	SW	GLASS		0' - 1 3/4"	3' - 4"	8' - 10"			TP			



DOOR GENERAL NOTES

1. **GLAZING REQUIREMENTS (MINIMUM):** ALL DOOR GLAZING IS TO BE INSULATED, DOUBLE PANE, WITH LOW-E2 COATINGS, UNLESS OTHERWISE NOTED - VERIFY WITH TITLE 24 ENERGY COMPLIANCE FORMS FOR REQUIRED U-FACTOR AND SHGC VALUES

2. **TEMPERED GLAZING:** WINDOWS AT LOCATIONS ADJACENT TO EXTERIOR/INTERIOR DOORS AND AT BOTTOM/TOP OF STAIRS SHALL HAVE TEMPERED GLASS IN ALL PANELS WITHIN 18" OF FIN. FLOOR AND WITHIN A 24" ARC FROM THE VERTICAL EDGE OF ANY DOOR OPENINGS. PROVIDE TEMPERED GLASS AT ALL LOCATIONS NOTED AND AS REQUIRED BY ALL ORDINANCES AND REGULATIONS ADOPTED BY GOVERNING AGENCIES: CITY, COUNTY, STATE AND FEDERAL AS THEY APPLY, 'TG' DENOTES TEMPERED GLASS PANELS.

3. **DOOR DIMENSIONS:**
   A. **GENERAL:** VERIFY REQUIRED ROUGH OPENINGS SIZES WITH MANUFACTURER'S SPECIFICATIONS AND FIELD VERIFY PRIOR TO ORDERING. ANY ERRORS, OMISSIONS, OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE OWNER BEFORE PROCEEDING WITH THE WORK.

   B. **EXTERIOR:** SCHEDULED DIMENSIONS ARE NET FRAME SIZES. REVIEW GASKETING AT ALL EXT. DOORS W/ ARCHITECT WHEN FINALIZING DOOR PANEL SIZES.

   C. **INTERIOR:** SCHEDULED DIMENSIONS ARE PANEL SIZES. SEE INTERIOR DETAILING FOR FRAME DIMENSIONS AND CONFIGURATIONS. SCHEDULED DETAILS ARE TYPICAL, UNLESS OTHERWISE NOTED.

4. **SCREENS:** SEE NOTES AGAINST EACH DOOR FOR ADDITIONAL INFORMATION ON INTEGRATED COMPONENTS LIKE BUG SCREENS & VENTS

BRAKE METAL GENERAL NOTES

1. ALL ALUMINUM BRAKE METAL SHAPES AS INDICATED ON WINDOW SCHEDULE (SHADED), DETAILS, AND EXTERIOR ELEVATIONS SHALL BE PROVIDED TO MATCH FINISH AND COLOR OF WINDOW AND DOOR SYSTEMS. CONTRACTOR TO VERIFY SIZES AND QUANTITY. COORDINATE VERTICAL AND HORIZONTAL JOINTS WITH ARCHITECT.

DOOR ABBREVIATIONS

OPERATION
SW SWING
PV PIVOT
SL SLIDING
PC POCKET SLIDE
SF SLIDE & FOLD
BF BIFOLD
OH OVERHEAD SECTIONAL

INTERIOR DOOR TYPE
FL FLUSH
FV FLUSH VENTED
1P 1-PANEL
2P 2-PANEL
3P 3-PANEL

INTERIOR FRAME TYPE
FR STANDARD FRAME
PL PANEL
BL BLIND

GLASS TYPE
IN DOUBLE GLAZED LOW-E2
TP TEMPERED

MATERIAL
WD WOOD
HM HOLLOW METAL
SC SOLID CORE WOOD

FINISH
PT PAINT
ST STAINED

HARDWARE GROUP
CL CLOSET
DB PUSH PLATE/DOOR PULL W/ DEAD BOLT
EX EXTERIOR LOCK W/ DEAD BOLT
PA PASSAGE
PO POCKET DOOR W/LOCK
PR PRIVACY

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LICENSED ARCHITECT
JONATHAN FELDMAN
C-28459
11/30/2025
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT NAME
WARD RESIDENCE

PROJECT ADDRESS
23 VASQUEZ TRAIL,
CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

HISTORY
△ DESC. DATE

TITLE
EXT DOOR SCHEDULE & ELEVATIONS

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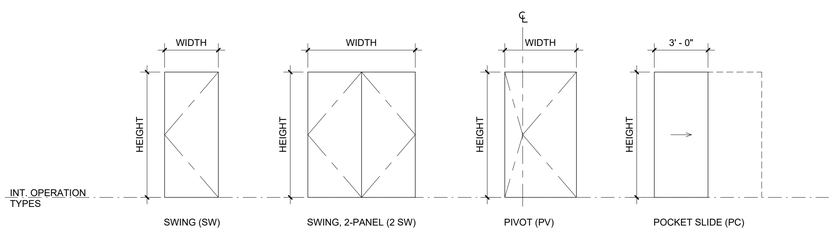
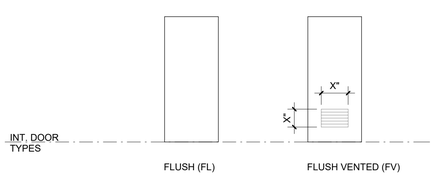
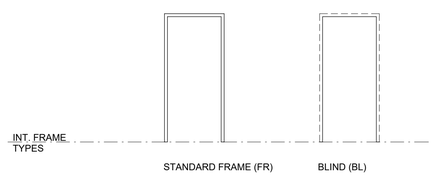
INTERIOR DOOR SCHEDULE

MARK	LOCATION	DOOR OPERATION	DOOR TYPE	DOOR WIDTH	DOOR HEIGHT	DOOR THICKNESS	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	HARDWARE GROUP	DETAILS (TYP. UON) HEAD	THRESHOLD	LEFT JAMB	RIGHT JAMB	NOTES
BASEMENT T.O. FF																	
050	MECHANICAL	SW	305	2' - 8"	7' - 0"	0' - 1 3/4"											
051	CELLAR	SW	305	2' - 8"	7' - 0"	0' - 1 3/4"											
052	STORAGE	SW	305	2' - 8"	7' - 0"	0' - 1 3/4"											
053	IT/STORAGE	SW	305	2' - 8"	7' - 0"	0' - 1 3/4"											
HOME OFFICE T.O. FF																	
162	OFFICE 2	SW	308	2' - 8"	8' - 0"	0' - 1 3/4"											
163	BATH 3	SW	351	2' - 6"	8' - 0"	0' - 1 3/4"											
164	OFFICE 2 CL	SW	351	2' - 6"	8' - 0"	0' - 1 3/4"											
165	OFFICE 2 CL	SW - SW	353	5' - 0"	8' - 0"	0' - 1 3/4"											
166	OFFICE 2 CL	SW	352	1' - 6"	8' - 0"	0' - 1 3/4"											
167	OFFICE 1 CL	SW	352	1' - 6"	8' - 0"	0' - 1 3/4"											
168	OFFICE 1 CL	SW - SW	353	5' - 0"	8' - 0"	0' - 1 3/4"											
169	OFFICE 1 CL	SW	351	2' - 6"	8' - 0"	0' - 1 3/4"											
170	BATH 2	SW	351	2' - 6"	8' - 0"	0' - 1 3/4"											
171	OFFICE 1	SW	308	2' - 8"	8' - 0"	0' - 1 3/4"											
172	HOME OFFICE LAUNDRY	SW	351	2' - 6"	8' - 0"	0' - 1 3/4"											
173	HOME OFFICE MECH	SW	351	2' - 6"	8' - 0"	0' - 1 3/4"											
GARAGE T.O. FF																	
161	GARAGE	SW	331	3' - 0"	8' - 0"	0' - 1 3/4"											
BEDROOM T.O. FF																	
160	LIBRARY	SW	378	3' - 0"	8' - 0"	0' - 1 3/4"											
GREAT ROOM T.O. FF																	
150	MUDROOM	SW	309	3' - 0"	8' - 0"	0' - 1 3/4"											
151	PWDR	SW	359	2' - 8"	8' - 0"	0' - 1 3/4"											
152	PANTRY	PC	358	2' - 8"	8' - 0"	0' - 1 1/2"											
153	PANTRY	SW	343	3' - 0 1/4"	8' - 0"	0' - 1 3/4"											
BRIDGE T.O. FF																	
154	PRIMARY BEDROOM	SW	331	3' - 0"	8' - 0"	0' - 1 3/4"											
PRIMARY SUITE T.O. FF																	
155	PRIMARY CLOSET	SW	308	2' - 8"	8' - 0"	0' - 1 3/4"											
156	LAUNDRY	PC	336	2' - 8"	8' - 0"	0' - 1 1/2"											
157	LAUNDRY	SW - SW	302	6' - 0"	8' - 0"	0' - 1 3/4"											
158	WATER CLOSET	PC	336	2' - 8"	8' - 0"	0' - 1 1/2"											
159	PRIMARY BATHROOM	PC	336	2' - 8"	8' - 0"	0' - 1 1/2"											







DOOR GENERAL NOTES

1. **GLAZING REQUIREMENTS (MINIMUM):** ALL DOOR GLAZING IS TO BE INSULATED, DOUBLE PANE, WITH LOW-E2 COATINGS, UNLESS OTHERWISE NOTED - VERIFY WITH TITLE 24 ENERGY COMPLIANCE FORMS FOR REQUIRED U-FACTOR AND SHGC VALUES

2. **TEMPERED GLAZING:** WINDOWS AT LOCATIONS ADJACENT TO EXTERIOR/INTERIOR DOORS AND AT BOTTOM/TOP OF STAIRS SHALL HAVE TEMPERED GLASS IN ALL PANELS WITHIN 18" OF FIN. FLOOR AND WITHIN A 24" ARC FROM THE VERTICAL EDGE OF ANY DOOR OPENINGS. PROVIDE TEMPERED GLASS AT ALL LOCATIONS NOTED AND AS REQUIRED BY ALL ORDINANCES AND REGULATIONS ADOPTED BY GOVERNING AGENCIES: CITY, COUNTY, STATE AND FEDERAL AS THEY APPLY, 'TG' DENOTES TEMPERED GLASS PANELS.

3. **DOOR DIMENSIONS:**
   A. **GENERAL:** VERIFY REQUIRED ROUGH OPENINGS SIZES WITH MANUFACTURER'S SPECIFICATIONS AND FIELD VERIFY PRIOR TO ORDERING. ANY ERRORS, OMISSIONS, OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE OWNER BEFORE PROCEEDING WITH THE WORK.

   B. **EXTERIOR:** SCHEDULED DIMENSIONS ARE NET FRAME SIZES. REVIEW GASKETING AT ALL EXT. DOORS W/ ARCHITECT WHEN FINALIZING DOOR PANEL SIZES.

   C. **INTERIOR:** SCHEDULED DIMENSIONS ARE PANEL SIZES. SEE INTERIOR DETAILING FOR FRAME DIMENSIONS AND CONFIGURATIONS. SCHEDULED DETAILS ARE TYPICAL, UNLESS OTHERWISE NOTED.

4. **SCREENS:** SEE NOTES AGAINST EACH DOOR FOR ADDITIONAL INFORMATION ON INTEGRATED COMPONENTS LIKE BUG SCREENS & VENTS

BRAKE METAL GENERAL NOTES

1. ALL ALUMINUM BRAKE METAL SHAPES AS INDICATED ON WINDOW SCHEDULE (SHADED), DETAILS, AND EXTERIOR ELEVATIONS SHALL BE PROVIDED TO MATCH FINISH AND COLOR OF WINDOW AND DOOR SYSTEMS. CONTRACTOR TO VERIFY SIZES AND QUANTITY. COORDINATE VERTICAL AND HORIZONTAL JOINTS WITH ARCHITECT.

DOOR ABBREVIATIONS

OPERATION
SW SWING
PV PIVOT
SL SLIDING
PC POCKET SLIDE
SF SLIDE & FOLD
BF BIFOLD
OH OVERHEAD SECTIONAL

INTERIOR DOOR TYPE
FL FLUSH
FV FLUSH VENTED
1P 1-PANEL
2P 2-PANEL
3P 3-PANEL

INTERIOR FRAME TYPE
FR STANDARD FRAME
PL PANEL
BL BLIND

GLASS TYPE
IN DOUBLE GLAZED LOW-E2
TP TEMPERED

MATERIAL
WD WOOD
HM HOLLOW METAL
SC SOLID CORE WOOD

FINISH
PT PAINT
ST STAINED

HARDWARE GROUP
CL CLOSET
DB PUSH PLATE/DOOR PULL W/ DEAD BOLT
EX EXTERIOR LOCK W/ DEAD BOLT
PA PASSAGE
PO POCKET DOOR W/LOCK
PR PRIVACY

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TITLE
INT DOOR SCHEDULE & TYPES

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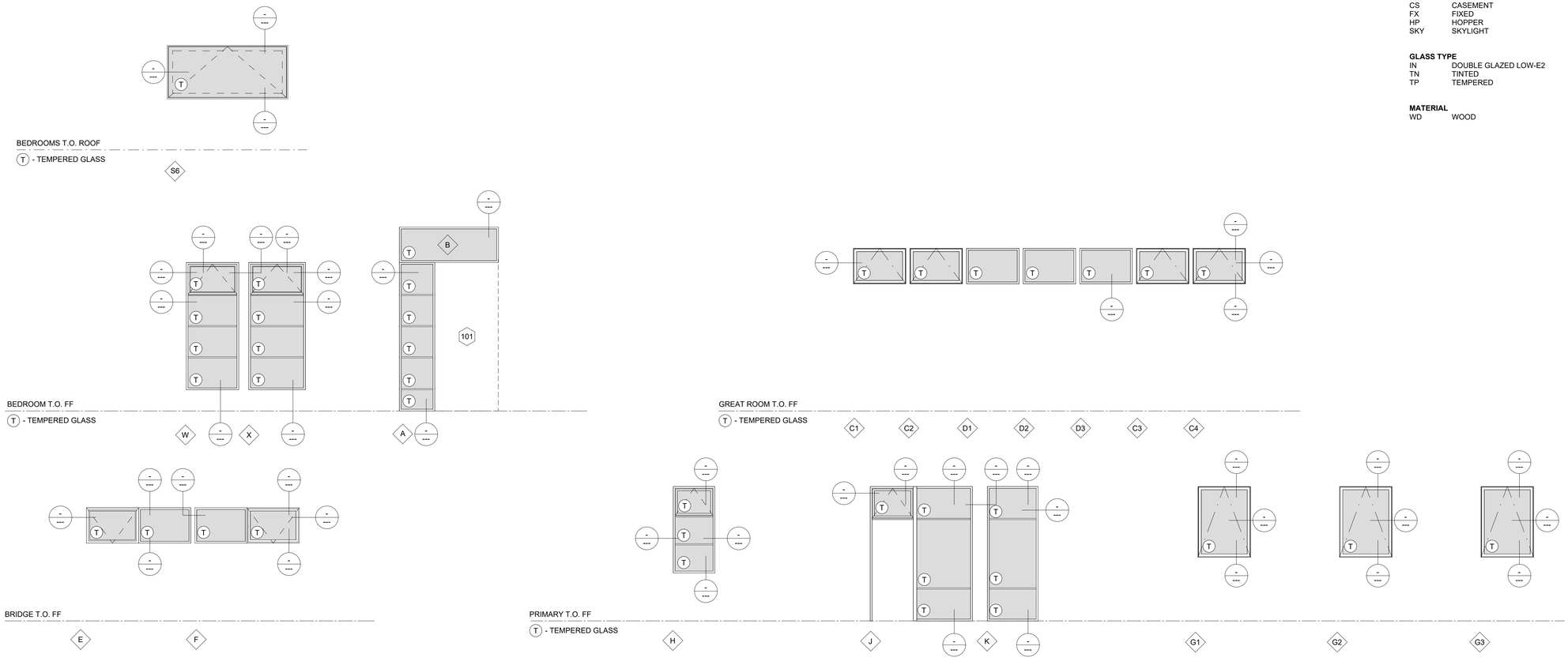
WINDOW SCHEDULE

MARK	LOCATION	OPERATION	FRAME WIDTH	FRAME HEIGHT	FRAME SILL HEIGHT	FRAME MATERIAL	FRAME FINISH	GLASS TYPE	PRODUCT MANUFACTURER	PRODUCT SERIES	NOTES
HOME OFFICE T.O. FF											
AA	OFFICE LIVING	FX	2' - 4"	9' - 0"	0' - 0"			TP			
BB1	BATH 2	FX-AW	5' - 6"	4' - 6"	4' - 6"			TP/SAFETY GLAZING			
BB2	BATH 3	FX-AW	5' - 6"	4' - 6"	4' - 6"			TP/SAFETY GLAZING			
CC1	OFFICE 1	FX-HP	4' - 0"	9' - 0"	0' - 0"			TP			
CC2	OFFICE 2	FX-HP	4' - 0"	9' - 0"	0' - 0"			TP			
DD1	OFFICE 1	FX	3' - 8 1/2"	9' - 0"	0' - 0"			TP			
DD2	OFFICE 2	FX	3' - 8 1/2"	9' - 0"	0' - 0"			TP			
BEDROOM T.O. FF											
A	ENTRY	FX	2' - 6"	10' - 6"	0' - 0"			TP			
B	ENTRY	FX	7' - 0"	2' - 6"	10' - 6"			TP			
S6	BATH 1	SKY	7' - 9"	3' - 0"				TP/SAFETY GLAZING			
Y1	BEDROOM 2	FX-HP	4' - 0"	9' - 0"	0' - 0"			TP			
Y2	BEDROOM 1	FX-HP	4' - 0"	9' - 0"	0' - 0"			TP			
Z1	BEDROOM 2	FX	3' - 8 1/2"	9' - 0"	0' - 0"			TP			
Z2	BEDROOM 1	FX	3' - 8 1/2"	9' - 0"	0' - 0"			TP			
GREAT ROOM T.O. FF											
C1	LIVING ROOM	AW	3' - 8 1/2"	2' - 6"	9' - 0"			TP			
C2	LIVING ROOM	AW	3' - 8 1/2"	2' - 6"	9' - 0"			TP			
C3	LIVING ROOM	AW	3' - 8 1/2"	2' - 6"	9' - 0"			TP			
C4	LIVING ROOM	AW	3' - 8 1/2"	2' - 6"	9' - 0"			TP			
D1	LIVING ROOM	FX	3' - 8 1/2"	2' - 6"	9' - 0"			TP			
D2	LIVING ROOM	FX	3' - 8 1/2"	2' - 6"	9' - 0"			TP			
D3	LIVING ROOM	FX	3' - 8 1/2"	2' - 6"	9' - 0"			TP			
R	LIVING ROOM	FX-HP	8' - 0"	9' - 1"	2' - 5"			TP			
S	LIVING ROOM	FX	8' - 0"	11' - 6"	0' - 0"			TP			
T	LIVING ROOM	FX	3' - 8 1/2"	11' - 6"	0' - 0"			TP			
U	LIVING ROOM	FX-AW	19' - 8 1/2"	11' - 6"	0' - 0"			TP			
V	LIBRARY	FX-AW	11' - 8 1/2"	9' - 0"	0' - 0"			TP			
W	LIBRARY	FX-AW	3' - 8 1/2"	9' - 0"	0' - 0"			TP			
X	LIBRARY	FX-AW	4' - 0"	9' - 0"	0' - 0"			TP			
BRIDGE T.O. FF											
E	BRIDGE	FX-AW	7' - 4 1/2"	2' - 6"	5' - 6"			TP			
F	BRIDGE	FX-AW	7' - 4 1/2"	2' - 6"	5' - 6"			TP			
P1	BRIDGE	FX	7' - 10 1/2"	6' - 6"	1' - 6"			TP			
P2	BRIDGE	FX	7' - 10 1/2"	6' - 6"	1' - 6"			TP			
Q	BRIDGE	FX	8' - 2 1/2"	6' - 6"	1' - 6"			TP			
PRIMARY SUITE T.O. FF											
G1	BRIDGE	AW	3' - 8 1/2"	5' - 0"	4' - 6"			TP			
G2	PRIMARY CLOSET	AW	3' - 8 1/2"	5' - 0"	4' - 6"			TP			
G3	LAUNDRY	AW	3' - 8 1/2"	5' - 0"	4' - 6"			TP			
H	PRIMARY BATH	FX	2' - 11 1/4"	6' - 1 1/4"	3' - 4 3/4"			TP			
J	PRIMARY BATH	FX-AW	7' - 2 5/8"	9' - 6"	0' - 0"			TP/SAFETY GLAZING			
K	PRIMARY BED	FX	3' - 6 7/8"	9' - 6"	0' - 0"			TP			
L	PRIMARY BED	FX-AW	27' - 5"	9' - 6"	0' - 0"			TP			
M	PRIMARY BED	FX	3' - 8 1/2"	9' - 6"	0' - 0"			TP			
N	PRIMARY BED	FX-AW	16' - 0"	9' - 6"	0' - 0"			TP			



WINDOW & SKYLIGHT GENERAL NOTES

1. **GLAZING REQUIREMENTS (MINIMUM):**
   ALL WINDOWS, SKYLIGHT AND DOOR GLAZING IS TO BE INSULATED, DOUBLE PANE, WITH LOW-E2 COATINGS, UNLESS OTHERWISE NOTED - VERIFY WITH TITLE 24 ENERGY COMPLIANCE FORMS FOR REQUIRED U-FACTOR AND SHGC VALUES.
2. **TEMPERED GLAZING:**
   WINDOWS AT LOCATIONS ADJACENT TO EXTERIOR/INTERIOR DOORS AND AT BOTTOM/TOP OF STAIRS SHALL HAVE TEMPERED GLASS IN ALL PANELS WITHIN 18" OF FIN. FLOOR AND WITHIN A 24" ARC FROM THE VERTICAL EDGE OF ANY DOOR OPENINGS. PROVIDE TEMPERED GLASS AT ALL LOCATIONS NOTED AND A S REQUIRED BY ALL ORDINANCES AND REGULATIONS ADOPTED BY GOVERNING AGENCIES: CITY, COUNTY, STATE AND FEDERAL AS THEY APPLY, 'TG' DENOTES TEMPERED GLASS PANELS.
3. **EMERGENCY ESCAPE AND RESCUE WINDOW:**
   ALL EMERGENCY ESCAPE AND RESCUE WINDOWS TO COMPLY WITH CBC SECTION 1030.2. VERIFY THAT ALL EGRESS WINDOWS HAVE CLEAR NET OPENING AREA OF 5.7 SF MIN. WITH 24" MIN. CLEAR OPENING HEIGHT AND 20" MIN. CLEAR OPENING WIDTH. FINISHED SILL HEIGHT NOT TO BE MORE THAN 44" ABOVE THE FLOOR.
4. **WINDOW SIZES:**
   DIMENSIONS SHOWN ARE NOMINAL FRAME SIZES. VERIFY REQUIRED ROUGH OPENINGS SIZES WITH MANUFACTURER'S SPECIFICATIONS AND FIELD VERIFY PRIOR TO ORDERING.
5. **SCREENS:**
   PROVIDE SCREENS AT ALL OPERABLE WINDOWS AND SKYLIGHTS, TYP.

BRAKE METAL GENERAL NOTES

1. ALL ALUMINUM BRAKE METAL SHAPES AS INDICATED ON WINDOW SCHEDULE (SHADED), DETAILS, AND EXTERIOR ELEVATIONS SHALL BE PROVIDED TO MATCH FINISH AND COLOR OF WINDOW AND DOOR SYSTEMS. CONTRACTOR TO VERIFY SIZES AND QUANTITY. COORDINATE VERTICAL AND HORIZONTAL JOINTS WITH ARCHITECT.

WINDOW ABBREVIATIONS

OPERATION

AW	AWNING
CS	CASEMENT
FX	FIXED
HP	HOPPER
SKY	SKYLIGHT

GLASS TYPE

IN	DOUBLE GLAZED LOW-E2
TN	TINTED
TP	TEMPERED

MATERIAL

WD	WOOD

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TITLE
WINDOW SCHEDULE & ELEVATIONS

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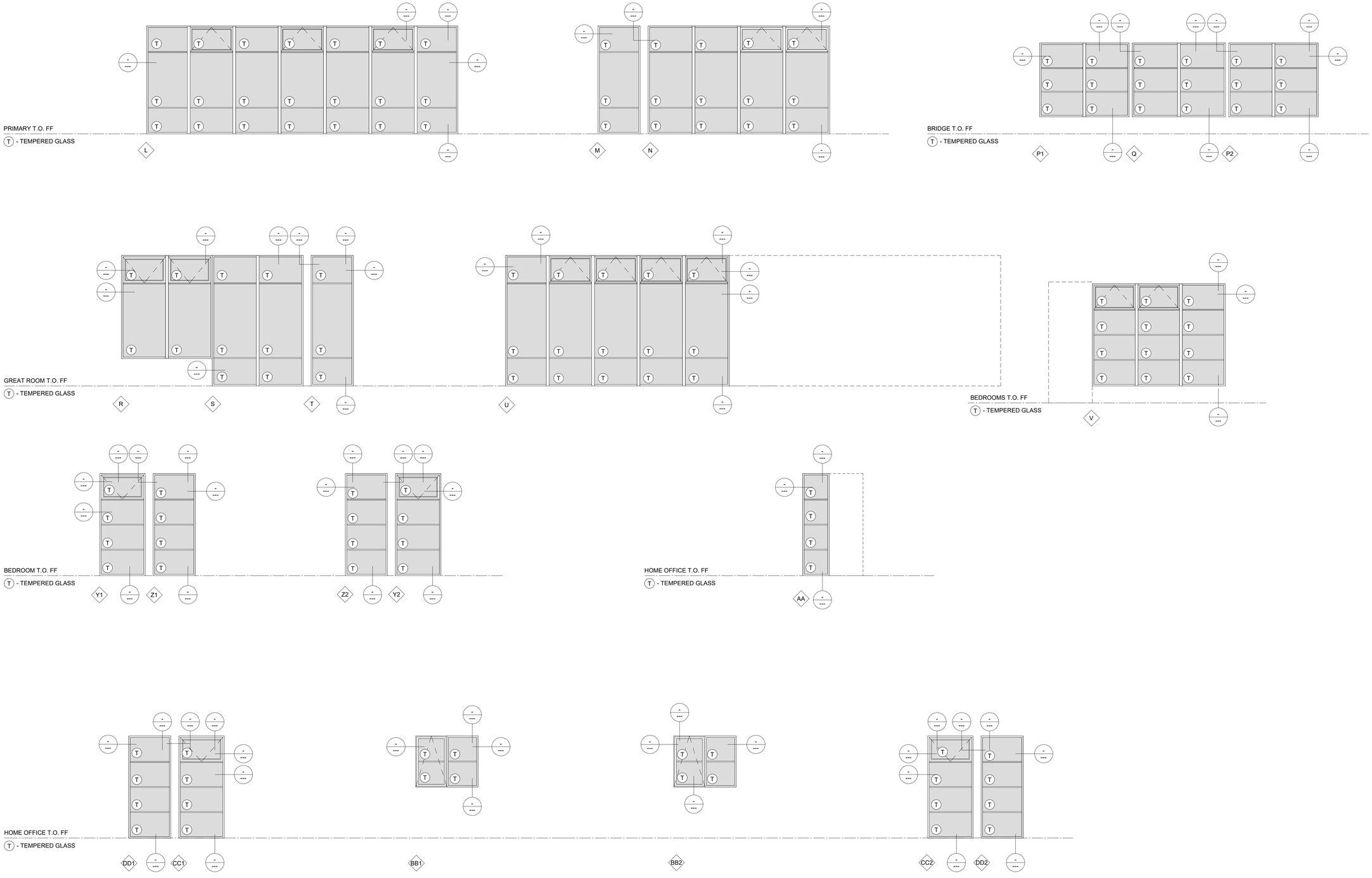

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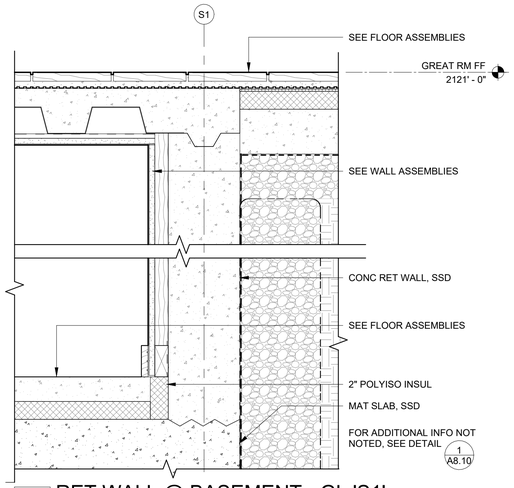
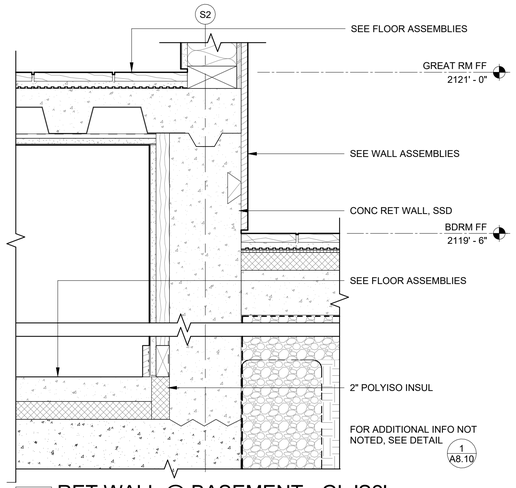
TITLE
WINDOW SCHEDULE & ELEVATIONS

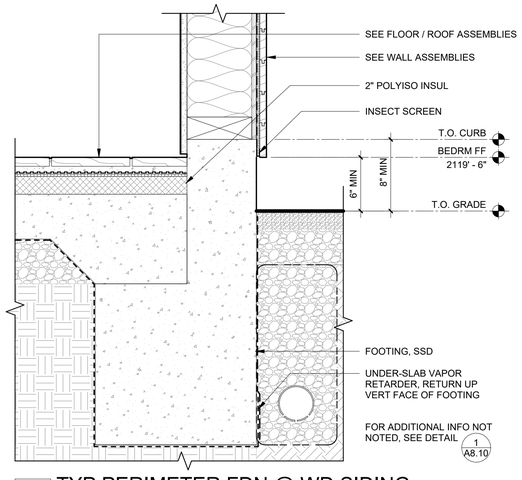
A7.41
SHEET



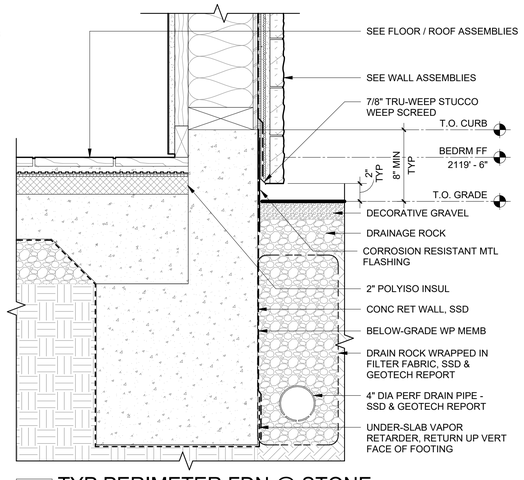
10 RET WALL @ BASEMENT - GL 'S1'
1 1/2" = 1'-0"



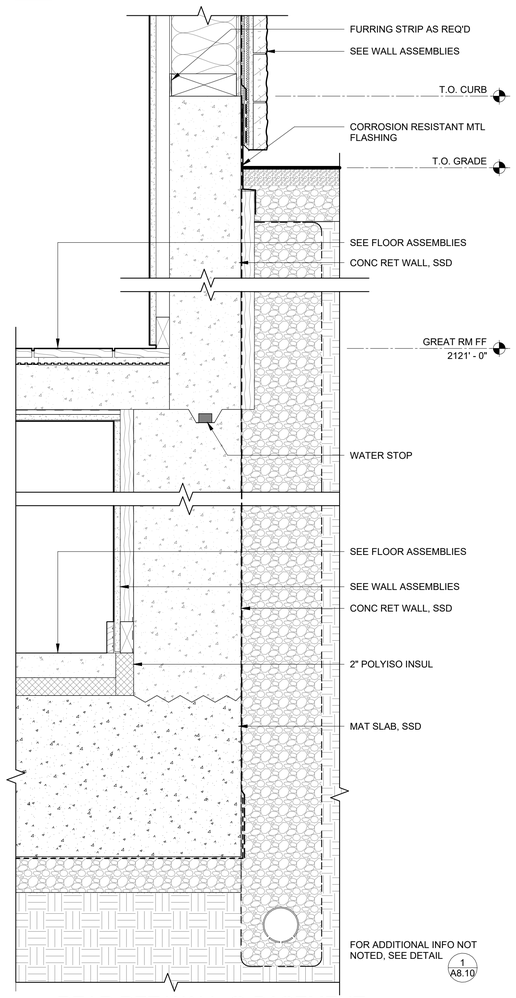
7 RET WALL @ BASEMENT - GL 'S2'
1 1/2" = 1'-0"



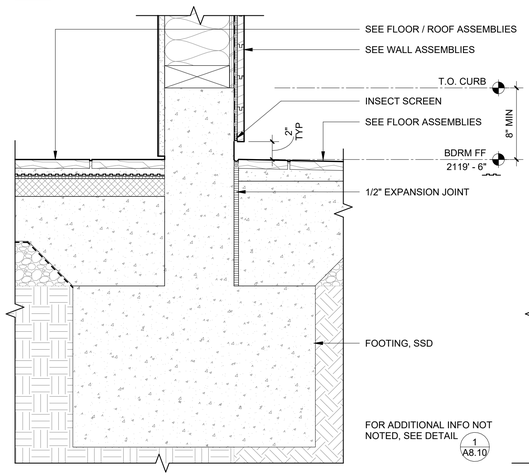
4 TYP PERIMETER FDN @ WD SIDING
1 1/2" = 1'-0"



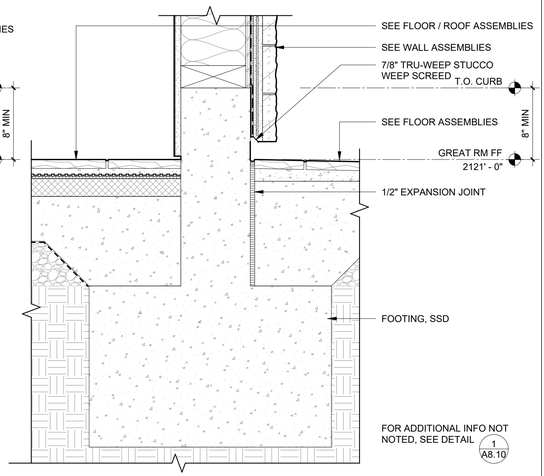
1 TYP PERIMETER FDN @ STONE
1 1/2" = 1'-0"



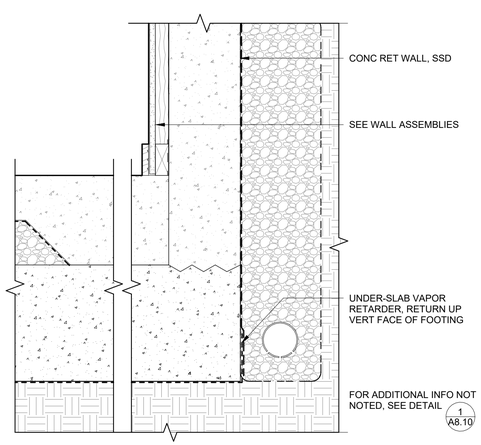
9 REAR RET WALL @ BASEMENT
1 1/2" = 1'-0"



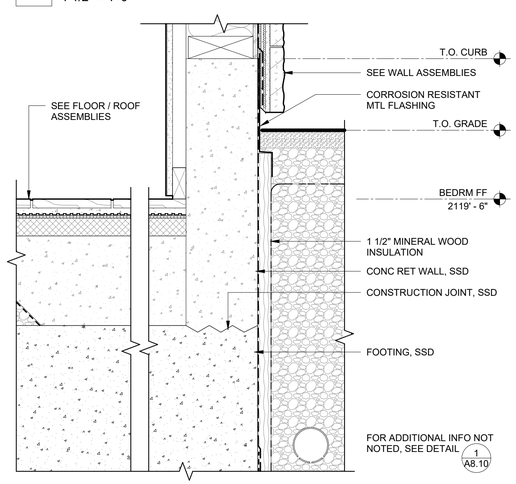
5 TYP FDN @ HARDSCAPE - WD SIDING
1 1/2" = 1'-0"



2 TYP FDN @ HARDSCAPE - STONE
1 1/2" = 1'-0"



6 TYP REAR RET WALL @ GARAGE
1 1/2" = 1'-0"



3 TYP REAR RET WALL
1 1/2" = 1'-0"

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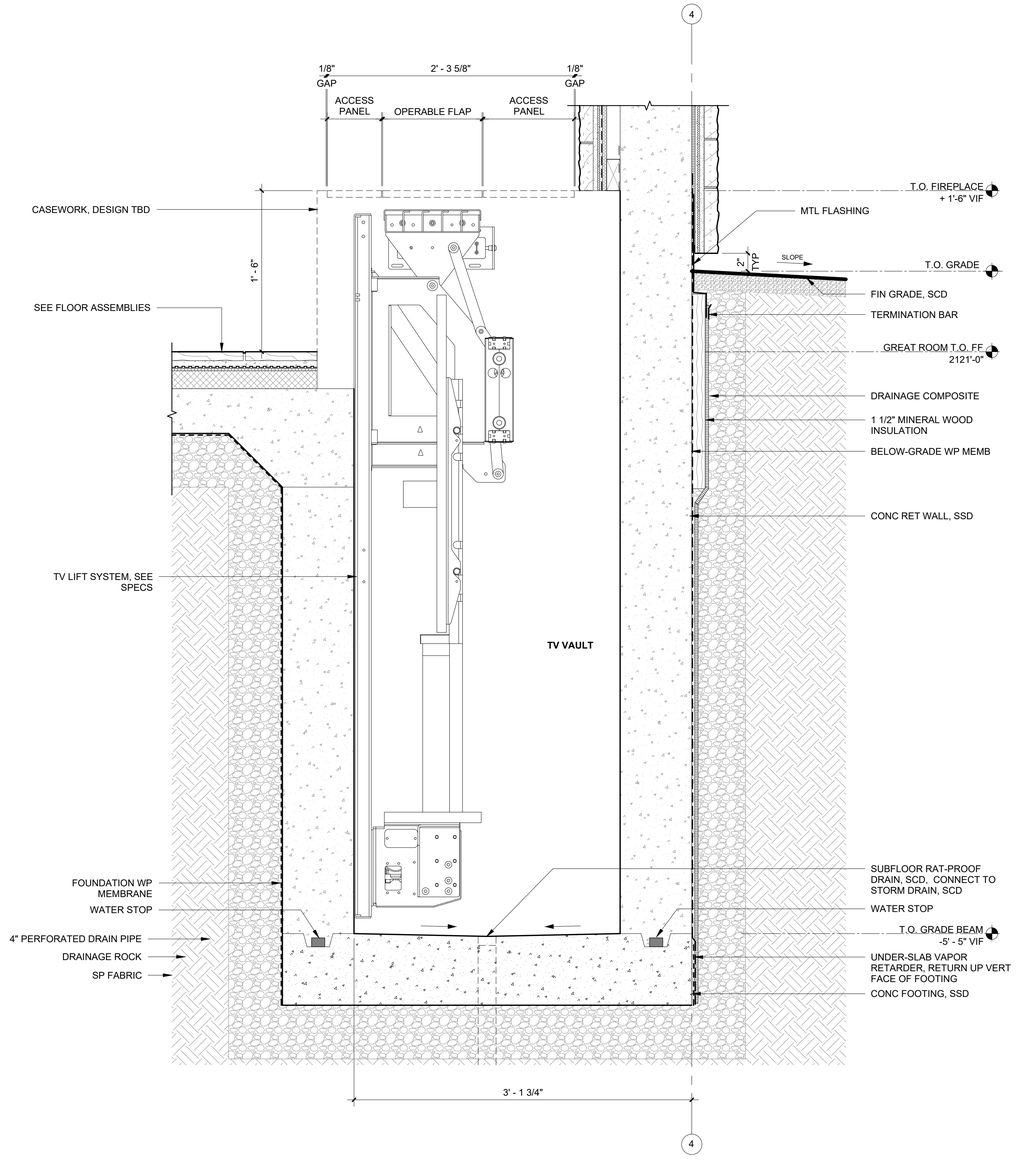
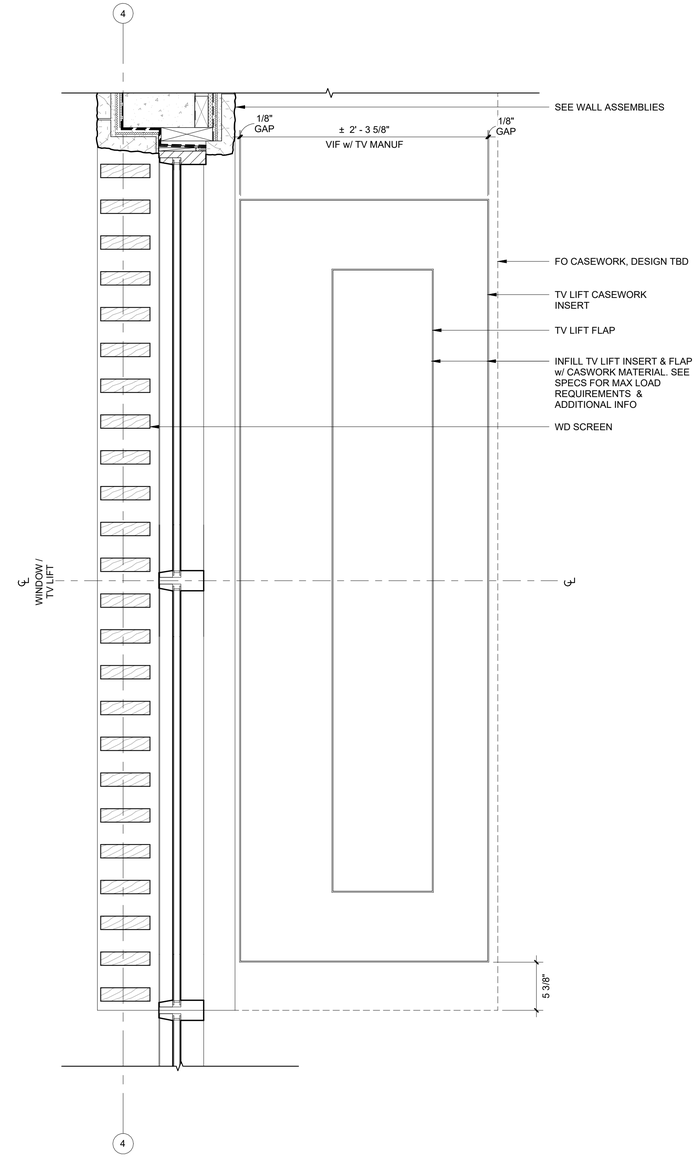
TITLE
EXTERIOR DETAILS - CURBS & FOUNDATION

A8.10
SHEET

5/19/2025 5:35:16 PM



2 CASEWORK / TV VAULT
1 1/2" = 1'-0"



1 TV LIFT - PLAN
1 1/2" = 1'-0"

FELDMAN ARCHITECTURE
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415 252 1441
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LICENSED ARCHITECT
JONATHAN FELDMAN
C-28459
11/30/2025
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT NAME
WARD RESIDENCE

PROJECT ADDRESS
23 VASQUEZ TRAIL, CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

HISTORY

△	DESC.	DATE

TITLE
EXTERIOR DETAILS - CURBS & FOUNDATION

A8.11
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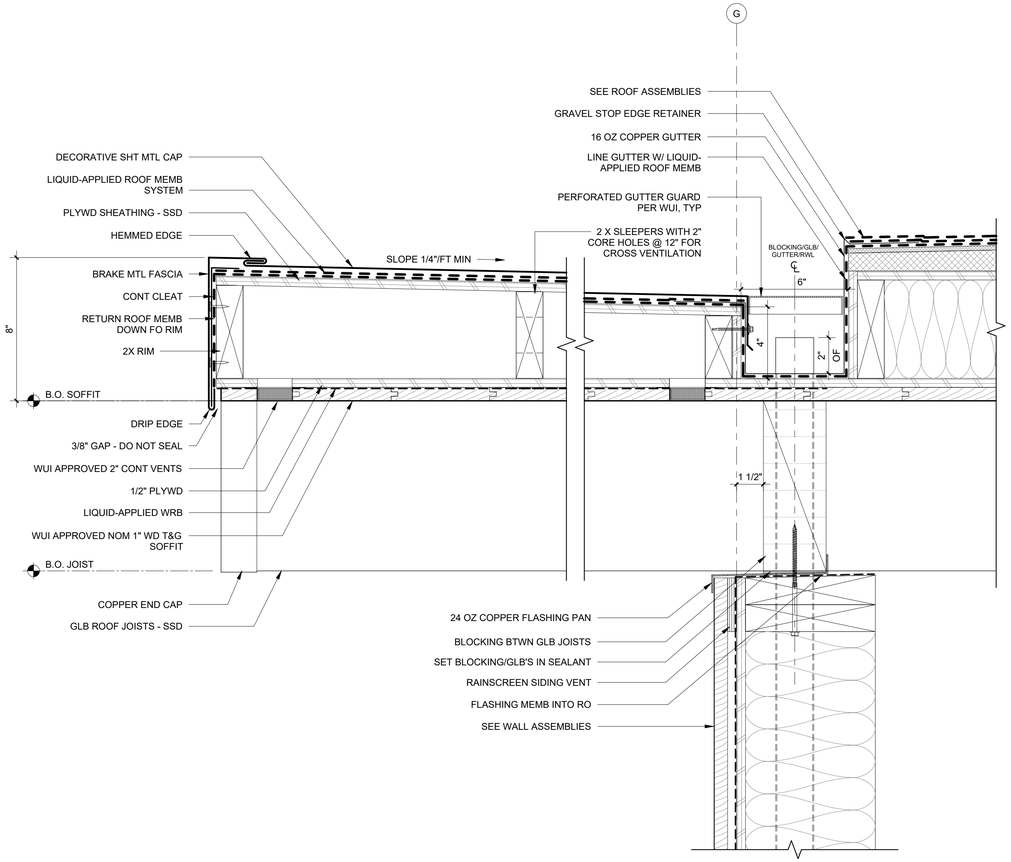
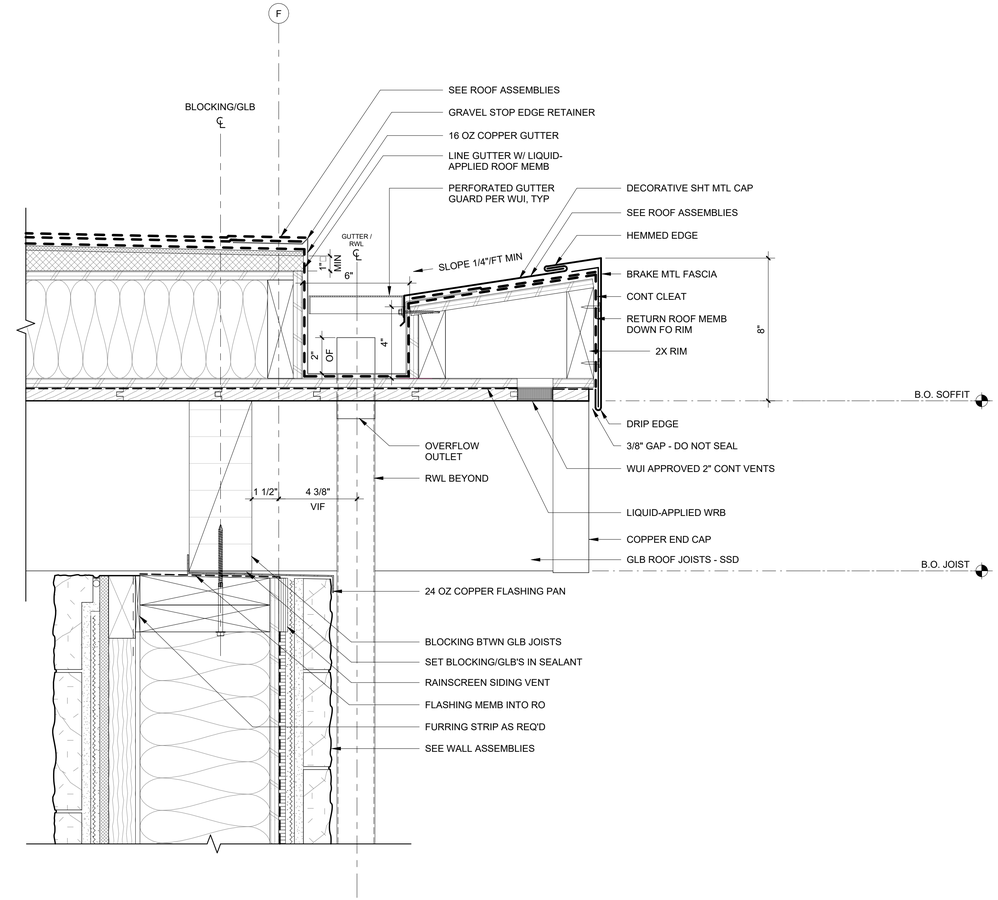


2 GREAT RM ROOF OVERHANG @ WD SIDING (PARALLEL TO ROOF BEAMS)
3" = 1'-0"



1 GREAT RM ROOF OVERHANG @ STONE WALL (PARALLEL TO ROOF BEAMS)
3" = 1'-0"

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05.16.2025

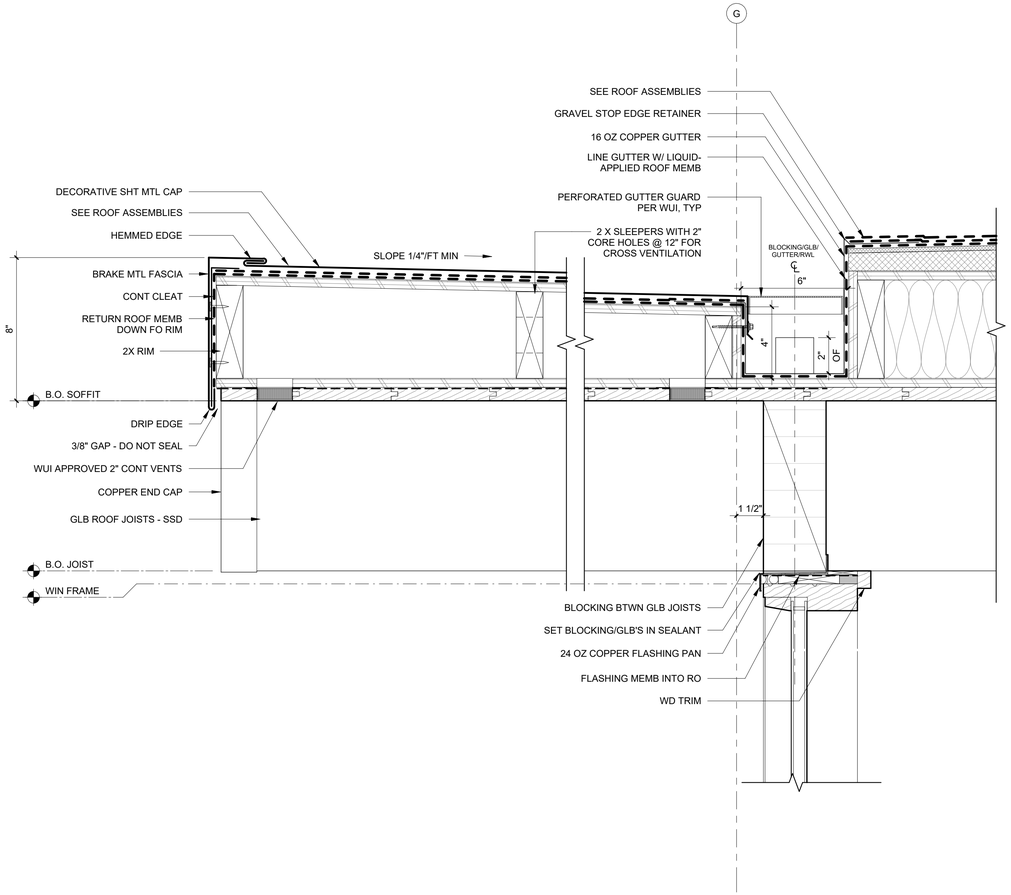
HISTORY

△	DESC.	DATE

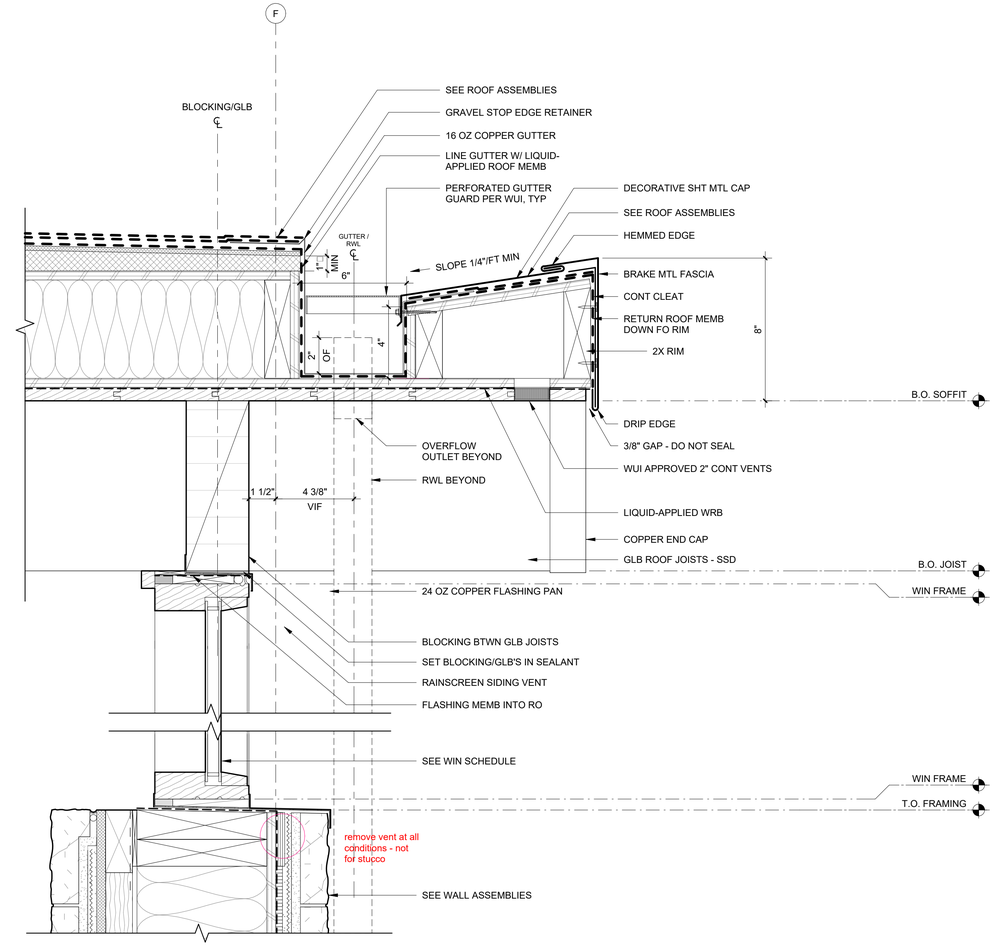
TITLE
EXTERIOR DETAILS - ROOF

A8.20
SHEET

5/19/2025 5:35:19 PM



2 GREAT RM ROOF OVERHANG @ WIN (PARALLEL TO ROOF BEAMS)
3" = 1'-0"



1 GREAT RM ROOF OVERHANG @ CLERESTORY WIN (PARALLEL TO ROOF BEAMS)
3" = 1'-0"

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SARAH AND RICHARD WARD

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COMBO PERMIT SET

DATE
05.16.2025

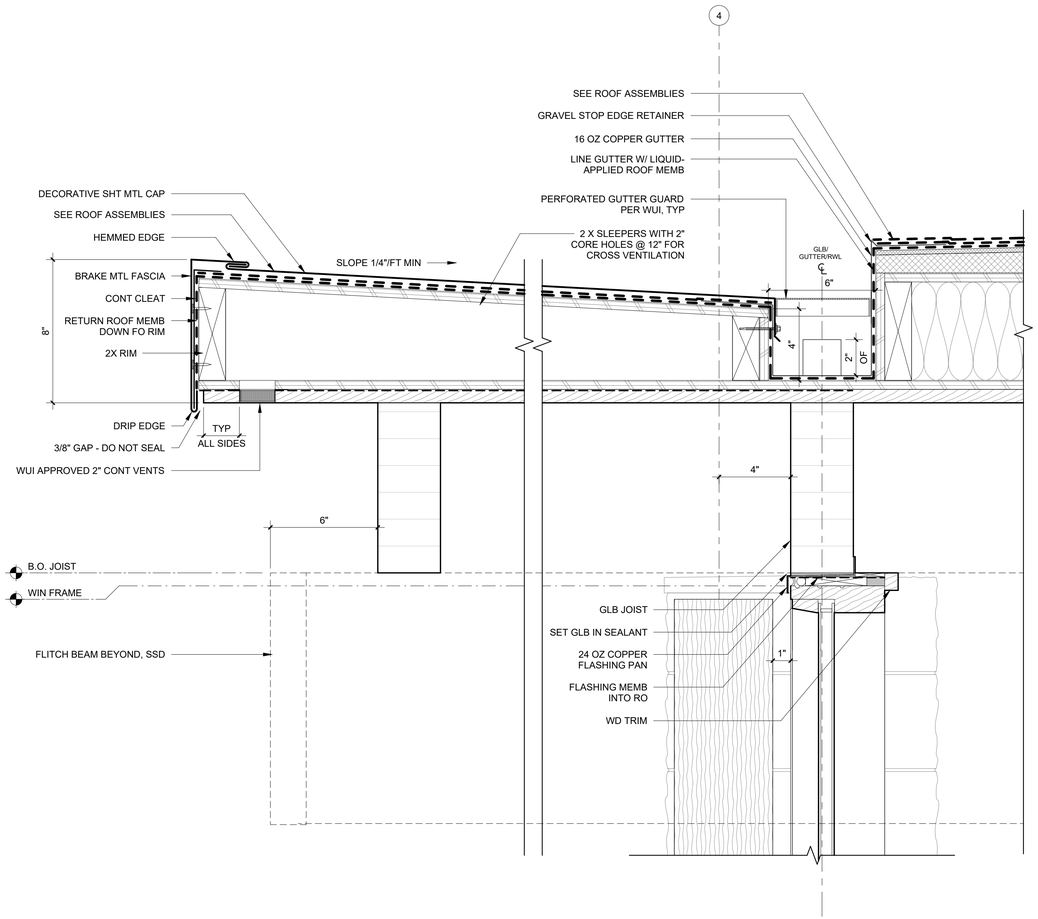
HISTORY

△	DESC.	DATE

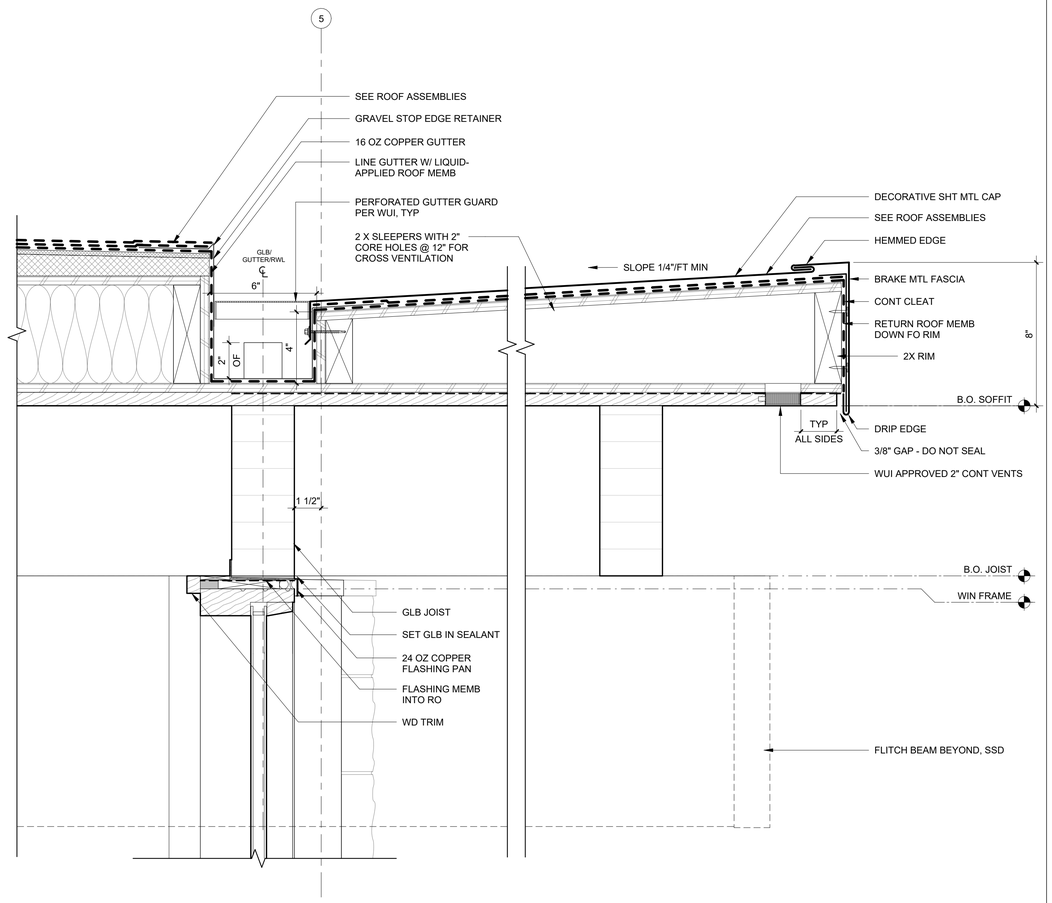
TITLE
EXTERIOR DETAILS - ROOF

A8.21
SHEET

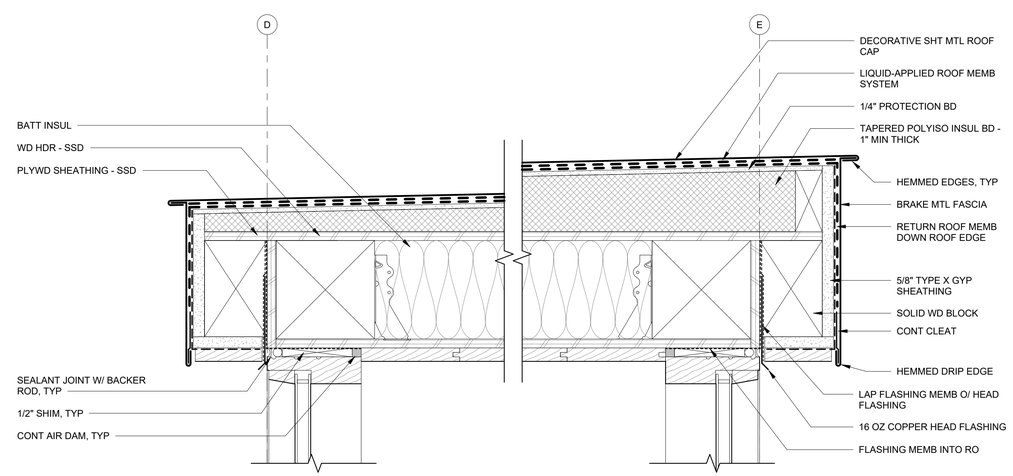
5/19/2025 5:35:20 PM



3 GREAT RM ROOF OVERHANG @ WIN (PERP TO ROOF BEAMS)
3" = 1'-0"



1 GREAT RM ROOF OVERHANG @ WIN - WD SIDING (PERP TO ROOF BEAMS)
3" = 1'-0"



2 BRIDGE ROOF DETAIL
3" = 1'-0"

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COMBO PERMIT SET

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05.16.2025

HISTORY

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TITLE
EXTERIOR DETAILS - ROOF

A8.22
SHEET

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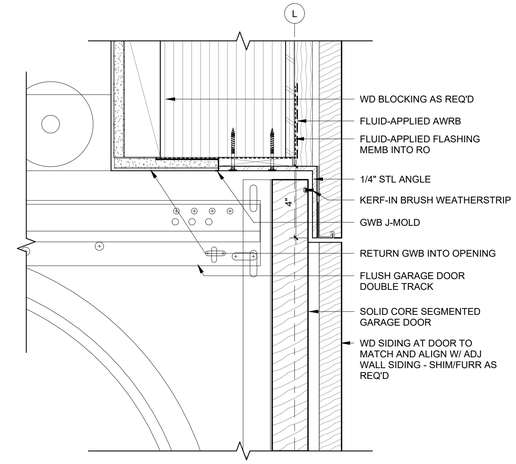
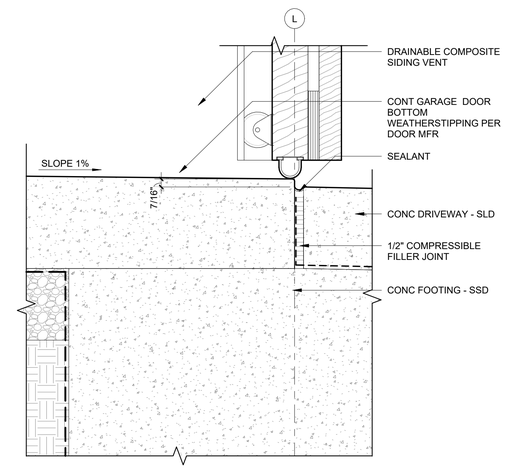
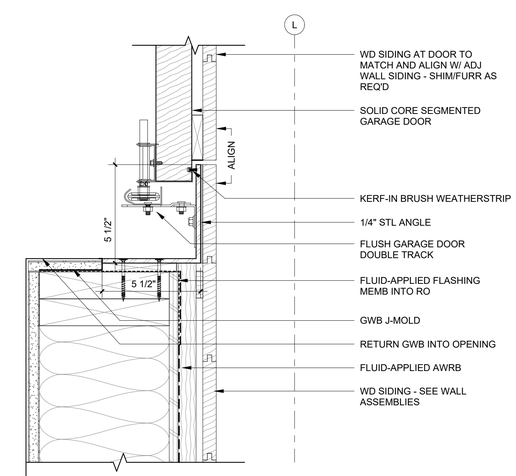


1 GARAGE OVERHEAD DOOR HEAD
3" = 1'-0"



2 GARAGE OVERHEAD DOOR SILL
3" = 1'-0"



3 GARAGE OVERHEAD DOOR JAMB
3" = 1'-0"

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C-28459
11/30/2025
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WARD RESIDENCE

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23 VASQUEZ TRAIL,
CARMEL, CA 93923

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CLIENT
SARAH AND RICHARD WARD

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24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

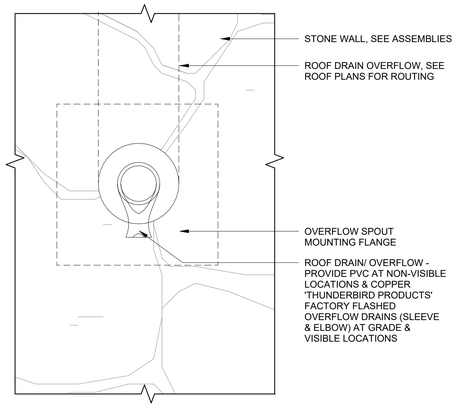
HISTORY

△	DESC.	DATE

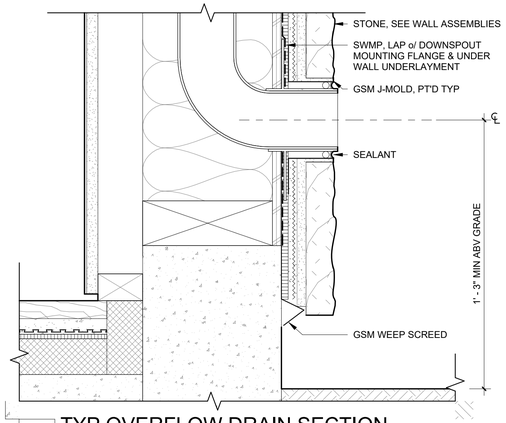
TITLE
EXTERIOR DETAILS - EXTERIOR DOORS

A8.43
SHEET

5/19/2025 5:35:21 PM



1 TYP OVERFLOW DRAIN ELEVATION
3" = 1'-0"



2 TYP OVERFLOW DRAIN SECTION
3" = 1'-0"

Feldman Architecture

P 1 (415) 252 1441
E info@feldmanarch.com
W feldmanarchitecture.com

project name
WARD RESIDENCE

project address
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COMBO PERMIT SET

date
05.16.2025

history

△	DESC.	DATE

title
EXTERIOR DETAILS

A8.44
sheet

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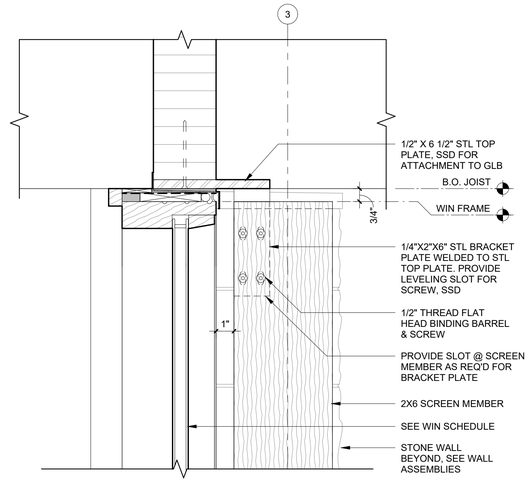
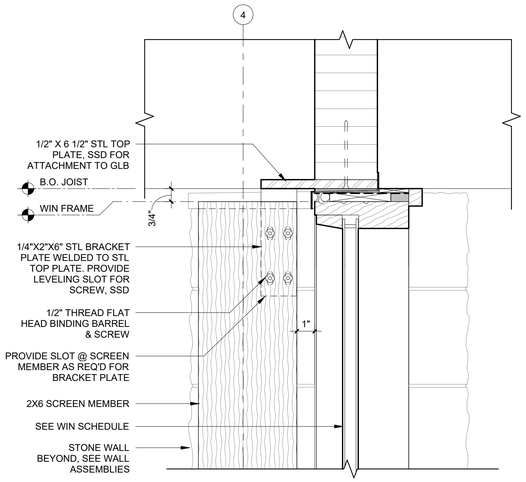
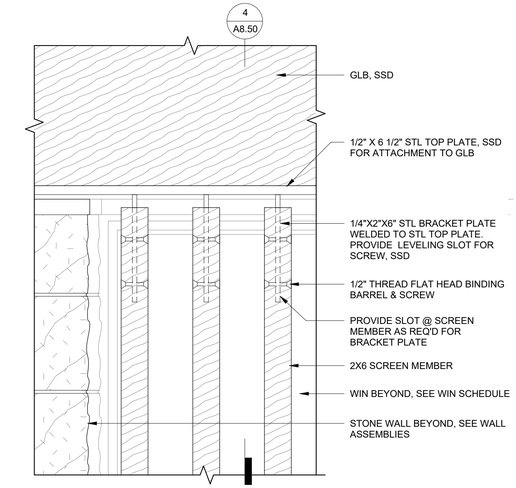


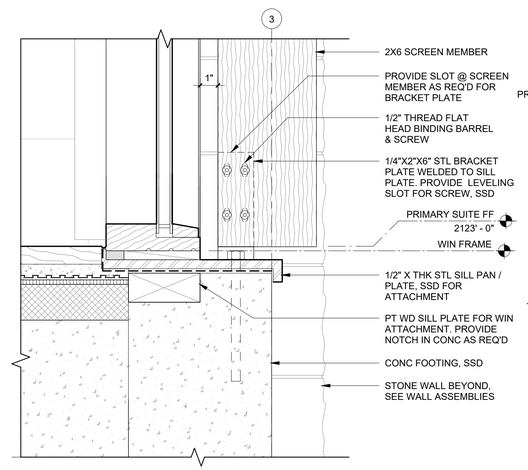
6 WD SCREEN @ WIN HEAD - PRIMARY SUITE
3" = 1'-0"



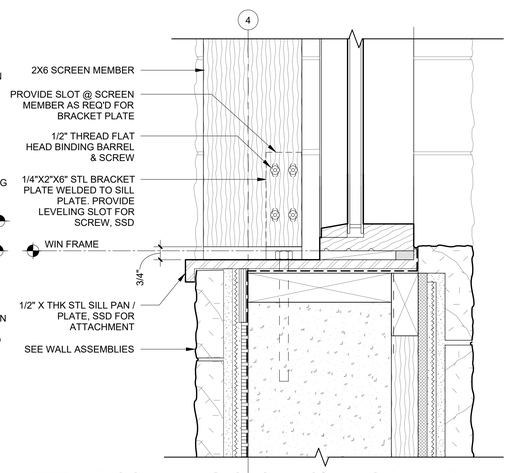
4 WD SCREEN @ WIN HEAD - GREAT RM
3" = 1'-0"



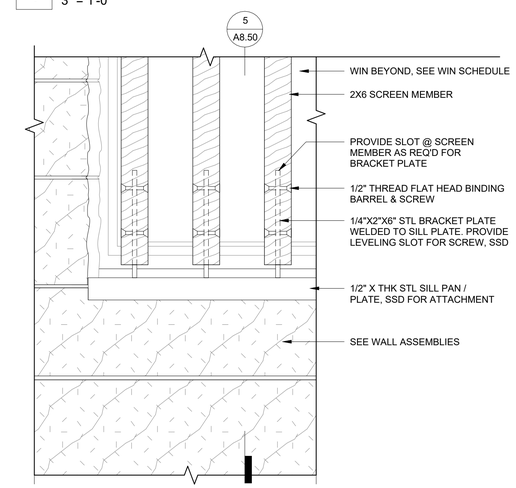
1 WD SCREEN - PARTIAL ELEV @ TOP
3" = 1'-0"



7 WD SCREEN @ CONC SILL - PRIMARY SUITE
3" = 1'-0"



5 WD SCREEN @ STONE SILL - GREAT RM
3" = 1'-0"



2 WD SCREEN - PARTIAL ELEV @ STONE BASE
3" = 1'-0"

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E info@feldmanarch.com
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project name
WARD RESIDENCE

project address
23 VASQUEZ TRAIL, CARMEL, CA 93923

apn #
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client
SARAH AND RICHARD WARD

fa job #
24-010

issue
COMBO PERMIT SET

date
05.16.2025

history

△	DESC.	DATE

title
EXTERIOR DETAILS - WD SCREEN

A8.50
sheet

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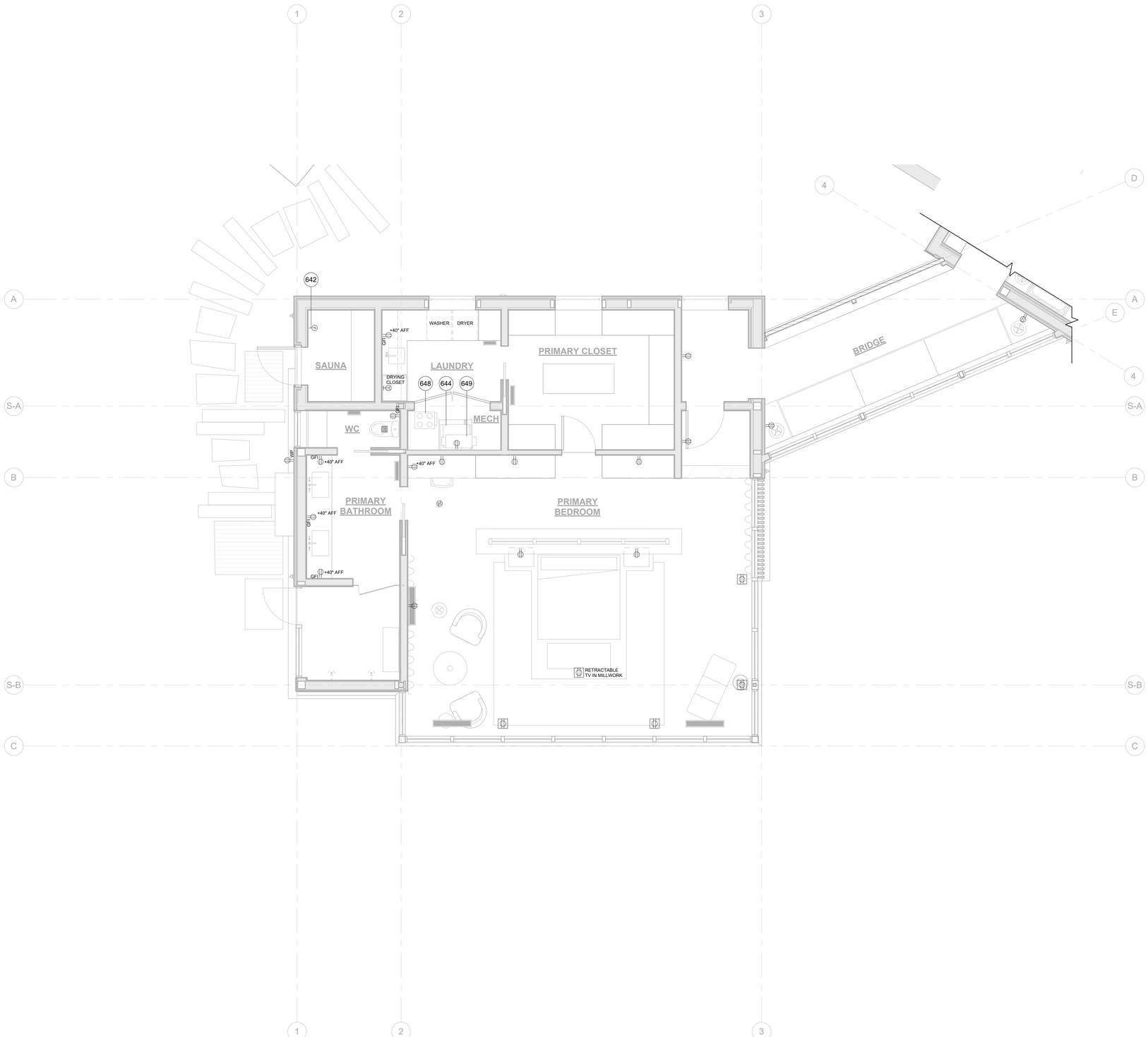

1 MAIN HOUSE - PRIMARY SUITE UTILITY PLAN

1/4" = 1'-0"

5/19/2025 5:35:25 PM

MEP LEGEND

- SWITCH
- SWITCH w/ DIMMER
- SWITCH w/ THREEWAY
- SWITCH w/ VACANCY SENSOR
- SWITCH w/ HUMIDISTAT
- LIGHTING CONTROL KEYPAD
- OUTLET - DUPLEX / QUADPLEX
- OUTLET - GFI
- OUTLET - WATERPROOF
- OUTLET - APPLIANCE
- OUTLET - PLUG MOLD
- OUTLET - FLOOR DUPLEX / QUADPLEX
- OUTLET - CEILING DUPLEX / QUADPLEX
- DATA JACK
- DATA / PHONE JACK
- PHONE JACK
- TV HOOKUP
- J-BOX
- BUNDLED WIRE
- BUNDLED WIRE
- WIRELESS ACCESS POINT - WALL / CEILING MOUNT
- ELECTRICAL PANEL
- SPEAKER - WALL / CEILING MOUNT
- SMOKE & CARBON MONOXIDE DETECTOR - WALL / CEILING MOUNT
- FAN - WALL / CEILING MOUNT
- LIGHT - RECESSED CAN
- LIGHT - RECESSED DIRECTIONAL CAN
- LIGHT - MULTIPLE RECESSED CAN
- LIGHT - SURFACE MOUNTED
- LIGHT - WALL MOUNT FIXTURE
- LIGHT - FLUORSCENT
- LIGHT - FLUORESCENT STRIP
- LIGHT - STEP
- HB HOSE BIB
- NG NATURAL GAS

KEYNOTE LEGEND

642	POWER PER SAUNA ELEC. HEATER REQ'S
644	AIR HANDLING UNIT, SMD
648	ERV UNIT, SMD
649	DEHUMIDIFIER, SMD

MEP PLAN GENERAL NOTES

1. DUAL SENSOR PHOTOELECTRIC / IONIZATION SMOKE ALARMS ARE REQUIRED IN ALL AREAS/ROOMS USED FOR SLEEPING AND IN THE IMMEDIATE VICINITY OUTSIDE THESE AREAS/ROOMS.
2. A DUAL SENSOR PHOTOELECTRIC / IONIZATION SMOKE ALARM SHALL BE PROVIDED AT EACH FLOOR LANDING OF ALL INTERIOR STAIRCASES AND ELEVATOR SHAFT.
3. SMOKE ALARMS INSTALLED WITHIN 20 FT. OF A KITCHEN, BATHROOM, OR ROOM CONTAINING A FIREPLACE OR WOOD BURNING STOVE SHALL BE OF THE PHOTOELECTRIC TYPE.
4. CARBON MONOXIDE AND SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING, BE EQUIPPED WITH BATTERY BACK-UP AND BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS.
5. FOR PLACEMENT OF SMOKE ALARMS AND CARBON MONOXIDE ALARMS IN ROOMS WITH VARIATIONS IN CEILING HEIGHT (SLOPED, PITCHED ETC.), REFER TO THE MANUFACTURERS GUIDELINES FOR PROPER PLACEMENT.
6. ALL LIGHTING, FIXTURES AND CONTROLS, INTERIOR & EXTERIOR, ARE TO FULLY COMPLY WITH THE 2022 CALIFORNIA TITLE 24 BUILDING ENERGY EFFICIENCY STANDARDS FOR LIGHTING.
7. PER 2022 CEC 406.12, ALL 125- AND 250- VOLT, 15- AND 20- AMPERE NONLOCKING-TYPE RECEPTACLES LESS THAN 5.5 FEET ABOVE THE FINISHED FLOOR LEVEL SHALL BE LISTED TAMPER RESISTANT. TAMPER RESISTANT RECEPTACLES ARE NOT REQUIRED WHERE THE RECEPTACLE IS DEDICATED TO A SPECIFIC APPLIANCE.

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DATE
05.16.2025

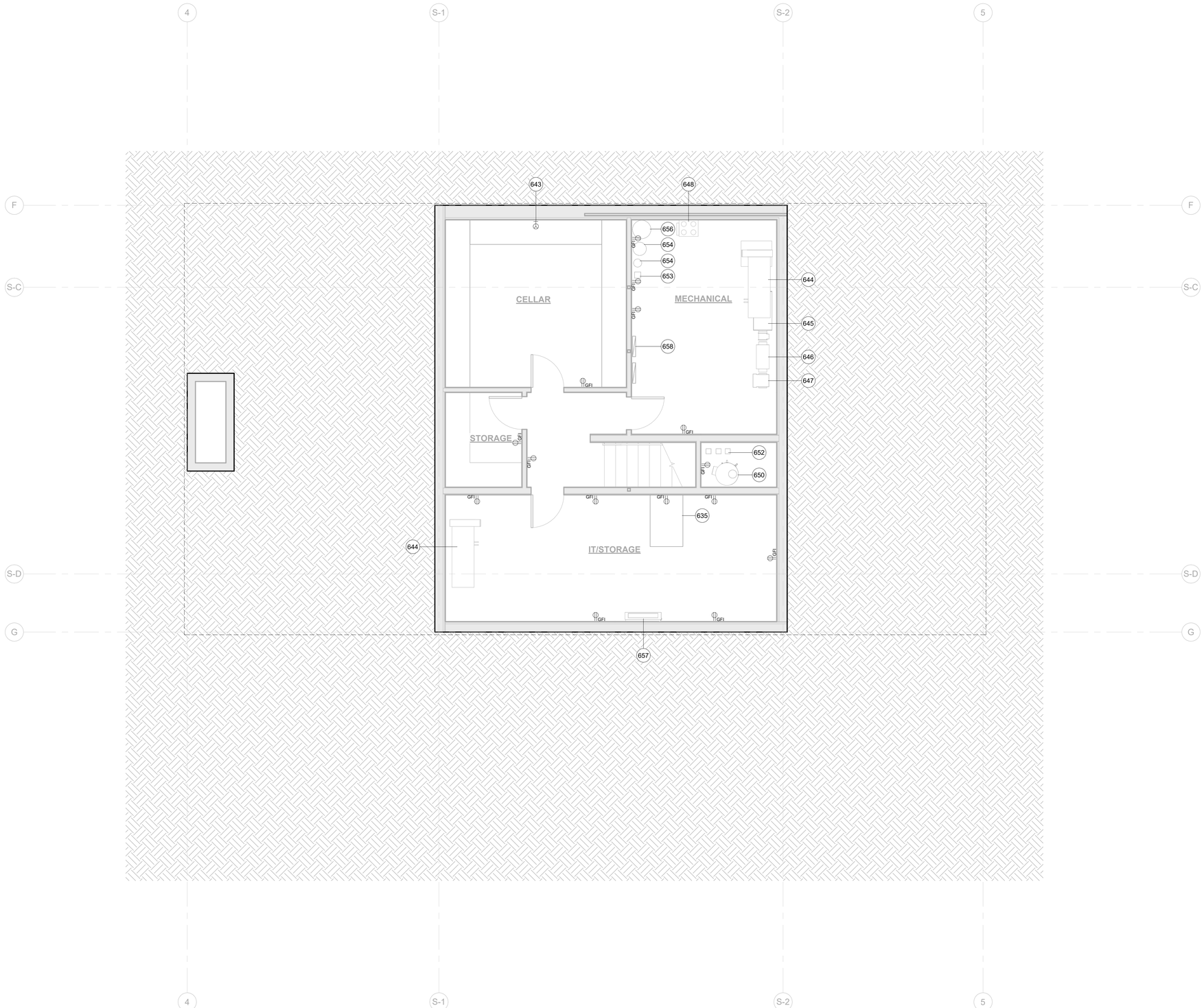
HISTORY

△	DESC.	DATE

0' 2' 4' 8'

TITLE
UTILITY PLAN - PRIMARY SUITE

U1.00
SHEET



1 MAIN HOUSE - BASEMENT UTILITY PLAN
1/4" = 1'-0"

5/19/2025 5:35:27 PM

MEP LEGEND

- SWITCH
- SWITCH w/ DIMMER
- SWITCH w/ THREEWAY
- SWITCH w/ VACANCY SENSOR
- SWITCH w/ HUMIDISTAT
- LIGHTING CONTROL KEYPAD
- OUTLET - DUPLEX / QUADPLEX
- OUTLET - GFI
- OUTLET - WATERPROOF
- OUTLET - APPLIANCE
- OUTLET - PLUG MOLD
- OUTLET - FLOOR DUPLEX / QUADPLEX
- OUTLET - CEILING DUPLEX / QUADPLEX
- DATA JACK
- DATA / PHONE JACK
- PHONE JACK
- TV HOOKUP
- J-BOX
- BUNDLED WIRE
- BUNDLED WIRE
- WIRELESS ACCESS POINT - WALL / CEILING MOUNT
- ELECTRICAL PANEL
- SPEAKER - WALL / CEILING MOUNT
- SMOKE & CARBON MONOXIDE DETECTOR - WALL / CEILING MOUNT
- FAN - WALL / CEILING MOUNT
- LIGHT - RECESSED CAN
- LIGHT - RECESSED DIRECTIONAL CAN
- LIGHT - MULTIPLE RECESSED CAN
- LIGHT - SURFACE MOUNTED
- LIGHT - WALL MOUNT FIXTURE
- LIGHT - FLUORSCENT
- LIGHT - FLUORESCENT STRIP
- LIGHT - STEP
- HB HOSE BIB
- NG NATURAL GAS

KEYNOTE LEGEND

635	AV RACK
643	POWER PER WINE ROOM REQ'S
644	AIR HANDLING UNIT, SMD
645	MAKEUP AIR SYSTEM, SMD
646	DUCT SILENCER, SMD
647	DUCT HEATER, SMD
648	ERV UNIT, SMD
650	HYBRID ELECTRIC WATER HEATER
652	CIRCULATION PUMP, SPD
653	LEAK DETECTION SYSTEM, SPD
654	SEDIMENT FILTER, SPD
656	BRINE TANK, SPD
657	WALL MOUNTED UNIT, SMD
658	ELECTRICAL PANEL

MEP PLAN GENERAL NOTES

1. DUAL SENSOR PHOTOELECTRIC / IONIZATION SMOKE ALARMS ARE REQUIRED IN ALL AREAS/ROOMS USED FOR SLEEPING AND IN THE IMMEDIATE VICINITY OUTSIDE THESE AREAS/ROOMS.
2. A DUAL SENSOR PHOTOELECTRIC / IONIZATION SMOKE ALARM SHALL BE PROVIDED AT EACH FLOOR LANDING OF ALL INTERIOR STAIRCASES AND ELEVATOR SHAFT.
3. SMOKE ALARMS INSTALLED WITHIN 20 FT. OF A KITCHEN, BATHROOM, OR ROOM CONTAINING A FIREPLACE OR WOOD BURNING STOVE SHALL BE OF THE PHOTOELECTRIC TYPE.
4. CARBON MONOXIDE AND SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING, BE EQUIPPED WITH BATTERY BACK-UP AND BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS.
5. FOR PLACEMENT OF SMOKE ALARMS AND CARBON MONOXIDE ALARMS IN ROOMS WITH VARIATIONS IN CEILING HEIGHT (SLOPED, PITCHED ETC.), REFER TO THE MANUFACTURERS GUIDELINES FOR PROPER PLACEMENT.
6. ALL LIGHTING, FIXTURES AND CONTROLS, INTERIOR & EXTERIOR, ARE TO FULLY COMPLY WITH THE 2022 CALIFORNIA TITLE 24 BUILDING ENERGY EFFICIENCY STANDARDS FOR LIGHTING.
7. PER 2022 CEC 406.12, ALL 125- AND 250- VOLT, 15- AND 20- AMPERE NONLOCKING-TYPE RECEPTACLES LESS THAN 5.5 FEET ABOVE THE FINISHED FLOOR LEVEL SHALL BE LISTED TAMPER RESISTANT. TAMPER RESISTANT RECEPTACLES ARE NOT REQUIRED WHERE THE RECEPTACLE IS DEDICATED TO A SPECIFIC APPLIANCE.

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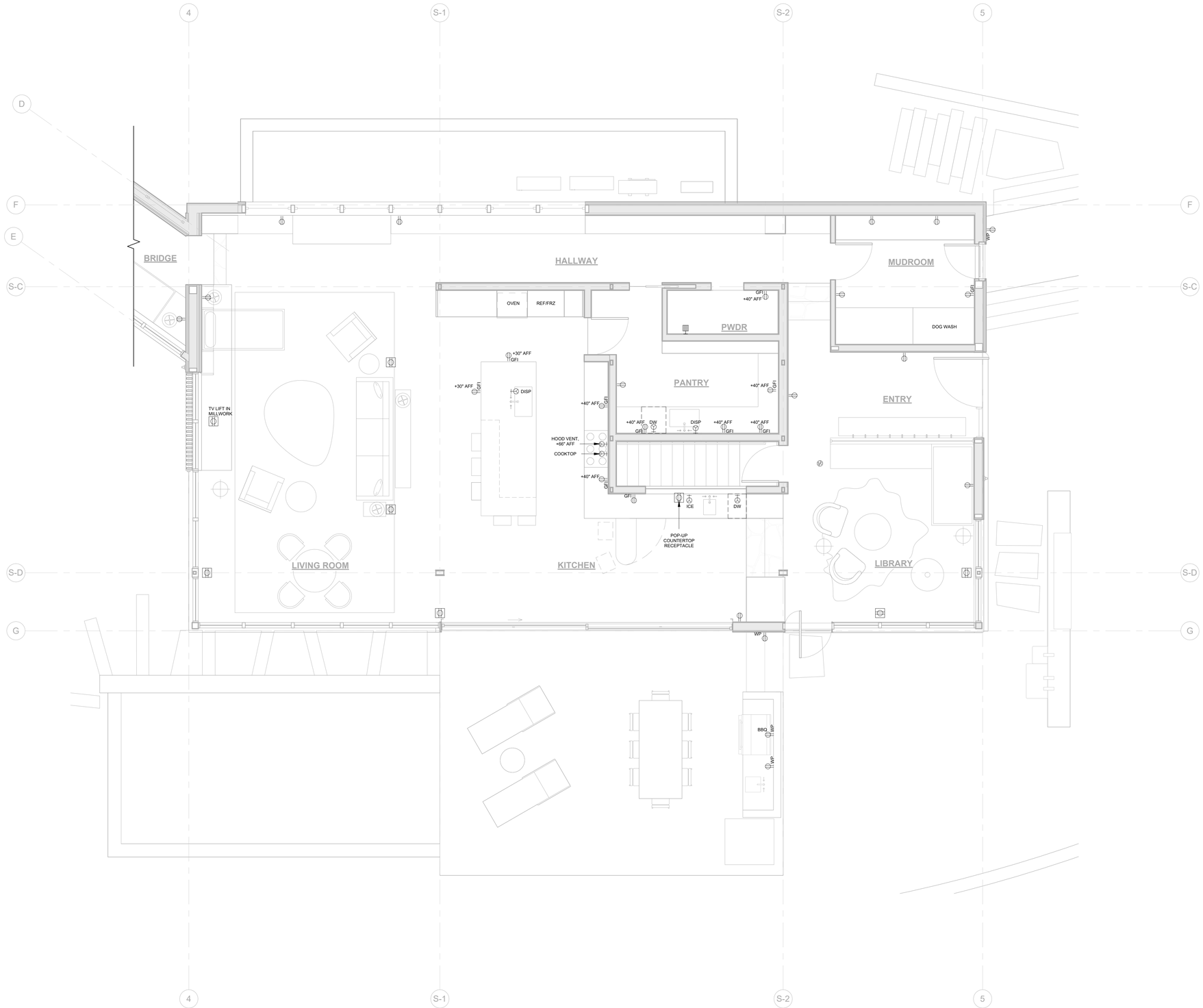
0' 2' 4' 8'

TITLE
UTILITY PLAN - GREAT ROOM BASEMENT

U1.01
SHEET



1 MAIN HOUSE - GREAT ROOM PAVILION UTILITY PLAN
1/4" = 1'-0"

5/19/2025 5:35:29 PM

MEP LEGEND

- SWITCH
- SWITCH w/ DIMMER
- SWITCH w/ THREEWAY
- SWITCH w/ VACANCY SENSOR
- SWITCH w/ HUMIDISTAT
- LIGHTING CONTROL KEYPAD
- OUTLET - DUPLEX / QUADPLEX
- OUTLET - GFI
- OUTLET - WATERPROOF
- OUTLET - APPLIANCE
- OUTLET - PLUG MOLD
- OUTLET - FLOOR DUPLEX / QUADPLEX
- OUTLET - CEILING DUPLEX / QUADPLEX
- DATA JACK
- DATA / PHONE JACK
- PHONE JACK
- TV HOOKUP
- J-BOX
- BUNDLED WIRE
- BUNDLED WIRE
- WIRELESS ACCESS POINT - WALL / CEILING MOUNT
- ELECTRICAL PANEL
- SPEAKER - WALL / CEILING MOUNT
- SMOKE & CARBON MONOXIDE DETECTOR - WALL / CEILING MOUNT
- FAN - WALL / CEILING MOUNT
- LIGHT - RECESSED CAN
- LIGHT - RECESSED DIRECTIONAL CAN
- LIGHT - MULTIPLE RECESSED CAN
- LIGHT - SURFACE MOUNTED
- LIGHT - WALL MOUNT FIXTURE
- LIGHT - FLUORSCENT
- LIGHT - FLUORESCENT STRIP
- LIGHT - STEP
- HOSE BIB
- NATURAL GAS

KEYNOTE LEGEND

MEP PLAN GENERAL NOTES

1. DUAL SENSOR PHOTOELECTRIC / IONIZATION SMOKE ALARMS ARE REQUIRED IN ALL AREAS/ROOMS USED FOR SLEEPING AND IN THE IMMEDIATE VICINITY OUTSIDE THESE AREAS/ROOMS.
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4. CARBON MONOXIDE AND SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING, BE EQUIPPED WITH BATTERY BACK-UP AND BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS.
5. FOR PLACEMENT OF SMOKE ALARMS AND CARBON MONOXIDE ALARMS IN ROOMS WITH VARIATIONS IN CEILING HEIGHT (SLOPED, PITCHED ETC.), REFER TO THE MANUFACTURERS GUIDELINES FOR PROPER PLACEMENT.
6. ALL LIGHTING, FIXTURES AND CONTROLS, INTERIOR & EXTERIOR, ARE TO FULLY COMPLY WITH THE 2022 CALIFORNIA TITLE 24 BUILDING ENERGY EFFICIENCY STANDARDS FOR LIGHTING.
7. PER 2022 CEC 406.12, ALL 125- AND 250- VOLT, 15- AND 20- AMPERE NONLOCKING-TYPE RECEPTACLES LESS THAN 5.5 FEET ABOVE THE FINISHED FLOOR LEVEL SHALL BE LISTED TAMPER RESISTANT. TAMPER RESISTANT RECEPTACLES ARE NOT REQUIRED WHERE THE RECEPTACLE IS DEDICATED TO A SPECIFIC APPLIANCE.

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LICENSED ARCHITECT
JONATHAN FELDMAN
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11/30/2025
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STATE OF CALIFORNIA

PROJECT NAME
WARD RESIDENCE

PROJECT ADDRESS
23 VASQUEZ TRAIL, CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

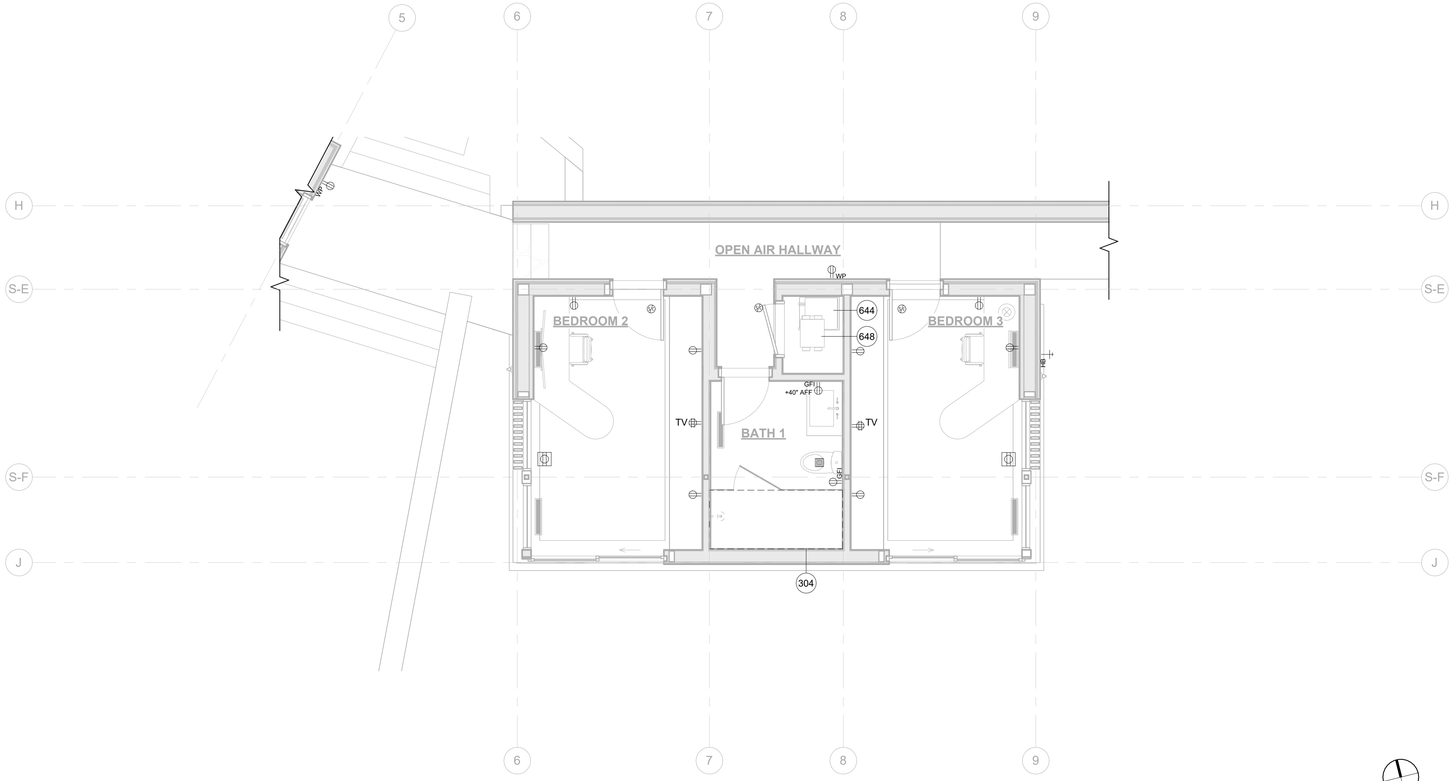
HISTORY

△	DESC.	DATE

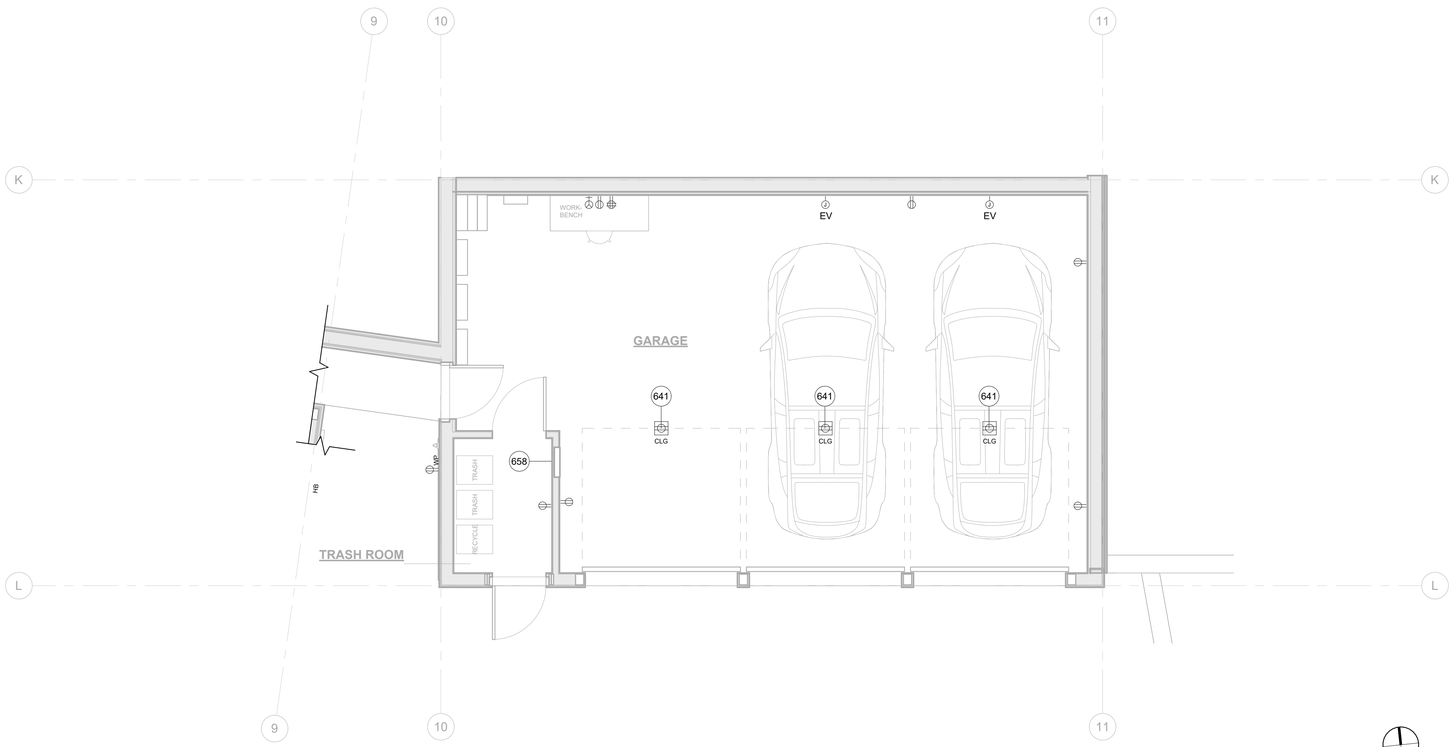
0' 2' 4' 8'

TITLE
UTILITY PLAN - GREAT ROOM

U1.02
SHEET



1 MAIN HOUSE - BEDROOMS UTILITY PLAN
1/4" = 1'-0"



2 MAIN HOUSE - GARAGE UTILITY PLAN
1/4" = 1'-0"

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MEP LEGEND

- SWITCH
- SWITCH w/ DIMMER
- SWITCH w/ THREEWAY
- SWITCH w/ VACANCY SENSOR
- SWITCH w/ HUMIDISTAT
- LIGHTING CONTROL KEYPAD
- OUTLET - DUPLEX / QUADPLEX
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- LIGHT - FLUORESCENT STRIP
- LIGHT - STEP
- HOSE BIB
- NATURAL GAS

KEYNOTE LEGEND

304	LINE OF SKYLIGHT ABOVE
641	GARAGE DOOR OPENER, PROVIDE BATTERY BACKUP, POWER OUTLET FOR GARAGE DOOR OPENER
644	AIR HANDLING UNIT, SMD
648	ERV UNIT, SMD
658	ELECTRICAL PANEL

MEP PLAN GENERAL NOTES

1. DUAL SENSOR PHOTOELECTRIC / IONIZATION SMOKE ALARMS ARE REQUIRED IN ALL AREAS/ROOMS USED FOR SLEEPING AND IN THE IMMEDIATE VICINITY OUTSIDE THESE AREAS/ROOMS.
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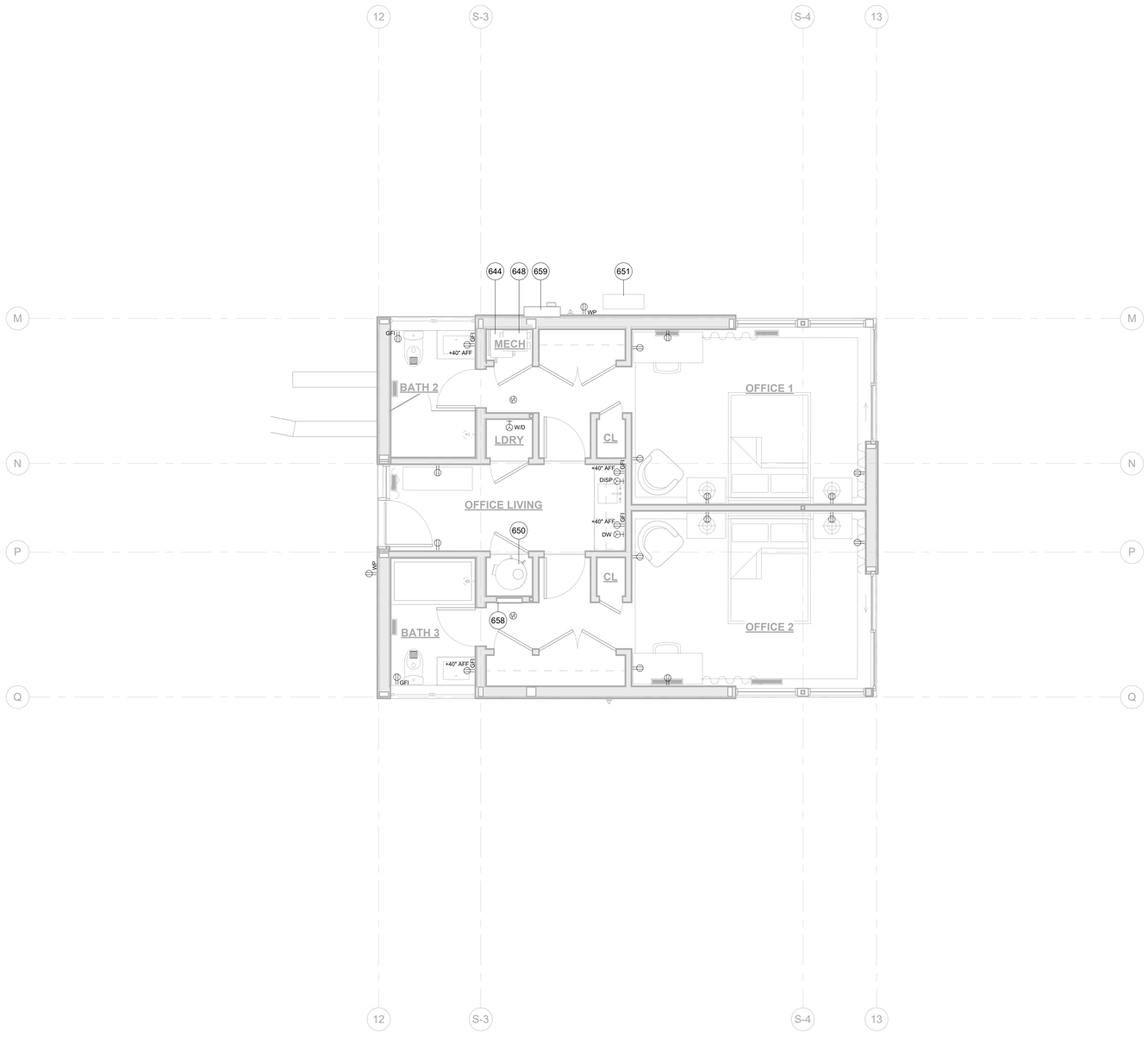
0' 2' 4' 8'

TITLE
UTILITY PLAN - BEDROOMS AND GARAGE

U1.03
SHEET



1 HOME OFFICES - UTILITY PLAN
1/4" = 1'-0"

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MEP LEGEND

- SWITCH
- SWITCH w/ DIMMER
- SWITCH w/ THREEWAY
- SWITCH w/ VACANCY SENSOR
- SWITCH w/ HUMIDISTAT
- LIGHTING CONTROL KEYPAD
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KEYNOTE LEGEND

644	AIR HANDLING UNIT, SMD
648	ERV UNIT, SMD
650	HYBRID ELECTRIC WATER HEATER
651	OUTDOOR HEAT PUMPS, SMD
658	ELECTRICAL PANEL
659	UTILITY METER

MEP PLAN GENERAL NOTES

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CLIENT
SARAH AND RICHARD WARD

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24-010

ISSUE
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0' 2' 4' 8'

TITLE
UTILITY PLAN - HOME OFFICES

U1.04
SHEET

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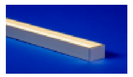
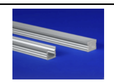
LUMINAIRE SCHEDULE

TYPE	IMAGE	LOCATION	DESCRIPTION	BASIS OF DESIGN (MAKE/ MODEL)	SIZE (NOMINAL)	LAMP (LM DELIVERED)	CCT CRI	INPUT WATTS	VOLTS	CONTROLS / GEAR	FINISH	MOUNTING NOTES
L1A		MECH /BOH	4-FT LINEAR UTILITY STRIP - LOW PROFILE	WILLIAMS 75 75S-4-L30-9-35	4-FT	LED 3000 LM DEL	3500K 90+	20	UNV	INTEGRAL ELV	WHITE OR AS PER ARCHITECT	SURFACE MOUNT
L1B		GARAGE	8-FT LINEAR UTILITY STRIP	WILLIAMS 75 75S-8-L30-9-35	8-FT	LED 6000 LM DEL	3500K 90+	35	UNV	INTEGRAL ELV	WHITE OR AS PER ARCHITECT	STEM MOUNTED FLUSH TO BOTTOM OF BEAM
L1C		GARAGE	4-FT LINEAR UTILITY STRIP - LOW PROFILE	WILLIAMS 75 75S-4-L30-9-35	4-FT	LED 3000 LM DEL	3500K 90+	20	UNV	INTEGRAL ELV	WHITE OR AS PER ARCHITECT	WALL MOUNTED - GLARE SHIELD
L2		GYP. LID POWER RM	RECESSED DOWNLIGHT - 4-IN APERTURE	ALPHABET NUE4-QD-27K-90-HET-WH-WH	4" SQ x 4" D	LED 1070 LM DEL	2700K 90+	10.5	120V	INTEGRAL ELV	WHITE OR AS PER ARCHITECT	GYP. LID RECESSED
L3		CIRCULATION	SURFACE MOUNTED SQUARE DOWNLIGHT W/ WOOD TRIM	ALPHAEBET BETA6	5" SQ. x x" D	LED 1630 M DEL	2700K 90+	15	120V	INTERGRAL ELV	WOOD TRIM TO MATCH	CEILING MOUNT
L4		PRIMARY BEAMS	LED TAPE IN CHANNEL W/ BATWING OPTIC	Q-TRAN VERS-INSERT	7/8" W x 5/8" H x 1-FT L	LED 150 LM DEL	2700K 90+	1.5 /LF	120V	REMOTE	AS PER ARCHITECT	SURFACE MOUNT ON TOP SIDE OF FLITCH BEAMS COORDINATE REMOTE DRIVER LOCATIONS PRIOR TO INSTALLATION
L5		KITCHEN	UNDERCABINET LED LOW PROFILE LINEAR	Q-TRAN	1" W x 1-1/4" H x LENGTH SHOWN	LED 460 LM DEL /LF	2700K 90+	5 /LF	120V	INTEGRAL	AS PER ARCHITECT	UNDERCAB COORDINATE WITH MILLWORK
L6		CELLAR	1-IN APERTURE WALL WASH	ALPHABET	1" SQ.	LED 420 LM DEL	2700K 90+	5.5	120V	INTEGRAL	WHITE	GYP. CLG. RECESSED
L7		SAUNA	PERIMETER SLOT IN WOOD CEILING	Q-TRAN TAPE: CHANNEL:	7/8" W x 5/8" H x LENGTH AS SHOWN	LED 238 LM DEL /LF	2700K 90+	3 /LF	120V	REMOTE	AS PER ARCHITECT	RECESSED IN ARCH. SLOT
L8		SAUNA	WET RATED LED TAPE (HIGH HEAT) IN CHANNEL	Q-TRAN TAPE: CHANNEL:	7/8" W x 5/8" H x LENGTH AS SHOWN	LED 238 LM DEL /LF	2700K 90+	3 /LF	120V	REMOTE	AS PER ARCHITECT	SURFACE AT TOE-KICK
L9		GARAGE	DIRECT / INDIRECT LINEAR SHELF	FINELITE S16 LED WM ID-(SHIELD)-LENGTH-2E-B-935-(OPTIC)-40U90D-120-FC1-SC-MB-FE-SW-OCC	7-5/8" W x 2" H x LENGTH AS SHOWN	LED 2000 LM DEL / LF	3500K 90+	15 /LF	120V	INTEGRAL 0-10V DIM TO 1%	AS PER ARCHITECT	WALL MOUNTED

NOTES:

1. CONTRACTOR RESPONSIBLE FOR PROVIDING LINEAR FIXTURES IN LONGEST LENGTHS TO FIT LOCATIONS SHOWN IN PLANS, WITH FEWEST QUANTITY OF POWER DROPS FOR REQUIRED CONTROLS.
2. REMOTE CONTROL GEAR TO BE PLACED IN WELL-VENTILATED, ACCESSIBLE LOCATIONS.
3. CONTRACTOR TO CHECK COMPATIBILITY OF FIXTURE MOUNTING HARDWARE AND WIRING AT EACH LOCATION SHOWN IN PLANS.
4. PRIOR TO ORDERING, ENSURE COMPABITILITY OF LUMINAIRE CONTROL GEAR TO MEET SPECIFIED DIMMING PERFORMANCE WITH SPECIFIED DIMMING EQUIPMENT TO BE PROVIDED.
5. SUBMITTALS FOR ALL FIXTURES TO INCLUDE ORDERING CODES SHOWING ALL PARTS TO BE PROVIDED; SUCH AS ACCESSORY COMPONENTS, REMOTE CONTROL GEAR, MOUNTING HARDWARE, POWER FEEDS, AND LAMP INFORMATION.
6. PROVIDE FACTORY SHOP DRAWINGS FOR ALL MODIFIED OR "SYSTEM" PRODUCTS. IF FACTORY DRAWINGS UNAVAILABLE CONTRACTOR TO SUBMIT MATERIAL EXPLAINING INTENDED INSTALLATION.

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TITLE
LUMINAIRE SCHEDULE

EL0.01
SHEET

5/15/2025 12:10:23 PM

DECORATIVE LUMINAIRE SCHEDULE

TYPE	IMAGE	LOCATION	DESCRIPTION	BASIS OF DESIGN (MAKE/ MODEL)	SIZE (NOMINAL)	LAMP (LM DELIVERED)	CCT CRI	INPUT WATTS	VOLTS	CONTROLS / GEAR	FINISH	MOUNTING NOTES
D1		LIVING ROOM	LARGE FORMAT PENDANT	TBD			2700K 90+		120V			
D2		NICHES / DAYBEDS	ADJUSTABLE WALL MOUNTED READING LIGHT - DIRECTIONAL	TBD			2700K 90+		120V			
D3		PRIMARY BATH	WALL SCONCE	TBD			2700K 90+		120V			
D4		LIVING RM	TABLE LAMP	TBD			2700K 90+		120V			
D5		PASSAGE	TABLE LAMP - SAME FAMILY AS D4 BUT TALLER	TBD			2700K 90+		120V			
D6		KITCHEN	SUSPENDED DIRECT/INDIRECT PENDANT WITH SHIELDED HOUSING	TBD			2700K 90+		120V			
D7		PANTRY	SUSPENDED VOLUMETRIC PENDANTS W/ FROSTED GLASS	TBD			2700K 90+		120V			
D8		ENTRY	SUSPENDED PENDANT	TBD			2700K 90+		120V			
D9		OPEN SHELVING	CLIP ON - DIRECTIONAL SCONCES	TBD			2700K 90+		120V			
D10		LIVING RM	NOGUCHI-ESQUE FLOOR LAMP	TBD			2700K 90+		120V			
D11		LIVING RM DINNER TABLE	SUSPENDED PENDANT	TBD			2700K 90+		120V			
D12		STAIRS	WALL SCONCE - DIRECT / INDIRECT	TBD			2700K 90+		120V			
D13		POWDER RM	VANITY - SIMPLE FORM	TBD			2700K 90+		120V			
D14		LIBRARY	STANDING FLOOR LAMP	TBD			2700K 90+		120V			
D15		LIBRARY	STANDING FLOOR LAMP	TBD			2700K 90+		120V			
D16		PRIMARY WIC	DECORATIVE DIRECT/INDIRECT PENDANT	TBD			2700K 90+		120V			
D17		PRIMARY BEDROOM	STANDING FLOOR LAMP	TBD			2700K 90+		120V			
D18		PRIMARY BEDROOM SIDETABLES	TABLE LAMPS - READING	TBD			2700K 90+		120V			
D19		PRIMARY BEDROOM	PENDANT OVER BED	TBD			2700K 90+		120V			

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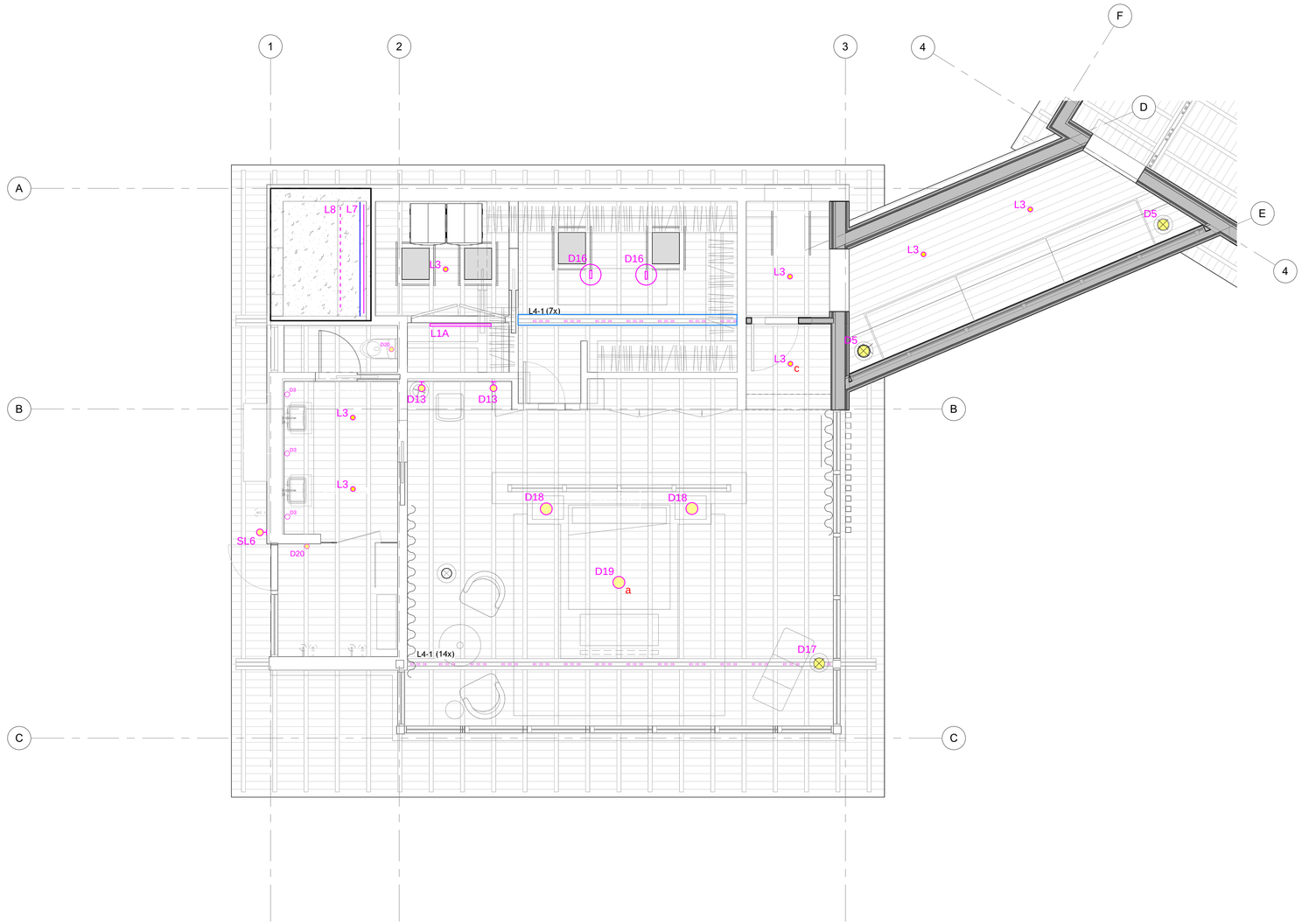
LUMINAIRE SCHEDULE - DECORATIVE

EL0.02
SHEET



1 MAIN HOUSE - PRIMARY SUITE - LIGHTING RCP

1/4" = 1'-0"

GENERAL NOTES:

A. THIS IS A PERMIT SET OF DRAWINGS. ALL COMPONENTS SHOWN ARE DIAGRAMMATIC AND SHALL BE COORDINATED BY THE CONTRACTOR WITH SURROUNDING CONDITIONS. NOTIFY THE ARCHITECT AND ELECTRICAL ENGINEER OF ANY CONFLICTS.

B. REFER TO LANDSCAPE DRAWINGS FOR HORIZONTAL LAYOUT AND DETAILS OF EXTERIOR LIGHTING, U.N.O.

C. REFER TO ELECTRICAL FOR CIRCUITING.

D. FOR THE DIMMING SYSTEM SPECIFIED, PROVIDE ALL NECESSARY COMPONENTS TO MAKE THE SYSTEM FUNCTIONS WITH THE LIGHT FIXTURES SPECIFIED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY INTER-OPERABILITY BETWEEN THE SPECIFIED LIGHT FIXTURES AND THE CONTROL SYSTEM. SEE FIXTURE SCHEDULE FOR CONTROL AND DIMMING PROTOCOLS.

E. LIGHTING CONTROLS TO BE COORDINATED WITH A/V INTEGRATOR PRIOR TO ORDERING AND INSTALLATION.

SHEET NOTES:

1.

2.

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TITLE
LIGHTING RCP - PRIMARY SUITE

EL1.10
SHEET

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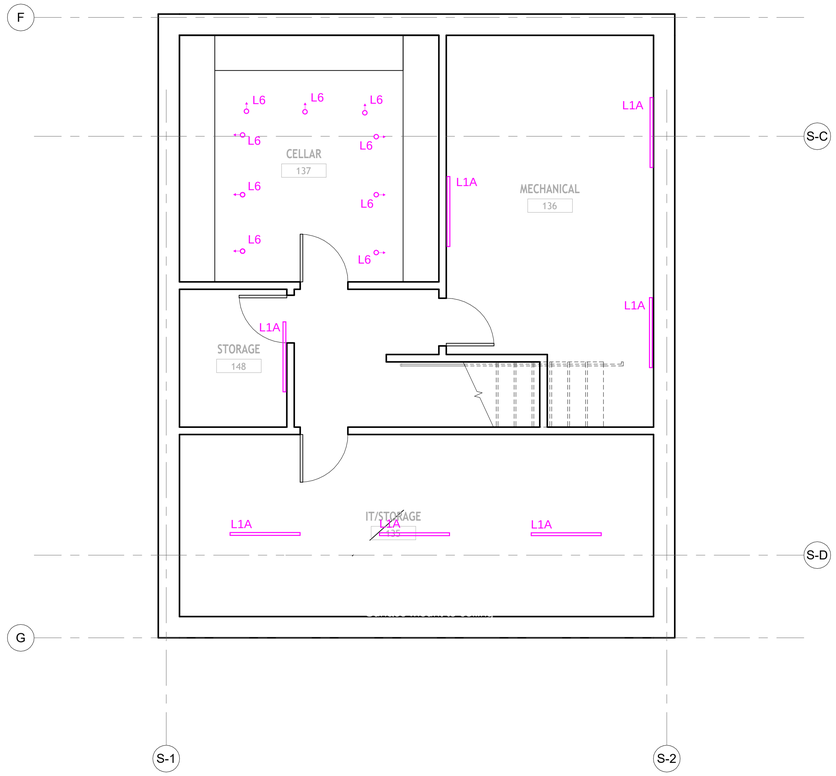

1 BASEMENT - LIGHTING RCP
1/4" = 1'-0"

GENERAL NOTES:

A. THIS IS A PERMIT SET OF DRAWINGS. ALL COMPONENTS SHOWN ARE DIAGRAMMATIC AND SHALL BE COORDINATED BY THE CONTRACTOR WITH SURROUNDING CONDITIONS. NOTIFY THE ARCHITECT AND ELECTRICAL ENGINEER OF ANY CONFLICTS.

B. REFER TO LANDSCAPE DRAWINGS FOR HORIZONTAL LAYOUT AND DETAILS OF EXTERIOR LIGHTING, U.N.O.

C. REFER TO ELECTRICAL FOR CIRCUITING.

D. FOR THE DIMMING SYSTEM SPECIFIED, PROVIDE ALL NECESSARY COMPONENTS TO MAKE THE SYSTEM FUNCTIONS WITH THE LIGHT FIXTURES SPECIFIED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY INTER-OPERABILITY BETWEEN THE SPECIFIED LIGHT FIXTURES AND THE CONTROL SYSTEM. SEE FIXTURE SCHEDULE FOR CONTROL AND DIMMING PROTOCOLS.

E. LIGHTING CONTROLS TO BE COORDINATED WITH A/V INTEGRATOR PRIOR TO ORDERING AND INSTALLATION.

SHEET NOTES:

1.

2.

FELDMAN
ARCHITECTURE
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San Francisco, California 94109
415 252 1441
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LICENSED ARCHITECT
JONATHAN FELDMAN
C-28459
11/30/2025
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT NAME
WARD RESIDENCE

PROJECT ADDRESS
23 VASQUEZ TRAIL,
CARMEL, CA 93923

APN #
239-121-010 (LOT 253)

CLIENT
SARAH AND RICHARD WARD

FA JOB NO.
24-010

ISSUE
COMBO PERMIT SET

DATE
05.16.2025

HISTORY

△	DESC.	DATE

TITLE
LIGHTING RCP - BASEMENT

EL1.11
SHEET

5/15/2025 12:10:24 PM

1 MAIN HOUSE - GREAT ROOM PAVIILION - LIGHTING RCP

1/4" = 1'-0"

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SHEET NOTES:

1. PROVIDE LOW PROFILE J-BOX, SIDE-MOUNTED TO FLITCH BEAM. COORDINATE POWER FEED FROM ABOVE DECKING WITH CONTRACTOR PRIOR TO INSTALLATION.

2.

5/15/2025 12:10:25 PM

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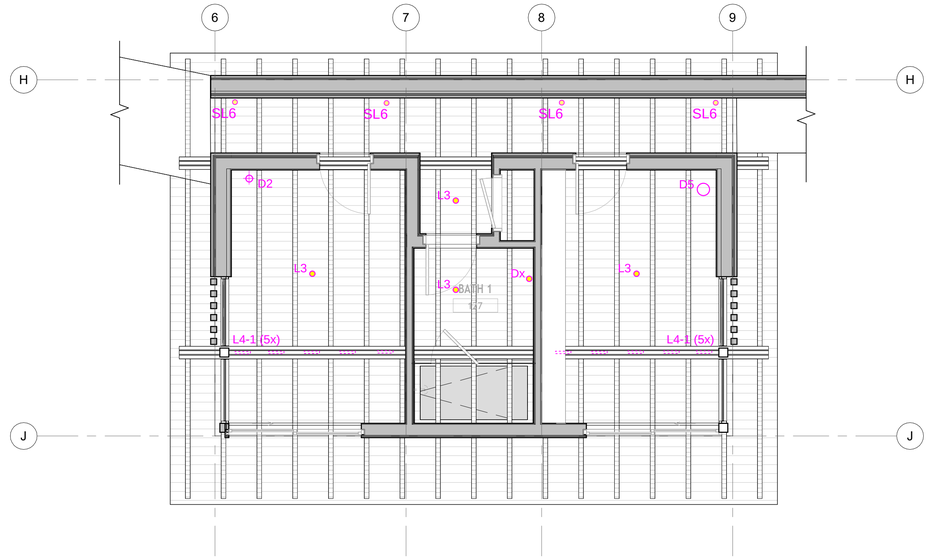
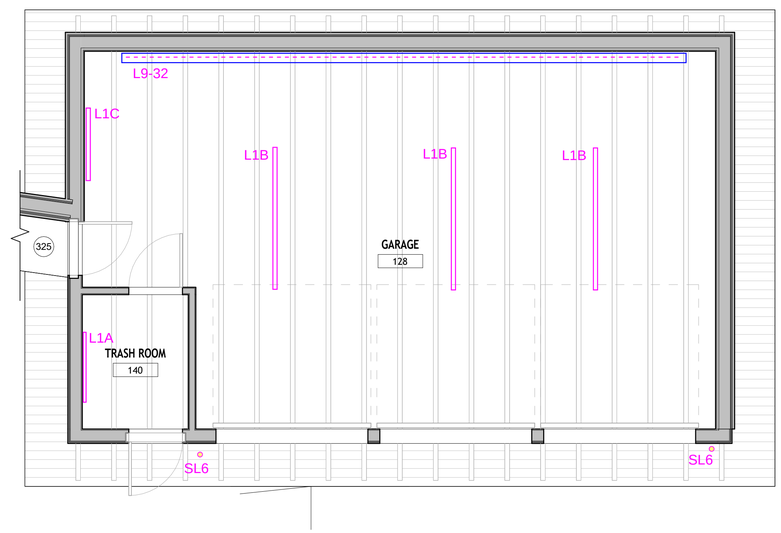
TITLE
LIGHTING RCP - GREAT ROOM

EL1.12
SHEET



1 MAIN HOUSE - BEDROOMS - LIGHTING RCP
1/4" = 1'-0"



2 MAIN HOUSE - GARAGE - LIGHTING RCP
1/4" = 1'-0"

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SHEET NOTES:

1.

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HISTORY

△	DESC.	DATE

TITLE
LIGHTING RCP - BEDROOMS & GARAGE

EL1.13
SHEET

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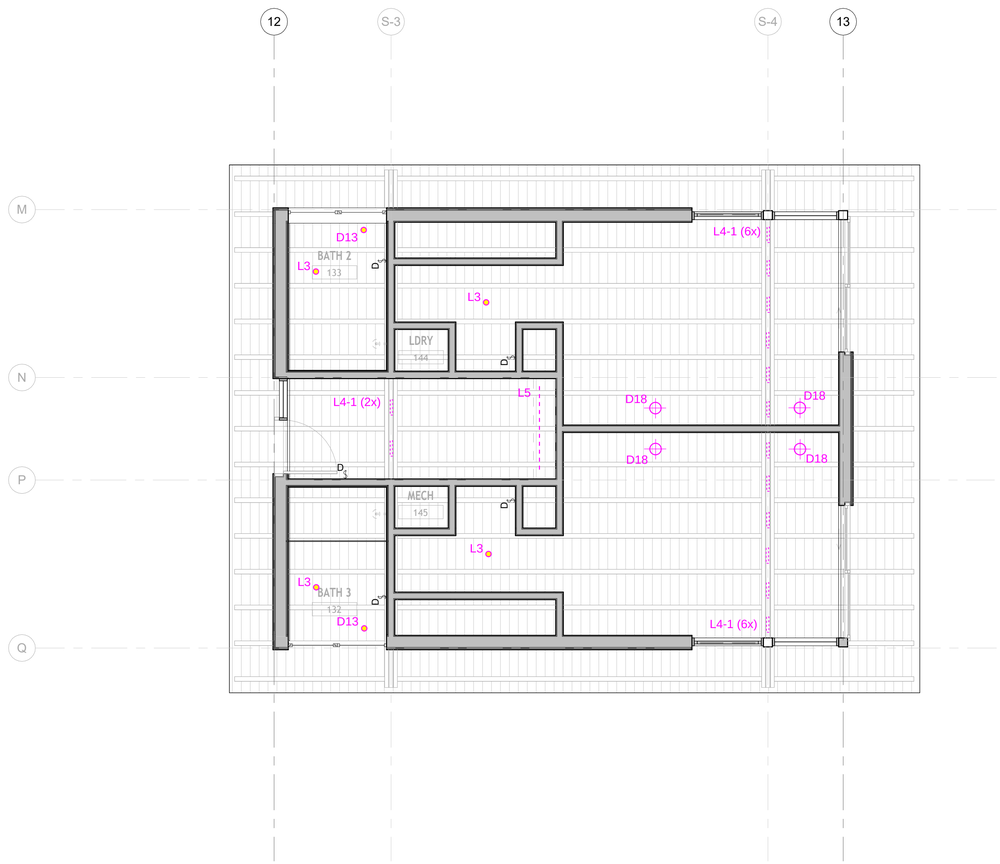

1 HOME OFFICES - LIGHTING RCP

1/4" = 1'-0"

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SHEET NOTES:

1.

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HISTORY

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TITLE
LIGHTING RCP - HOME OFFICES

EL1.14
SHEET

(F) SHEAR WALL NOTES

1. BLOCK ALL UNSUPPORTED EDGES WITH 2x MATERIAL UNO. BLOCK EDGES WITH 3x MATERIAL WHERE NAILING IS 4"oc OR LESS. SEE 11/S1.2 FOR NAIL STAGGER AT ALL 3x.
2. FIELD NAILING TO BE 12"oc UNO.
3. ALL SHEATHING NAILS TO BE COMMON WIRE. SEE E/S0.1 AND SPECIFICATIONS FOR OTHER NAIL REQUIREMENTS.
4. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEAR WALLS ON PLANS TO HAVE SHEATHING AND PEN NAILING PER SHEAR WALL TYPE 'A'.
5. SHEAR WALL LENGTHS, WHERE NOTED, ARE MINIMUM. DO NOT LOCATE HOLDOWNS FROM THESE DIMENSIONS. SAD FOR ACTUAL WALL LENGTHS. SEE 7/S1.2 FOR SCHEMATIC SHEAR WALL CONSTRUCTION.
6. HOLDOWN REFERS TO SIMPSON STRONG TIE CO. HOLDOWNS. INSTALL HOLDOWNS AND REQUIRED POSTS PER 8/S1.2 AND 9/S1.2. SEE PLANS FOR OTHER REQUIREMENTS.
7. EDGE NAIL WALL SHEATHING TO STUDS OR POSTS WITH HOLDOWNS.
8. PORTIONS OF INTERIOR WALL SURFACES ADJACENT TO SPECIFIED SHEAR WALLS SHALL BE SHEATHED FOR THE FULL, UNINTERRUPTED LENGTH TO MATCH EXTERIOR WALLS OR WITH GYPSUM BOARD OF THE SAME THICKNESS TO PROVIDE AN EVEN WALL SURFACE FOR FINISH MATERIALS.
9. SHEAR WALLS MORE THAN ONE VERTICAL PANEL IN HEIGHT SHALL HAVE STAGGERED HORIZONTAL OR VERTICAL SPLICE JOINTS.
10. WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6"oc ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS OR FRAMING SHALL BE 3x, DOUBLE 2x, OR THICKER AND NAILS ON EACH SIDE SHALL BE STAGGERED.
11. ANCHOR BOLTS (AB) FOR SHEAR WALLS SHALL INCLUDE STEEL PLATE WASHERS, A MINIMUM OF 0.229 INCH BY 3 INCHES SQUARE IN SIZE, BETWEEN THE SILL PLATE AND NUT. THE HOLE IN THE PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO 3/16" LARGER THAN THE AB DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1 3/4", PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT. PLATE WASHER TO EXTEND WITHIN 1/2" OF SHEAR WALL SHEATHING UNO. PROVIDE OVERSIZED PLATE WASHER OR OFFSET AB AS REQUIRED. AT DOUBLE-SIDED SHEAR WALLS, STAGGER AB AS REQUIRED. AB TO BE PLACED A MINIMUM OF 4 1/2" AND A MAXIMUM OF 12" FROM ENDS OF ALL SILL PLATES AND AT NOTCHES IN SILL PLATES.
12. NO OPENINGS ARE ALLOWED IN SHEAR WALLS UNLESS SHOWN ON THE STRUCTURAL PLANS. OPENINGS NOTED ARE PER 6/S1.2 . COORDINATE ANY OPENINGS NOT SHOWN WITH THE STRUCTURAL ENGINEER.

SHEAR WALL SCHEDULE

SW	APA RATED EXP 1 SHEATHING	NAILING (PEN)	ANCHORAGE					REMARKS	
			5/8"Ø BOLT FDN		AT FRAMING 2				
			2x SILL	3x SILL	16d	A35	SCREW 1	AT SAWN STUD	AT LVL STUD
A	15/32" (32/16) OSB	10d @ 6"oc	32"oc	48"oc	8"oc	24"oc	16"oc		
B	15/32" (32/16) OSB	10d @ 4"oc	24"oc	32"oc	4"oc	16"oc	12"oc	3x MIN AT ALL ADJOINING PANEL EDGES	(2) 1 3/4 STUD OR 2 1/2" MIN STUD AT ADJOINING PANEL EDGES
C	15/32" (32/16) OSB	10d @ 3"oc	16"oc	24"oc	4"oc	12"oc	8"oc		
D	15/32" (32/16) OSB	10d @ 2"oc	-	16"oc	(2) ROWS @ 3"oc	8"oc	6"oc		(2) 1 3/4 STUD AT ADJOINING PANEL EDGES, SINGLE MEMBER NOT ACCEPTABLE
E	15/32" (32/16) OSB BOTH SIDES	10d @ 2"oc	-	12"oc	(2) ROWS @ 2"oc	6"oc	(2) ROWS @ 6"oc		

NOTES:
1. 2x SILL: SDS1/4x4 1/2" OR SDWS 0.22"x4". AT 3x SILL : SDS1/4x6" OR SDWS 0.22"x6"
2. FOR SCREW @ 6"oc OR LESS & DBL ROW OF ANCHORAGE PROVIDE 4x OR EQUIVALENT SB/RIM BLW. AT DBL ROW STGR ROWS TYPICAL.

ABBREVIATIONS

AB	ANCHOR BOLT
ABV	ABOVE
AC	AIR CONDITIONING
ADJ	ADJACENT
ADDL	ADDITIONAL
ALT	ALTERNATE
ALUM	ALUMINUM
ARCH	ARCHITECT
AYC	ALASKAN YELLOW CEDAR
@	AT
BF	BRACED FRAME
BLDG	BUILDING
BLK/BLKG	BLOCK/BLOCKING
BLW	BELOW
BM	BEAM
BN	BOUNDARY NAIL
BOT	BOTTOM
BRG	BEARING
BTWN	BETWEEN
BU	BUILT-UP
BYND	BEYOND
C	AMERICAN STANDARD CHANNEL
CA	CALIFORNIA
CANT	CANTILEVER
CB	CARRIAGE BOLT
CFS	COLD FORMED STEEL
CIP	CAST IN PLACE
CGL	CERTIFIED GLUED LUMBER
CJ	CONTROL JOINT
℄	CENTERLINE
CJP	COMPLETE JOINT PENETRATION
CLG	CEILING
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
COORD	COORDINATE/ COORDINATION
CMU	CONCRETE MASONRY UNIT
CSK	COUNTERSINK
CW	CUT WASHER
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DCW	DEMAND CRITICAL WELD
DF	DOUGLAS FIR
DIA or Ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIST	DISTANCE
DJ	DOWEL JOINT
DL	DEAD LOAD
DN	DOWN
DO	DITTO
DWG	DRAWING
DWL	DOWEL
EA	EACH
EE	EACH END
EF	EACH FACE
ELEC	ELECTRICAL
ELEV	ELEVATOR/ELEVATION
EMBED	EMBEDMENT
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
(E)	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FDN	FOUNDATION
FIN	FINISH
FG	FINISH GRADE
FLR	FLOOR
FN	FACE NAIL
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FRMG	FRAMING
FS	FAR SIDE
FTG	FOOTING
GA	GAGE or GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GL	GRIDLINE
GLB	GLUE LAMINATED BEAM
GR	GRADE
HD	HOLDOWN
HDG	HOT-DIP GALVANIZED
HDR	HEADER
HGR	HANGER
HK	HOOK
HORIZ	HORIZONTAL
HSB	HIGH STRENGTH BOLT
HSG	HIGH STRENGTH GROUT
HSH	HORIZONTAL SLOTTED HOLE
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
ID	INSIDE DIAMETER
IJ	I SHAPED WOOD BUILT UP TRUSS
INT	INTERIOR
JST	JOIST
JT	JOINT
KP	KING POST
L	STEEL ANGLE
Lb or #	POUND(s)
LGMF	LIGHT GAGE METAL FRAMING
LGMFC	LIGHT GAGE METAL FRAMING CONTRACTOR
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION
LS	LAG SCREW
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
LWC	LIGHTWEIGHT CONCRETE
MAX	MAXIMUM
MB	MACHINE BOLT
MBM	METAL BUILDING MANUFACTURER
MC	MISCELLANEOUS CHANNEL
MECH	MECHANICAL
MEZZ	MEZZANINE
MF	MOMENT FRAME
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MIW	MALLEABLE IRON WASHER
MTL	METAL
MU	MECH UNIT
(N)	NEW
N/A	NOT APPLICABLE
NO or #	NUMBER
NS	NEAR SIDE
NSG	NON-SHRINK GROUT
NTS	NOT TO SCALE
NWC	NORMAL-WEIGHT CONCRETE
O/	OVER
oc	ON CENTER
OD	OUTSIDE DIAMETER
OH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OVS	OVERSIZED
OW	OTHERWISE
OWT	OPEN WEB TRUSS
⅊	PLATE or PROPERTY LINE
PA	POST ABOVE
PAF	POWER ACTUATED FASTENERS
PEN	PANEL EDGE NAIL
PERP	PERPENDICULAR
PES	PANEL EDGE SCREWS
PJP	PARTIAL JOINT PENETRATION
PLF	POUNDS PER LINEAR FOOT
PNL	PANEL
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PTDF	PRESSURE TREATED DOUGLAS FIR
PT	POINT
R	RADIUS
RBS	REDUCED BEAM SECTION
RFTR	RAFTER
REF	REFERENCE
REINF	REINFORCING
REQD	REQUIRED
RET	RETAINING
REV	REVISION
RF	ROOF
RWD	REDWOOD
S	AMERICAN STANDARD BEAM
SAD	SEE ARCHITECTURAL DRAWINGS
SB	SOLID BLOCK
SC	SLIP CRITICAL
SCD	SEE CIVIL DRAWINGS
SCHED	SCHEDULE
SED	SEE ELECTRICAL DRAWINGS
SEOR	STRUCTURAL ENGINEER OF RECORD
SFRS	SEISMIC FORCE RESISTING SYSTEM
SHTG	SHEATHING
SIM	SIMILAR
SKYLT	SKYLIGHT
SLD	SEE LANDSCAPE DRAWINGS
SMS	SHEET METAL SCREW
SMD	SEE MECHANICAL DRAWINGS
SOG	SLAB ON GROUND
SPCG	SPACING
SPD	SEE PLUMBING DRAWINGS
SPEC	SPECIFICATION
SQ	SQUARE
SS	SELECT STRUCTURAL or STAINLESS STEEL
STGR	STAGGERED
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURAL
SW	SHEAR WALL
SYM	SYMMETRICAL
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
THK	THICK
THRD	THREADED
THRU	THROUGH
TL	TOTAL LOAD
TN	TOE NAIL
TOC	TOP OF CONCRETE
TOF	TOP OF FRAMING
TOM	TOP OF MASONRY
TOP	TOP OF PLYWOOD
TOS	TOP OF STEEL
TOT	TOTAL
TU	TILT UP
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VIF	VERIFY IN FIELD
VSH	VERTICAL SLOTTED HOLE
W	WIDE FLANGE STEEL BEAM
W/	WITH
W/O	WITHOUT
WD	WOOD
WHS	WELDED HEADED STUD
WLD	WELDED
WP	WORK POINT/WATERPROOF
WS	WOOD SCREW
WT	WEIGHT
WTS	WELDED THREADED STUD
WWR	WELDED WIRE REINFORCEMENT

(E) WOOD FRAMING NOTES

1. HEADERS, BEAMS, POSTS, TOP PLATE SPLICES, AND ETC., ARE PER 1/S1.2 AND 3/S1.2 WHERE NOT NOTED ON PLAN AND DETAILS. WALLS AT SEISMIC SEPARATIONS SHALL BE CONSIDERED EXTERIOR WALLS.
2. ALL BEAMS AND JOISTS (EXCLUDING I JOISTS) SHALL BE SEAT CUT FOR FULL UNIFORM BEARING AT SUPPORTS, INCLUDING BEAM SEATS AND COLUMN CAPS.
3. THE GENERAL CONTRACTOR SHALL MEASURE GLULAM BEAM SIZES AND CAMBERS AS DELIVERED TO THE JOB SITE AND SHALL REPORT FINDINGS TO THE ENGINEER PRIOR TO ERECTION. PROVIDE 5,000 FT. RADIUS CAMBER ON ALL SIMPLE SPAN GLULAM BEAMS UNO. WHERE INDICATED ON PLAN, C = 3/4" INDICATES MIDSPAN CAMBER IN INCHES.
4. SEE 11/S1.2 FOR SHEATHING NAILING REQUIREMENTS. ALL NAILING NOT NOTED OR DETAILED OTHERWISE SHALL BE PER 10/S1.2. NAIL LENGTH TO BE SUFFICIENT TO MEET CBC PENETRATION REQUIREMENTS. NAILS INTO PRESSURE TREATED MATERIAL SHALL BE HOT DIP GALVANIZED. NAILS AT BORATE TREATED LUMBER MAY BE CLEAR ZINC COATED. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AT EXTERIOR EXPOSURES.
5. EXTERIOR STUD WALL SHALL BE 2x8 @ 16"oc OR 1 3/4"x7 1/4" LVL @ 16"oc UNLESS NOTED OTHERWISE. INTERIOR BEARING WALLS AND SHEAR WALLS SHALL BE 2x6 @ 16"oc UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL DRAWINGS FOR OTHER INTERIOR WALL FRAMING SIZES. COORDINATE STUD AND PLATE SIZES WITH THE REQUIREMENTS OF THE SHEAR WALL SCHEDULE.
6. WOOD POST SIZES ARE TO MATCH BEAM AND STUD WIDTH, UNO. WHERE POST OCCURS ABOVE RAISED FLOOR, PROVIDE SOLID BLOCKING AT FLOOR FRAMING TO MATCH WIDTH OF POST. PEN PER F/S0.1 TO POSTS AT ALL EXTERIOR WALLS AND INTERIOR SHEAR WALLS. POSTS AT HOLDOWNS TO BE FULL HEIGHT AND PER 8/S1.2
7. FOR ROOF DRAINAGE, TOP OF FRAMING BETWEEN NOTED POINTS IS A STRAIGHT LINE.
8. ALL MECHANICAL SUPPLY AND RETURN OPENINGS TO BE BETWEEN FRAMING UNO.
9. HSS OR PIPE COLUMNS IN STUD WALLS ARE TO BE TRIMMED PER 6/S1.3. REFER TO PLANS AND DETAILS FOR OTHER REQUIREMENTS.
10. JOISTS AND RAFTERS ARE PER PLAN. UNLESS NOTED OTHERWISE, PROVIDE "LU" HANGER AT FLUSH FRAMING AND "HU" HANGER WHERE HANGER IS SHOWN SKEWED PER PLAN AND/OR HANGER SEAT IS INDICATED TO BE SLOPED. HANGER SIZE TO BE CORRECT FULL SIZE FOR JOIST SIZE (I.E. LU210 FOR 2x10). FILL ALL NAIL HOLES.
11. PROVIDE SOLID BLOCKING @ 8'-0"oc MAX FOR ALL 2x12 REPETITIVE FRAMING. PROVIDE SOLID BLOCKING OR SIMPSON TB X-BRIDGING @ 8'-0"oc MAX FOR ALL 1 1/2" LSL AND 1 3/4" LVL REPETITIVE FRAMING WITH A DEPTH OF 11 1/4" OR GREATER.
12. PROVIDE ADDITIONAL JOIST BELOW ALL OR ADJACENT TO NON-STRUCTURAL WALLS PARALLEL TO FRAMING, UNO.
13. ROUND HOLES IN STEEL PLATES TO BE 1/16" OVERSIZE. SLOTTED HOLES IN STEEL PLATES SHALL BE 1/16" WIDER THAN THE BOLT DIAMETER AND HAVE A LENGTH OF 2 TIMES THE BOLT DIAMETER. THE DIRECTION OF THE SLOTTED LENGTH IS INDICATED ON THE DETAILS (VSH OR HSH). INSTALL BOLT AT THE CENTER LINE OF THE HOLE. BOLT HOLES IN WOOD SHALL BE ROUND AND 1/32" OVERSIZE. CUT OFF BOLT THREADED END FLUSH WITH NUT WHEN REQUIRED BY FINISHES AND 1" MAXIMUM FROM NUT OTHERWISE. PROVIDE STANDARD CUT WASHERS UNDER HEAD AND NUT WHERE BOLT BEARS ON WOOD. USE PLATE OR MALLEABLE IRON WASHERS AT EXPOSED CONDITIONS OR AS INDICATED.
14. ALL BOLTED OR NAILED STRAP CONNECTIONS SHALL HAVE AN EQUAL NUMBER OF BOLTS OR NAILS EACH SIDE OF THE SPLICE JOINT. THE FIRST BOLT OR NAIL FROM EACH SIDE OF THE SPLICED OR STRAPPED MEMBER SHALL BE EQUIDISTANT FROM THE SPLICE. STRAPS USING 16d NAILS ON 2x MATERIAL TO BE INSTALLED ON THE 1 1/2" EDGE OF THE MEMBER.
15. THE CONTRACTOR SHALL VERIFY THAT THE MOISTURE CONTENT OF ALL FRAMING LUMBER AND SHEATHING MEET THE REQUIREMENTS OF THE SPECIFICATIONS AT THE TIME OF INSTALLATION AND AT CLOSE-IN. THE CONTRACTOR SHALL PROVIDE ALLOWANCE FOR DIFFERENTIAL SHRINKAGE BETWEEN FLOORS, ETC.
16. VENTING IS REQUIRED IN ENCLOSED FRAMING AREAS, SAD. DRILL BLOCKING AND LEDGERS AND PROVIDE SKIP BLOCKING AS DETAILED.
17. SAD FOR CEILING INFO. WHERE REQUIRED PROVIDE CEILING JOISTS PER 4/S1.3, UNO.
18. ALL SHEATHING SHALL HAVE 1/8" GAP AT ALL EDGES AND JOINTS. TYPICAL SHEATHING:
    A. FLAT ROOF SHEATHING (SLOPE 2:12 OR LESS): 19/32" T&G APA RATED SHEATHING (40/20) EXP 1 WITH 10d @ 6"oc EDGES (PEN) AND 12"oc FIELD UNO ON PLANS. LAY PERPENDICULAR TO FRAMING MEMBERS. BLOCK EDGES WITH 2x4 LAID FLAT WHERE NOTED ON THE PLANS AND DETAILS. NO PANELS LESS THAN 24" WIDE SHALL BE USED. STAGGER SHEETS.
    B. FLOOR SHEATHING: 23/32" T&G APA RATED SHEATHING (48/24) EXP 1 WITH 10d @ 6"oc EDGES (PEN) AND 12"oc FIELD UNO ON PLANS. LAY PERPENDICULAR TO & GLUE TO FRAMING MEMBERS IMMEDIATELY PRIOR TO FULL NAILING (DO NOT SPOT NAIL). BLOCK EDGES WITH 2x4 LAID FLAT AS NOTED ON THE PLANS AND DETAILS. NO PANELS LESS THAN 24" WIDE SHALL BE USED. STAGGER SHEETS. ALTERNATE FASTENER: SIMPSON WSV #9x2" MIN SCREW (ICC ESR-1472). MIN 1 1/4" FRAMING/BLOCKING EMBEDMENT.

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(C) FOUNDATION NOTES

1. ALLOWABLE (ASD) FOUNDATION DESIGN PRESSURES ARE:

   CONTINUOUS FOOTINGS OR MAT SLAB:
   DEAD LOAD + LIVE LOAD = 1,800 PSF
   DEAD LOAD + LIVE LOAD + LATERAL = 2,400 PSF

   ISOLATED RECTANGULAR FOOTINGS:
   DEAD LOAD + LIVE LOAD = 2,000 PSF
   DEAD LOAD + LIVE LOAD + LATERAL = 2,667 PSF

   PASSIVE PRESSURE = 200 PSF/FT DEPTH
2. ALL SOILS WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS AND THE REQUIREMENTS OF THE GEOTECHNICAL REPORT NOTED BELOW, AND CHAPTER 18 OF THE CBC. ALL FOUNDATIONS SHALL BEAR ON FIRM ENGINEERED FILL AT OR EXCEEDING DEPTHS SHOWN ON THE DRAWINGS. ENGINEERED FILL TO BE COMPACTED PER GEOTECHNICAL REPORT. INCREASE FILL AND OR FOOTING DEPTH AS REQUIRED BY GEOTECHNICAL ENGINEER. ALL FOOTING EXCAVATIONS SHALL BE AS NEAT AS PRACTICABLE. MAXIMUM OVER EXCAVATION IN WIDTH SHALL BE LESS THAN 12 INCHES OR 25% OF FOOTING WIDTH, WHICH EVER IS LESS. 6 INCHES MAXIMUM PER SIDE. LARGER OVER-EXCAVATIONS IN WIDTH SHALL BE FILLED WITH ADDITIONAL REINFORCED CONCRETE AS DIRECTED BY THE ENGINEER, OR FORMWORK SHALL BE PROVIDED. OVER-EXCAVATIONS IN DEPTH MAY BE FILLED WITH LEAN CONCRETE OR COMPACTED APPROVED BACKFILL. ALL LOOSE SOILS SHALL BE REMOVED FROM EXCAVATIONS PRIOR TO PLACEMENT OF REINFORCING OR CONCRETE. GEOTECHNICAL REPORT BY:

   SOIL SURVEYS GROUP
   REPORT NO. 7993 AND 7993-2
   DATED: JANUARY 24, 2021 AND NOVEMBER 1, 2024
3. WHERE BOTTOM OF ADJACENT FOOTINGS ARE DIFFERENT PROVIDE STEPPED FOOTING PER 5/S1.1.
4. AT WOOD SILL PLATES, USE 5/8" DIAMETER ANCHOR BOLTS (AB) AT 48"oc UNLESS OTHERWISE NOTED. MINIMUM EMBEDMENT INTO CONCRETE IS 7" (EXCLUDING CURB) UNLESS DETAILED OTHERWISE. ANCHOR BOLTS ARE TO BE TIED IN PLACE PRIOR TO PLACEMENT OF CONCRETE. SEE SHEAR WALL SCHEDULE FOR ADDITIONAL REQUIREMENTS. MINIMUM TWO ANCHOR BOLTS PER SILL PIECE.
5. TYPICAL SLAB: 5" CONCRETE REINFORCED WITH #4 @ 16"oc EACH WAY AT MID-DEPTH OVER VAPOR RETARDER (PER SPECIFICATIONS) AND 6" MINIMUM FREE DRAINING COMPACTED CRUSHED ROCK ON SUBGRADE PER THE GEOTECHNICAL RECOMMENDATIONS, AND AS APPROVED BY THE GEOTECHNICAL ENGINEER. DO NOT DRIVE CONCRETE TRUCKS OR LARGE SCREED MACHINES ON VAPOR RETARDER WITHOUT ADDITIONAL BUFFER MATERIAL AND APPROVAL FROM THE STRUCTURAL ENGINEER.
6. REFER TO ARCHITECTURAL AND PLUMBING DRAWINGS FOR DEPRESSED SLABS FOR ARCHITECTURAL FLOORING OR INSERTS, SLOPED SLABS TO DRAIN AND PIPES OR CONDUITS AT SLAB. SEE 8/S1.1 & 9/S1.1 AT DEPRESSED SLAB & 7/S1.1 FOR PIPES AND CONDUITS.
7. PROVIDE CONTROL JOINTS PER 6/S1.1 (OR CONSTRUCTION/DOWEL JOINTS AT CONTRACTOR'S OPTION) AS SHOWN ON PLAN AND AS REQUIRED TO MEET A MAXIMUM SPACING IN FEET OF 3 TIMES THE SLAB DEPTH IN INCHES (FOR EXAMPLE 3x4" = 12'-0"oc MAX) AND 15'-0"oc MAX. INSTALL JOINTS TO DIVIDE SLAB INTO RECTANGULAR AREAS WITH LONG DIMENSION LESS THAN 1.5 x SHORT DIMENSION. INSTALL JOINTS AT FACE OF STUDS OF WALL WHERE POSSIBLE. SUBMIT JOINT LAYOUT PLAN FOR REVIEW PRIOR TO PLACEMENT.
8. FORMWORK STAKES ARE NOT PERMITTED WITHIN CONCRETE PLACEMENTS. IF REQUIRED, PROVIDE STEEL STAKES SLEEVED WITH PLASTIC PIPE OR SOLID PLASTIC STAKES; WOOD STAKES NOT PERMITTED. FLUSH CUT SLEEVE OR STAKE AND FILL SLEEVES IMMEDIATELY WITH GROUT. WHERE STAKES PENETRATE VAPOR RETARDER, TAPE OR SEAL PER MANUFACTURER'S RECOMMENDATIONS.
9. TOP OF FOOTING ELEVATIONS TO BE DETERMINED BY THE CONTRACTOR BASED ON INFORMATION FROM THE CIVIL DRAWINGS, GEOTECHNICAL REPORT, LANDSCAPE, ETC.

(D) SPECIAL INSPECTION BY OWNERS TESTING AGENCY

SPECIAL INSPECTIONS AND TESTING SHALL BE PERFORMED BY AN APPROVED AGENCY IN ACCORDANCE WITH CBC CHAPTER 17 AND THE STATEMENT OF SPECIAL INSPECTIONS AS REQUIRED BY CBC SECTIONS 1704.2.3 AND 1704.3 FOR BUILDING STRUCTURAL ELEMENTS SUMMARIZED AS FOLLOWS:

1. SHOP FABRICATION OF STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES PER CBC SECTION 1704.2.5 OR ALTERNATIVELY, APPROVED FABRICATORS SHALL SUBMIT A CERTIFICATE OF COMPLIANCE PER CBC SECTION 1704.2.5.1 INCLUDING GLULAM BEAM INSPECTION CERTIFICATES.
2. STRUCTURAL STEEL CONSTRUCTION PER CBC SECTIONS 1705.2, 1705.13.1, 1705.14.1, AND TABLE 1705.2.3 INCLUDING MATERIAL IDENTIFICATION, SHOP AND FIELD WELDING, AND INSTALLATION OF HIGH-STRENGTH BOLTS.
3. CONCRETE CONSTRUCTION PER CBC SECTIONS 1705.3, AND TABLE 1705.3 INCLUDING FORMWORK, REINFORCING STEEL, CAST-IN-PLACE BOLTS, MIX DESIGNS, CONCRETE SAMPLES, AND PLACEMENT FOR ALL CONCRETE. REINFORCING DOWELS FROM FOOTINGS TO RETAINING WALLS SHALL BE INSPECTED PRIOR TO PLACEMENT OF FOOTING CONCRETE AND WALL GROUT OR CONCRETE. CONTINUOUS OR ISOLATED SPREAD FOOTINGS WITH DESIGN STRENGTH NO GREATER THAN 2500 PSI, NON-STRUCTURAL SLABS ON GRADE, AND EXTERIOR FLATWORK DO NOT REQUIRE SPECIAL INSPECTION PER CBC SECTION 1705.3.
4. WOOD CONSTRUCTION PER CBC SECTIONS 1705.5, 1705.12.1, AND 1705.13.2 INCLUDING NAILING, BOLTING, AND ANCHORING OF ALL DRAG STRUTS; TOP PLATE SPLICES, LEDGER SPLICES, SIMPSON HARDWARE, BRACES, AND HOLDOWNS; AND NAILING, BOLTING, AND ANCHORING OF ALL SHEAR WALLS, SHEAR PANELS, AND DIAPHRAGMS WHERE THE FASTENER SPACING OF THE SHEATHING IS 4" APART OR LESS.
5. SOILS PER CBC SECTION 1705.6, TABLE 1705.6, AND THE APPROVED SOILS REPORT INCLUDING SUBGRADE PREPARATION, FOUNDATION BEARING MATERIALS AND DEPTH OF EXCAVATIONS, AND VERIFICATION, PLACEMENT AND TESTING OF CONTROLLED FILL.
6. SPECIAL CASES PER CBC SECTION 1705.1.1 AND PRODUCT ICC REPORTS FOR ALL STRUCTURAL MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN THE CBC OR REFERENCED STANDARDS INCLUDING POST-INSTALLED ANCHOR BOLTS IN CONCRETE AND CMU, AND PRE-MANUFACTURED SHEAR PANELS AND BRACED FRAMES.

(A) DESIGN CRITERIA

DESIGN CRITERIA:	2022 CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2 (CBC)
FLOOR LIVE LOAD:	40 PSF (REDUCIBLE)
ROOF LIVE LOAD:	20 PSF (REDUCIBLE)
FUTURE SOLAR:	3 PSF
RISK CATEGORY:	II
WIND DATA:	ULTIMATE WIND SPEED (3 SEC GUST) IN MPH: 92 WIND EXPOSURE: C INTERNAL WIND PRESSURE COEFFICIENT (GCPI) = ±0.18 COMPONENTS AND CLADDING DESIGN PRESSURES FOR SYSTEMS DESIGNED BY OTHERS SHALL COMPLY WITH THE "ASCE 7-16" DESIGN STANDARD
EARTHQUAKE DATA:	SEISMIC IMPORTANCE FACTOR, I_e: 1.0 MAPPED SPECTRAL RESPONSE ACCELERATIONS: S_S = 1.248; S_1 = 0.461 SITE CLASS: D SPECTRAL RESPONSE COEFFICIENTS: S_{DS} = 0.833; S_{D1} = 0.565 SEISMIC DESIGN CATEGORY: D SEISMIC FORCE RESISTING SYSTEM(S): WOOD FRAMED SHEAR WALLS RESPONSE MODIFICATION FACTOR(S): R = 6.5 DESIGN BASE SHEAR: - PRIMARY SUITE: 8.6k (ASD) - GREAT ROOM: 14.1k (ASD) - BEDROOMS: 3.5k (ASD) - GARAGE: 5.6k (ASD) - GUEST SUITE: 3.3k (ASD) SEISMIC RESPONSE COEFFICIENT(S), C_S = 0.128 (ULTIMATE) ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE MAXIMUM ANTICIPATED STORY DRIFT = 0.02 X HEIGHT PROVIDE DEFORMATION COMPATIBILITY PER ASCE 7 SECTION 12.12.5 FOR NON-STRUCTURAL ITEMS, INCLUDING CLADDING, STAIRS, GLAZING, ETC.
SCOPE:	NEW CONSTRUCTION OF 5 STRUCTURALLY INDEPENDENT STRUCTURES. LATERAL FORCE RESISTING SYSTEM CONSISTS OF WOOD-FRAMED AND REINFORCED CONCRETE SHEAR WALLS. ROOF FRAMING CONSISTS OF GLULAM PURLINS SUPPORTED BY WOOD AND STEEL FLITCH PLATE BEAMS, SUPPORTED ON SHALLOW REINFORCED CONCRETE FOOTINGS.

(B) GENERAL NOTES

1. REFER TO SHEETS S1.1, S1.2, S1.3, S1.4, AND S1.5 FOR STANDARD DETAILS OF CONSTRUCTION. REFER TO THE PROJECT SPECIFICATIONS FOR MATERIALS AND METHODS.
2. BUILDING DIMENSIONS SHOWN ARE FOR GENERAL REFERENCE ONLY. SEE ARCHITECTURAL DRAWINGS (SAD) FOR ALL ACTUAL BUILDING DIMENSIONS. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER SO CLARIFICATION CAN BE MADE PRIOR TO COMMENCING WORK.
3. STRUCTURAL DRAWINGS SHALL NOT BE SCALED. ALL DIMENSIONS AND FIT SHALL BE DETERMINED AND VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING WORK.
4. DETAILS NOT FULLY OR SPECIFICALLY SHOWN SHALL BE OF SAME NATURE AS OTHER SIMILAR CONDITIONS.
5. REFER TO ARCHITECTURAL DRAWINGS FOR SIDEWALK SLABS AND DIMENSIONS.
6. COORDINATION OF MECHANICAL, ELECTRICAL, PLUMBING, AND SITE UTILITY SYSTEMS WITH THE STRUCTURAL SYSTEM IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. USE DETAILS ON SHEETS S1.1 THROUGH S1.5. AT CONDITIONS WHERE THESE DETAILS DO NOT APPEAR TO APPLY, NOTIFY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION. AT CONDITIONS WHERE FIELD MODIFICATIONS OF MECHANICAL, ELECTRICAL, PLUMBING, OR SITE UTILITIES AFFECT STRUCTURAL SYSTEMS, NOTIFY STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
7. VERIFY WEIGHTS AND LOCATIONS OF MECHANICAL UNITS WITH MECHANICAL ENGINEER PRIOR TO PLACEMENT. UNITS EXCEEDING WEIGHT NOTED ON PLANS SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION. CONTRACTOR TO VERIFY MECHANICAL UNIT SIZES AND WEIGHTS AS INSTALLED PRIOR TO INSTALLATION OF ADDITIONAL FRAMING TO ENSURE CORRECT PLACEMENT UNDER CURBS, ETC. SEE 8/S1.3.
8. SHORING, SCAFFOLDING, AND BRACING DESIGN, MATERIALS AND INSTALLATION SHALL BE PROVIDED BY THE GENERAL CONTRACTOR, AND SHALL BE ADEQUATE FOR ALL LOADS. LEAVE IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY AND UNTIL FINAL STRUCTURAL CONSTRUCTION IS COMPLETED.
9. VEHICULAR TRAFFIC, HEAVY EQUIPMENT AND MATERIAL STAGING SHALL NOT BE ALLOWED ADJACENT TO ANY RETAINING/BASEMENT WALL, NEW OR EXISTING WITHIN A HORIZONTAL DISTANCE EQUAL TO THE WALL HEIGHT MEASURED FROM THE BOTTOM OF FOOTING OR 5'-0" WHICHEVER IS GREATER, UNLESS APPROVED BY THE STRUCTURAL ENGINEER OR NOTED OTHERWISE. WITHIN THIS ZONE, ONLY HAND-OPERATED EQUIPMENT ("WHACKERS", VIBRATORY PLATES, OR PNEUMATIC COMPACTORS) SHALL BE USED TO COMPACT THE BACKFILL SOILS. BACKFILL & DRAINAGE ARE PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. DO NOT BACKFILL UNTIL CONCRETE HAS REACHED SPECIFIED STRENGTH AND 14 DAYS MINIMUM.
10. SPECIAL INSPECTIONS ARE REQUIRED PER D/S0.1 AND THE TESTING AND INSPECTION FORM.
11. STRUCTURAL OBSERVATION PER CBC SECTION 1704.6 IS NOT REQUIRED. NOTIFY ZFA FOR GENERAL ON SITE REVIEW OF:
    - MINIMUM FOOTING SIZE AND REINFORCING STEEL.
    - RETAINING WALLS AND REINFORCING.
    - WOOD SHEAR WALLS, SHEAR PANELS AND FLOOR/ROOF DIAPHRAGMS, INCLUDING NAILING, BOLTING, ANCHORAGE AND OTHER FASTENING TO OTHER COMPONENTS OF THE SEISMIC FORCE RESISTING SYSTEM.
    - STRUCTURAL WOOD FRAMING.
    - STRUCTURAL STEEL FRAMING.

    NOTIFY ZFA FOR REVIEW PRIOR TO COVERING ABOVE LISTED WORK. PROVIDE 2 WORKING DAYS MINIMUM SCHEDULING NOTICE PRIOR TO REVIEW DATE. ZFA SHALL BE NOTIFIED PRIOR TO COMMENCEMENT OF CONSTRUCTION IF THE AUTHORITY HAVING JURISDICTION OR OWNER REQUIRES A FINAL GENERAL CONFORMANCE LETTER. ALL STRUCTURAL CONSTRUCTION DEVIATIONS OBSERVED DURING SITE VISITS SHALL BE RESOLVED AND COPIES OF ALL SPECIAL INSPECTIONS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A CONFORMANCE LETTER.

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION

THIS DOCUMENT AND THE IDEAS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF THE ENGINEER AND IS NOT TO BE USED, IN WHOLE OR IN PART FOR ANY OTHER PROJECT WITHOUT THE PRIOR WRITTEN AUTHORIZATION OF THE ENGINEER.

Revision Schedule

#	Revision Description	Date

ZFA STRUCTURAL ENGINEERS
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san francisco ca 94111
zfa job no.25013
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PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

GENERAL NOTES

ENGR: EA
PM: JMR
DATE: MAY 16, 2025

SHEET

S0.1

(H) STRUCTURAL SPECIFICATIONS

CONCRETE CONSTRUCTION

1. CONCRETE SHALL MEET THE FOLLOWING REQUIREMENTS:

LOCATION	MIN 28-DAY STRENGTH (PSI)	AGGREGATE SIZE	MAX WATER TO CEMENTITIOUS MATERIALS RATIO	MIN SACKS CEMENTITIOUS MATERIAL PER CUBIC YARD[4]
STRUCTURAL				
INTERIOR SLAB ON GROUND[3]	4,000	1"x#4	0.45	6.1
FOUNDATIONS (CONT FTG, PAD FTG, GRADE BM, STEM WALL)	4,000	1"x#4	0.53	5.0
MAT SLAB & RETAINING WALLS	4,000	1"x#4	0.46	6.0
SLAB ON METAL DECK	4,000	¾"x#4	0.53	5.0
NON-STRUCTURAL				
LEAN CONCRETE (USE ONLY WHERE SPECIFIED)	-	-	-	3.0
EXTERIOR SLAB ON GROUND (WALKWAYS AND PATIOS)	2,500	1"x#4	0.55	4.5

2. CONCRETE MIX DESIGN AND TESTING SHALL MEET THE REQUIREMENTS OF CBC SECTIONS 1705 AND 1903, ACI CODE-318, ACI SPEC-301, AND THESE SPECIFICATIONS. SUBMIT MIX DESIGN AND SUPPORTING DOCUMENTATION IN ACCORDANCE WITH ACI SPEC-301 AND ACI CODE-318 FOR REVIEW PRIOR TO PLACEMENT.

CEMENT:	ASTM C150 TYPE II
AGGREGATE:	ASTM C33 RECYCLED AGGREGATE PRODUCTS NOT PERMITTED EXCEPT RECLAIMED COARSE AGGREGATE PER ASTM C33
FLY ASH:	ASTM C618 CLASS F
SLAG CEMENT:	ASTM C989 GRADE 100 OR 120
WATER:	ASTM C1602
ADMIXTURES:	ASTM C494, C260

3. CONCRETE MIX DESIGN FOR INTERIOR SLABS ON GROUND TO HAVE A MINIMUM OF 25% TO 35% FLY ASH OR 30% TO 45% SLAG CEMENT SUBSTITUTED FOR CEMENT AT A POUND-FOR-POUND RATE. A TOTAL 50% SMC MIN IF POSSIBLE. CONFIRM WITH ARCHITECT.. REPLACE 200 POUNDS OF SAND WITH 200 POUNDS ⅜"(-) AGGREGATE TO REDUCE TOTAL SAND.

4. FLY ASH MAY BE SUBSTITUTED UP TO 25% FOR CEMENT AT A POUND-FOR-POUND RATE, UNLESS SPECIFIED OTHERWISE. DO NOT USE FLY ASH IN HIGH EARLY STRENGTH CONCRETE. SLAG CEMENT MAY BE SUBSTITUTED UP TO 45% FOR CEMENT AT A POUND-FOR-POUND RATE, UNLESS SPECIFIED OTHERWISE. DO NOT USE SLAG CEMENT IN HIGH EARLY STRENGTH CONCRETE.

5. UNDER SLAB VAPOR RETARDER TO BE ASTM E1745 CLASS A; 15 MILS MINIMUM THICKNESS; 0.01 U.S. PERMS MAXIMUM PERMEANCE. INSTALL PER ASTM E1643 AND MANUFACTURER'S RECOMMENDATIONS. PROVIDE "STEGO WRAP VAPOR BARRIER (15MIL)" OR APPROVED EQUIVALENT. RETARDER SHALL EXTEND TO FOOTINGS BUT NOT TO BOTTOM OF FOOTING OR INTO A COLD JOINT.

6. REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60 OR A706 GRADE 60. STEEL SHALL BE KEPT CLEAN AND FREE OF RUST. SECURELY TIE REBAR IN PLACE PRIOR TO CONCRETE PLACEMENT. WELDED REINFORCING STEEL SHALL BE ASTM A706 OR A615 MEETING CARBON REQUIREMENTS OF AWS D1.4. WELDING SHALL CONFORM WITH AWS D1.4. WELDED WIRE REINFORCEMENT SHALL CONFORM WITH ASTM A1064 AND SHALL BE LAPPED 12" MINIMUM.

7. CONCRETE SHALL BE KEPT CONTINUOUSLY WET FOR 48 HOURS, AFTER PLACEMENT, AND SHALL BE KEPT DAMP FOR 7 DAYS AFTER PLACEMENT. IN LIEU OF PONDING, SLABS EITHER MAY HAVE CURE/SEALER APPLIED IMMEDIATELY AFTER FINISHING (IF OTHER FINISHES ARE NOT AFFECTED) OR COVERED WITH CURING PAPER, FILM OR BURLAP. CURE SHALL BE OF A TYPE THAT WILL NOT BE DETRIMENTAL TO SEALERS TO BE APPLIED LATER.

8. ANCHOR BOLTS - ASTM F1554 GRADE 36 THREADED ROD WITH DOUBLE NUTS OR ASTM A307 HEADED BOLTS. (NO "J" OR "L" BOLTS EXCEPT AT WOOD SILL PLATES). SECURELY TIE ANCHOR BOLTS IN PLACE PRIOR TO CONCRETE POUR.

9. LAITANCE SHALL BE REMOVED FROM ALL COLD JOINT SURFACES PRIOR TO PLACEMENT OF SUBSEQUENT CONCRETE.

10. MECHANICAL COUPLERS FOR REINFORCING STEEL TO BE "L-SERIES BAR LOCK" BY DAYTON SUPERIOR (UES ER-0319) OR EQUAL COUPLER WITH ICC REPORT, UNO.

STRUCTURAL STEEL

1. STEEL GRADES:

W & WT SHAPES	ASTM A992 OR A572 GRADE 50
C SHAPES, L SHAPES & PLATES	ASTM A36, A572 GRADE 50 OR A529 GRADE 50 UNO
PIPES	ASTM A53 GRADE B
ROUND HSS	ASTM A500 GRADE C
SQUARE AND RECTANGULAR HSS	ASTM A500 GRADE C
MACHINE BOLTS (MB)	ASTM A307 GRADE A
MACHINE BOLT NUTS	ASTM A563 GRADE A
MACHINE BOLT WASHERS	ASTM F844
HIGH STRENGTH BOLTS (HSB)	ASTM F3125 GRADE A325 OR F1852 UNO
HIGH STRENGTH BOLT NUTS	ASTM A563 GRADE C AT A325 ASTM A563 GRADE DH AT A490
HIGH STRENGTH BOLT WASHERS	ASTM F436 TYPE 1
ANCHOR RODS	ASTM F1554 GRADE 36 UNO
ANCHOR ROD NUTS	ASTM A563 GRADE A (GRADE DH AT GRADE 105 ROD)
ANCHOR ROD WASHERS	ASTM F436 TYPE 1
WELDED HEADED/THREADED STUDS	AWS D1.1 TYPE B STUDS
DEFORMED BAR ANCHORS	ASTM A1064
ROUND PILES	ASTM A252 GRADE 2 MIN

2. WORKMANSHIP AND DETAILS SHALL CONFORM TO THE AISC SPECIFICATIONS AND THE CBC UNLESS NOTED OTHERWISE.

3. BOLT HOLES SHALL BE 1/16" LARGER IN DIAMETER THAN THE BOLT. ANCHOR BOLT HOLES SHALL BE ¼" LARGER IN DIAMETER THAN THE ANCHOR BOLT. BOLT HOLES MAY BE ⅛" LARGER IN DIAMETER THAN THE BOLT FOR 1" AND LARGER BOLTS.

4. WELDING ELECTRODES SHALL MEET AWS REQUIREMENTS AND ELECTRODES SHALL BE E70XX FOR SHIELDED METAL ARC, F7XX-EXXX FOR SUBMERGED ARC (SHOP WELDS ONLY), ER70S-X FOR GAS METAL ARC AND E7XT-XX FOR FLUX CORE (UNLESS NOTED OTHERWISE). E60 OR E70 ELECTRODES MAY BE USED AT METAL DECK AND LIGHT GAUGE METAL.

5. ALL STRUCTURAL WELDS SHALL BE INSPECTED AND CERTIFIED BY A QUALIFIED TESTING AGENCY. CERTIFICATION SHALL BE SUBMITTED TO THE ARCHITECT AND THE BUILDING DEPARTMENT.

6. TEMPORARY SHORING AND BRACING SHALL BE USED AND SHALL BE ADEQUATE FOR ALL LOADS TO WHICH IT MAY BE SUBJECTED. LEAVE TEMPORARY BRACING AND SHORING IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY, AND UNTIL FINAL FRAMING CONSTRUCTION IS COMPLETED.

7. HIGH STRENGTH GROUT: ASTM C1107, NON-SHRINK, NON-METALLIC AGGREGATE TYPE, CAPABLE OF DEVELOPING MINIMUM COMPRESSIVE STRENGTH OF 7,000 PSI AT 28 DAYS WHEN PLACED IN A FLUID STATE. PROVIDE "SIKAGROUT 328" MANUFACTURED BY SIKA.

8. SEE ARCHITECTURAL DRAWINGS FOR FINISHES ON STEEL FRAMING. STEEL FRAMING WITH EXTERIOR EXPOSURE SHALL BE HOT-DIP GALVANIZED PER ASTM A123 CLASS 55 MINIMUM OR OTHERWISE FINISHED WITH A HIGH-PERFORMANCE (E.G. EPOXY OR URETHANE) EXTERIOR COATING SYSTEM (PRIMER AND TOP COAT) APPROVED BY THE ARCHITECT AND ENGINEER. PROVIDE VENT HOLES PER ASTM A385 AT CLOSED SECTIONS (SUCH AS HSS). SUBMIT PROPOSED LOCATION OF VENT HOLES FOR REVIEW BY ENGINEER. ALL CONNECTION HARDWARE AT EXTERIOR EXPOSURE FRAMING SHALL BE HOT-DIP GALVANIZED PER ASTM A153 OR F2329. ASTM F3125 GRADE A325 HIGH-STRENGTH BOLT ASSEMBLIES MAY BE MECHANICALLY GALVANIZED PER ASTM B695 CLASS 55 OR HOT-DIP GALVANIZED PER ASTM F2329. MATING BOLTS AND NUTS SHALL RECEIVE THE SAME ZINC-COATING PROCESS. REPAIR ALL UNCOATED, DAMAGED, OR ALTERED GALVANIZED SURFACES PER ASTM A780.

9. WELDING OF THREADED STUDS, HEADED STUDS, AND DEFORMED BAR ANCHORS SHALL BE FULL-FUSION ARC WELDS CONFORMING TO AWS D1.1.

10. CONTRACTOR TO SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION FOR REVIEW. GENERAL CONTRACTOR TO REVIEW SUBMITTALS PRIOR TO SUBMISSION TO ARCHITECT/ENGINEER.

11. COMPLY WITH SECTION 10 OF AISC 303 FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS). SEE ARCHITECTURAL & STRUCTURAL DRAWINGS FOR LOCATIONS OF AESS.

WOOD CONSTRUCTION (CARPENTRY)

1. EACH PIECE OF LUMBER SHALL BEAR THE STAMP OF THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB) OR WESTERN WOOD PRODUCTS ASSOCIATION (WWPA) SHOWING GRADE MARK OR APPROVED EQUAL. BEAMS AND POSTS TO BE FREE OF HEART CENTER (FOHC). OTHER MATERIALS SHALL BE AS SHOWN BELOW:

SAWN LUMBER MEMBER	SPECIES AND MINIMUM GRADE, UNO	F_b (PSI)	F_v (PSI)	E (PSI)
6x POSTS	DOUGLAS FIR - #1	1200	170	$1.6x10^6$
6x BEAMS	DOUGLAS FIR - #1	1350	170	$1.6x10^6$
4x POSTS & BEAMS	DOUGLAS FIR - #1	1000	180	$1.7x10^6$
2x JOISTS, RAFTERS	DOUGLAS FIR - #2	900	180	$1.6x10^6$
PL MATERIAL	DOUGLAS FIR - #2	900	180	$1.6x10^6$
2x STUDS ≤ 10' HEIGHT	DOUGLAS FIR - STUD	700	180	$1.4x10^6$
2x STUDS > 10' HEIGHT	DOUGLAS FIR - #2	900	180	$1.6x10^6$

2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THE MAXIMUM MOISTURE CONTENT OF WOOD AT THE TIME OF INSTALLATION SHALL BE NOT MORE THAN 19%.

3. NAILS TO BE ASTM F1667 (INCLUDING SUPPLEMENT S1) OF COMMON WIRE AND OF CENTERED FULL-ROUND HEADS WHERE NAILING IS SPECIFIED ON THE DRAWINGS. MACHINE-DRIVEN NAILS MEETING SIZE REQUIREMENTS ARE ACCEPTABLE. NAILS MUST NOT BE OVER-DRIVEN. PRE-DRILL NAIL HOLES WHERE WOOD TENDS TO SPLIT. NAILS AS SPECIFIED ON PLANS AND INCLUDING IN PTDF MATERIAL CONTAINING AMMONIA IN EXTERIOR APPLICATIONS SHALL BE TYPE 304 OR 316 STAINLESS STEEL. NAILS USED IN EXTERIOR APPLICATIONS OR IN INTERIOR PTDF SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153.

WIRE NAIL	MINIMUM SHANK DIAMETER	MINIMUM NAIL LENGTH UNO	MINIMUM HEAD DIAMETER	TYPICAL NAIL APPLICATION, UNO
16d COMMON	0.162"	3½"	0.344"	FRAMING
10d COMMON	0.148"	3"	0.312"	FRAMING
10d COMMON	0.148"	PER 11/S1.2	0.312"	SHEATHING
8d COMMON	0.131"	PER 11/S1.2	0.281"	SHEATHING

4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE THAT THE METAL FRAMING CLIPS, HANGERS, ETC. ARE BY SIMPSON STRONG-TIE. NAILING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS WITH A NAIL PROVIDED FOR EACH PUNCHED HOLE UNO. CONNECTORS AS SPECIFIED ON PLANS AND THOSE IN CONTACT WITH PTDF MATERIAL CONTAINING AMMONIA IN EXTERIOR APPLICATIONS SHALL BE TYPE 304 OR 316 STAINLESS STEEL. ALL OTHER CONNECTORS USED IN EXTERIOR APPLICATIONS OR INTERIOR PTDF SHALL BE HDG (MINIMUM 2.0 oz/SQ FT) OR ZMAX (MINIMUM 1.85 oz/SQ FT PER ASTM A653). IN APPLICATIONS WHERE NON-AMMONIA TREATED WOOD IS DRY WHEN INSTALLED AND WILL REMAIN DRY IN-SERVICE A COATING THICKNESS OF 0.9 oz/SQ FT MAY BE USED.

5. WOOD SCREWS SHALL CONFORM TO ANSI/ASME B18.6.1. PROVIDE PILOT HOLE 70% OF DIAMETER OF SCREW SHANK WHERE FASTENING HARDWOOD TIMBER SPECIES OR WHERE WOOD TENDS TO SPLIT. MINIMUM PENETRATION IS (10) DIAMETERS, UNO.

6. BOLTS SHALL BE UNFINISHED MACHINE BOLTS PER ASTM A307. NUTS SHALL BE PER ASTM A563 AND OF STANDARD SIZE UNLESS NOTED OTHERWISE. LENGTH OF BOLTS SHALL BE SUCH THAT THE BOLT PROJECTION IS NOT LESS THAN 1/16" NOR MORE THAN ½" PAST END OF NUT. BOLT HOLES IN WOOD SHALL BE 1/16" LARGER THAN BOLT SIZES (UNO). PROVIDE STANDARD CUT WASHERS UNDER HEAD AND NUT WHERE BOLT HEADS WOULD BEAR ON WOOD. USE MALLEABLE IRON WASHERS WHERE EXPOSED TO VIEW OR NOTED. NUTS SHALL BE TIGHTENED WHEN PLACED AND RETIGHTENED BEFORE CLOSING IN OF WALLS OR OTHER CONSTRUCTION. DO NOT CRUSH WOOD WHEN TIGHTENING. BOLTS AS SPECIFIED ON PLANS AND THOSE IN CONTACT WITH PTDF MATERIAL CONTAINING AMMONIA IN EXTERIOR APPLICATIONS SHALL BE TYPE 304 OR 316 STAINLESS STEEL. ALL OTHER BOLTS USED IN EXTERIOR APPLICATIONS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153.

7. WOOD AGAINST CMU OR CONCRETE SHALL BE PRESSURE TREATED DOUGLAS FIR (PTDF) PER AWPA STANDARD U1. "USE CATEGORY" UC2 AT INTERIOR. "USE CATEGORY" UC3B AT EXTERIOR (NO GROUND CONTACT). CUT FACES SHALL BE BRUSH TREATED WITH EQUIVALENT PRESERVATIVE PRIOR TO INSTALLATION.

8. DECKING MATERIAL AND FRAMING EXPOSED TO WEATHER TO BE PTDF AWPA "USE CATEGORY" UC3B OR REDWOOD, SAD.

9. WOOD ADHESIVE SHALL BE WATER-PROOF, CARTRIDGE DISPENSED, MEETING APA PRODUCT SPECIFICATION AFG-01 OR ASTM D3498. LOCTITE "PL PREMIUM" OR EQUAL. FOR USE AT SUBFLOOR SHEATHING AND WHERE SPECIFICALLY NOTED FOR USE ON DRAWINGS.

PLYWOOD/ORIENTED STRAND BOARD (OSB) SHEATHING

1. STRUCTURAL SHEATHING SHALL CONFORM TO PRODUCT STANDARD PS-1 OR PS-2. ALL PANELS SHALL HAVE AN EXTERIOR EXPOSURE RATING AND BEAR THE TRADEMARK OF THE ENGINEERED WOOD ASSOCIATION (APA) OR OTHER QUALIFIED AGENCY. SHEATHING SHEETS SHALL BE SPLICED ALONG CENTERLINE OF FRAMING MEMBER WITH NAILING SPACED NOT LESS THAN ⅜" FROM EDGE OF SHEETS. MACHINE-PLACED NAILING AND NAILS TO BE APPROVED BY THE ENGINEER PRIOR TO USE. SHEATHING NAILS OF COMMON WIRE WITH FULL ROUND HEADS ARE REQUIRED.

2. OSB WITH EQUIVALENT THICKNESS AND SPAN RATING MAY BE USED IN LIEU OF PLYWOOD CALLED OUT. ALL OSB SHALL CONFORM TO PS-2.

GLUED-LAMINATED BEAMS

1. ALL GLUED-LAMINATED MEMBERS UNO SHALL BE DOUGLAS FIR, COMBINATION 24F-V4-1.8E FOR SIMPLE SPANS; COMBINATION 24F-V8-1.8E FOR CONTINUOUS BEAMS/PURLINS AND CANTILEVERS; COMBINATION 3-1.9E FOR POSTS AND TRUSS MEMBERS. WHERE NOTED PER PLAN, PROVIDE ALASKAN YELLOW CEDAR (AYC) COMBINATION 20F-V12-1.5E FOR SIMPLE SPANS; COMBINATION 20F-V13-1.5E FOR CONTINUOUS BEAMS/PURLINS, CANTILEVERS, POST AND TRUSS MEMBERS. APPEARANCE TO BE ARCHITECTURAL UNLESS NOTED OTHERWISE (SEE ARCHITECTURAL DRAWINGS), MANUFACTURED WITH EXTERIOR GLUE CONFORMING TO CBC SECTION 2303.

2. SUBMIT SHOP DRAWINGS TO ARCHITECT AND ENGINEER FOR REVIEW PRIOR TO FABRICATION. PROVIDE ANSI/AITC CERTIFICATE OF INSPECTION OR EQUIVALENT TO ARCHITECT AND BUILDING DEPARTMENT PRIOR TO ERECTION.

PARALLEL STRAND LUMBER (PSL)

1. PSL BEAMS SHALL CONFORM TO THE FOLLOWING MINIMUM PROPERTIES:
   - $E = 2.2x10^6$ PSI
   - $F_b = 2{,}900$ PSI
   - $F_c = 2{,}900$ PSI (PARALLEL)
   - $F_v = 290$ PSI

2. PSL POSTS SHALL CONFORM TO THE FOLLOWING MINIMUM PROPERTIES:
   - $E = 1.8x10^6$ PSI
   - $F_b = 2{,}400$ PSI
   - $F_c = 2{,}500$ PSI (PARALLEL)
   - $F_v = 190$ PSI

LAMINATED VENEER LUMBER AND LAMINATED STRAND LUMBER (LVL AND LSL)

1. ALL LAMINATED VENEER LUMBER USED FOR BEAMS OR JOISTS SHALL BE 2.0E, F_b=2,600 PSI MINIMUM WITH MINIMUM WIDTH OF 1¾" AND DEPTH TO MATCH JOISTS UNO. ALL LAMINATED STRAND LUMBER USED FOR RIMS OR BLOCKING SHALL BE 1.3E, F_b=1,700 PSI MINIMUM WITH MINIMUM WIDTH OF 1½" AND DEPTH TO MATCH JOISTS.

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Revision Schedule

#	Revision Description	Date

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REGISTERED PROFESSIONAL ENGINEER
JASON R. POWERS
CIVIL
No. 78130
STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

GENERAL NOTES AND STRUCTURAL SPECIFICATIONS

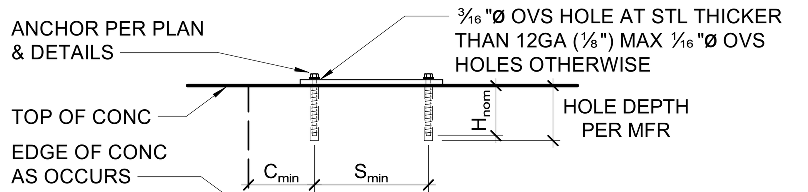
ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

SHEET

S0.2

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION

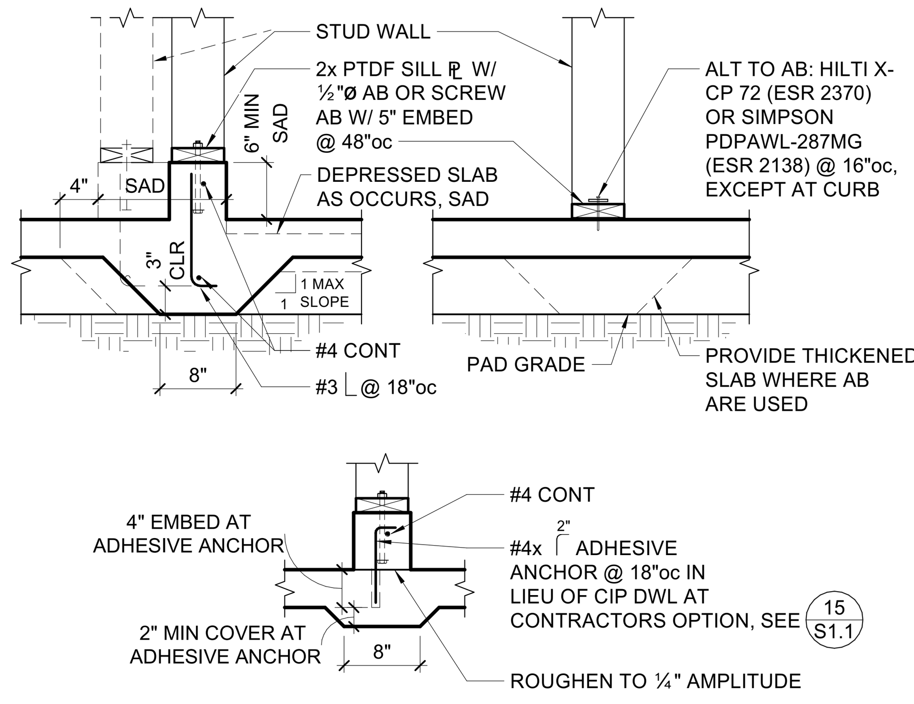
CARBON SCREW ANCHOR IN 2500 PSI MIN CONCRETE							
ANCHOR TYPE	ANCHOR AND PILOT HOLE DIA	MINIMUM EMBEDMENT H_{nom}	MINIMUM EDGE DIST C_{min}	MINIMUM SPCG S_{min}	MINIMUM CONCRETE THICKNESS H_{min}	INSTALL & TEST TORQUE (FT-LB)	MAXIMUM INSTALL TORQUE (FT-LB)
SIMPSON TITEN HD (ICC-ESR 2713)	¼"	1⅝"	1½"	1½"	3¼"	10	24
	⅜"	2½"	1¾"	3"	4"	10	50
	½"	3¼"	1¾"	3"	5"	10	65
	⅝"	4"	1¾"	3"	6"	10	100
	¾"	5½"	1¾"	3"	8¾"	20	150
HILTI KH-EZ (ICC-ESR 3027)	¼"	1⅝"	1½"	3"	3¼"	10	18
	⅜"	2½"	1½"	3"	4"	10	40
	½"	3"	1¾"	3"	4¾"	10	45
	⅝"	3¼"	1¾"	4"	5"	10	85
	¾"	4"	1¾"	4"	6"	20	95
STAINLESS STEEL SCREW ANCHOR IN 2500 PSI MIN CONCRETE							
SIMPSON TITEN HDSS (IAPMO UES ER-493)	⅜"	2½"	1¾"	3"	4"	10	40
	½"	3¼"	1¾"	4"	5"	10	70
	⅝"	4"	1¾"	3"	6"	10	85
	¾"	5½"	1¾"	3"	8¾"	20	150



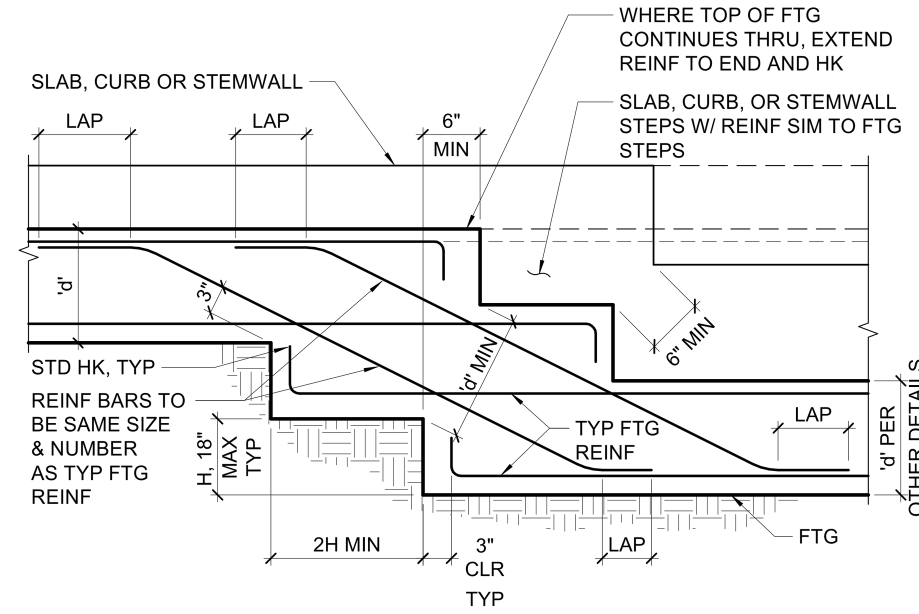
NOTES:

1. EXCEPT AT EXTERIOR EXPOSURE CONDITIONS, PROVIDE CARBON STEEL ANCHORS UNO. INSTALL SCREW ANCHORS PER MANUFACTURER'S INFORMATION AND ICC REPORT INSTRUCTIONS. SPECIAL INSPECTION IS REQUIRED PER SECTION 1705 OF THE CBC AND THE REQUIREMENTS OF THE ICC REPORTS. INSTALLED ANCHORS SHALL BRING CONNECTED PLIES INTO FIRM CONTACT, MEETING THE INSTALL TORQUE BUT NOT EXCEEDING THE MAXIMUM INSTALL TORQUE.
2. CONTRACTOR TO VERIFY MINIMUM EDGE DISTANCES, SPACING AND THICKNESS ARE IN ACCORDANCE W/ SCHEDULE PRIOR TO INSTALLING ANCHOR.
3. HOLES TO BE DRILLED W/ ROTARY DRILL ONLY. WHEN INSTALLING DRILLED-IN ANCHORS IN EXISTING REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN 1" CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR. FILL ABANDONED HOLES W/ HIGH STRENGTH GROUT.
4. THE SPECIAL INSPECTOR SHALL PERFORM PERIODIC/CONTINUOUS INSPECTION IN ACCORDANCE WITH TABLE 1705.3. THE SPECIAL INSPECTOR SHALL INSPECT ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE(S), ANCHOR SPACING(S), CONCRETE THICKNESS, AND TIGHTENING TORQUE.

14 SCREW ANCHOR IN CONCRETE
3/4" = 1'-0"

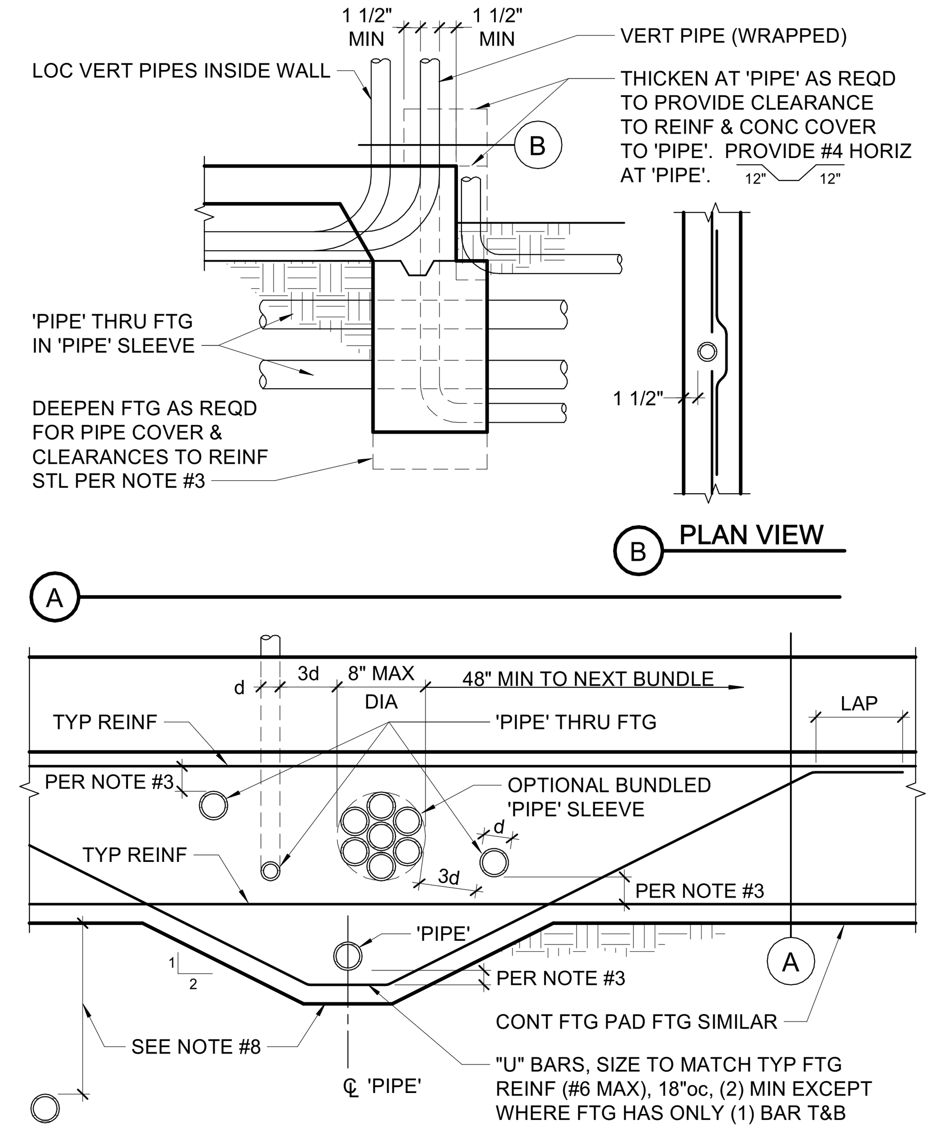


10 NON-BEARING STUD WALL AT SLAB
3/4" = 1'-0"



NOTE:
REMOVE ALL EARTH LOOSENED DURING EXCAVATION AND FILL W/ CONCRETE.

5 STEPPED FOOTING
3/4" = 1'-0"



NOTES:

1. 'PIPE' = ANY PENETRATION THRU OR EMBEDDED IN FOUNDATION.
2. ALL PIPES THROUGH FOOTINGS TO BE WRAPPED OR SLEEVED AS FOLLOWS:
   a. SLEEVES: PROVIDE 1" MIN CLEAR ALL AROUND O.D. PIPE TO I.D. SLEEVE, UNO. SEAL SLEEVE ENDS W/ MASTIC OR PLASTIC BITUMINOUS CEMENT.
   b. WRAPPED VERTICAL PIPES: PROVIDE ⅛" NOMINAL SHEET FOAM W/ (3) WRAPS MINIMUM, UNO.
   c. WRAPPED HORIZONTAL PIPES: PROVIDE ⅛" NOMINAL SHEET FOAM W/ (8) WRAPS MINIMUM, UNO.
   d. UNDERGROUND FIRE LINES 4" AND LARGER:
      1. SLEEVES: PROVIDE 2" MIN CLEAR ALL AROUND O.D. PIPE TO I.D. SLEEVE. SEAL ENDS PER ABOVE.
      2. WRAPPED: PROVIDE ⅛" NOMINAL SHEET FOAM W/ (16) WRAPS MINIMUM.
3. WRAPPED AND SLEEVED PIPES SHALL HAVE 1½" MIN CLEAR TO REINF STEEL. MINIMUM CONCRETE COVER AT PIPES TO BE 3".
4. CLEARANCE BETWEEN 'PIPES' TO BE 3d MIN TYP W/ A MAXIMUM OF (8) PIPES PER 48". GROUPS OF PIPES MAY BE BUNDLED AS SHOWN, EXCEPT IN PAD FOOTINGS.
5. NO 'PIPE' TO RUN PARALLEL IN FOOTINGS, STEM OR CURB.
6. PVC CONDUIT ('PIPE') EMBEDDED IN CURB/STEM MAY BE WIRE TIED TO HORIZONTAL REINF.
7. NO HORIZONTAL PIPES ALLOWED THROUGH FOOTING WITHIN 2'-0" EACH SIDE OF HOLDOWNS OR STEEL COLUMNS. NO VERTICAL PIPES ALLOWED IN FOOTINGS AT BRACED FRAMES.
8. PROVIDE 18" MIN OF COMPACTED FILL ABOVE PIPES UP TO 12"Ø, FOR LARGER PIPES INCREASE COMPACTED FILL DEPTH 1'-0" FOR EACH 6" INCREASE IN PIPE DIAMETER. OTHERWISE DEEPEN FOOTING AS SHOWN.

2 PIPES THRU FOOTING
3/4" = 1'-0"

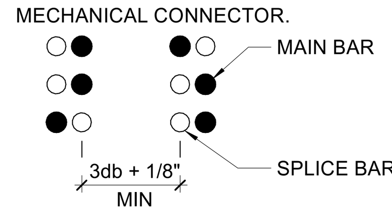
		DEVELOPMENT LENGTHS (Ld)								
	LOCATION	SIZE #3	#4	#5	#6	#7	#8	#9	#10	#11
CONCRETE f'c = 3000 PSI AT 28 DAYS	TOP	13"	18"	26"	26"	43"	54"	66"	81"	97"
	OTHER	12"	14"	20"	20"	33"	42"	51"	63"	75"
CONCRETE f'c = 4000 PSI AT 28 DAYS	TOP	12"	15"	23"	23"	37"	47"	58"	70"	84"
	OTHER	12"	12"	17"	18"	29"	36"	44"	54"	65"

		HOOKED DEVELOPMENT LENGTHS (Ldh)								
	LOCATION	SIZE #3	#4	#5	#6	#7	#8	#9	#10	#11
CONCRETE f'c = 3000 PSI AT 28 DAYS	ANY	8"	12"	16"	21"	27"	32"	39"	46"	-
CONCRETE f'c = 4000 PSI AT 28 DAYS	ANY	7"	11"	15"	20"	25"	30"	36"	43"	-

		LAP SPLICE LENGTHS (LAP) (STAGGER SPLICES)								
	LOCATION	SIZE #3	#4	#5	#6	#7	#8	#9	#10	#11
CONCRETE f'c = 3000 PSI AT 28 DAYS	TOP	17"	23"	34"	34"	55"	70"	86"	105"	126"
	OTHER	13"	18"	26"	26"	43"	54"	66"	81"	97"
CONCRETE f'c = 4000 PSI AT 28 DAYS	TOP	15"	20"	29"	29"	48"	62"	75"	91"	109"
	OTHER	12"	15"	23"	23"	37"	47"	58"	70"	84"

NOTES:

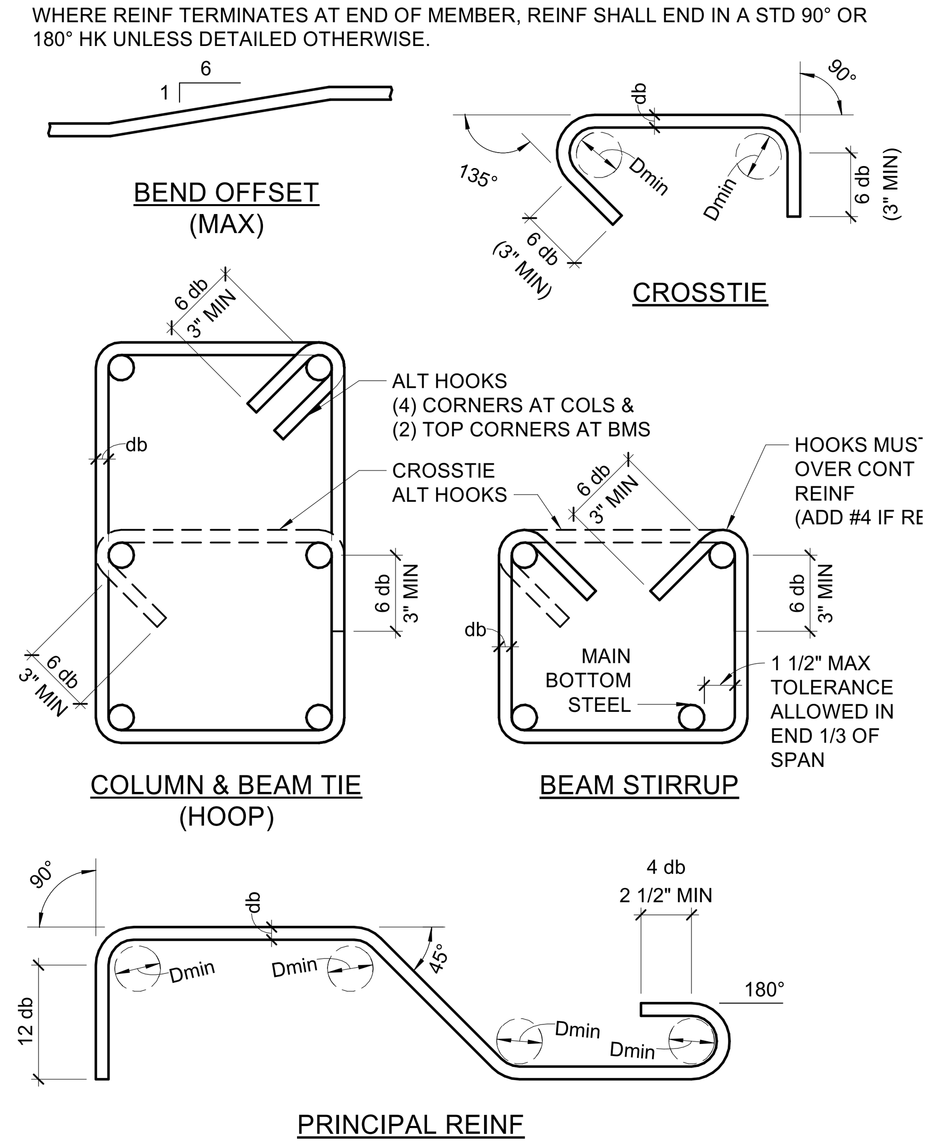
1. TOP REINFORCING IS HORIZONTAL REINFORCEMENT WITH MORE THAN TWELVE INCHES (12") OF CONCRETE PLACED BELOW IT.
2. DEVELOPMENT, HOOK DEVELOPMENT, AND LAP LENGTHS SHOWN ARE FOR UNCOATED BARS IN NORMAL WEIGHT CONCRETE.
3. IF THE LAP SPLICE REINFORCEMENT DOES NOT HAVE A MINIMUM SPACING 3db + 1/8 INCHES & A MINIMUM COVER OF db + 1/8 INCHES, USE WELDED SPLICE OR MECHANICAL CONNECTOR.



4. HOOKED DEVELOPMENT LENGTHS (Ldh) MAY BE USED IN LIEU OF DEVELOPMENT LENGTH (Ld) IF STANDARD HOOK IS PROVIDED AT END OF BAR.
5. MECHANICAL CONNECTORS SHALL BE TENSION-COMPRESSION TYPE WITH THE ABILITY TO DEVELOP 125% OF THE YIELD STRENGTH FOR THE SPLICED REINFORCEMENT (75 KSI). MECHANICAL CONNECTORS SHALL HAVE & BE INSTALLED PER AN ICC EVALUATION REPORT.
6. WHERE LAP SPLICING DIFFERENTLY SIZED BARS, LAP SPLICE LENGTH SHALL BE THE LARGER OF (Ld) OF THE LARGER BAR AND (LAP) OF THE SMALLER BAR.
7. WWR SHALL LAP MINIMUM (3) BAR CROSSINGS.

CONCRETE COVER FOR REINFORCING STEEL	'CLR'
CAST AGAINST EARTH OR GR	3"
EXPOSED TO EARTH (FORMED) OR WEATHER	
#5 & SMALLER	1½"
#6 & LARGER	2"
NOT EXPOSED TO EARTH OR WEATHER	
#11 & SMALLER AT SLABS & WALLS	¾"
ALL OTHER CONDITIONS	1½"

ALL REINF SHALL EXTEND AS FAR AS POSSIBLE. WHERE BAR SPLICES ARE REQUIRED, BARS SHALL BE LAPPED PER SCHEDULE ABOVE UNLESS DETAILED OTHERWISE. WHERE REINF TERMINATES AT END OF MEMBER, REINF SHALL END IN A STD 90° OR 180° HK UNLESS DETAILED OTHERWISE.

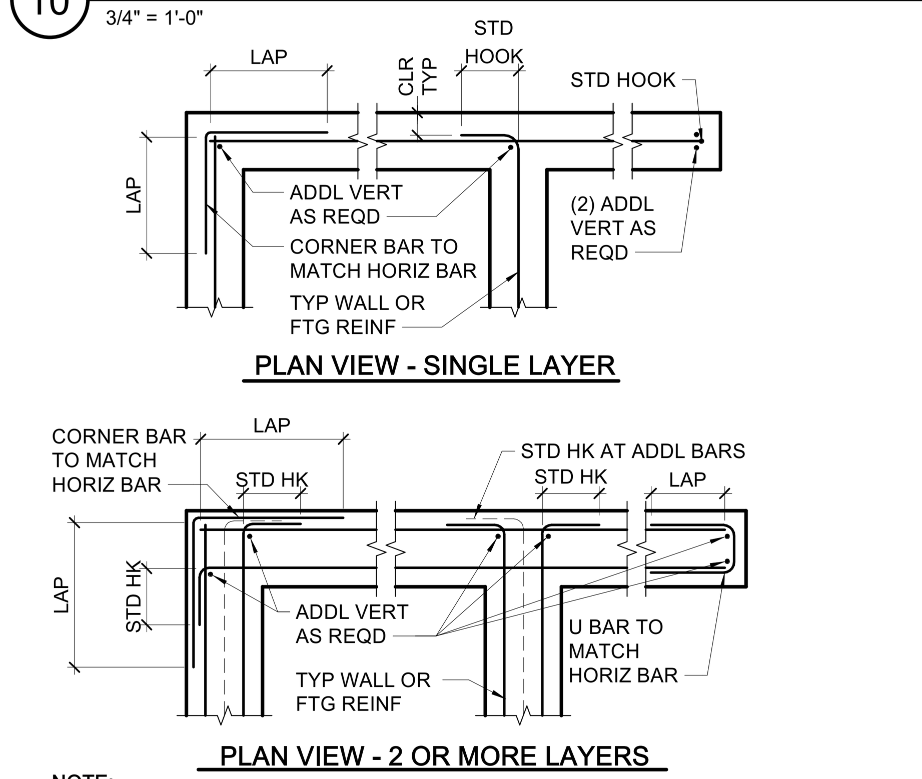


PRINCIPAL REINF	
REINF	Dmin
#3 TO #8	6 db
#9 TO #11	8 db
#14 TO #18	10 db

CROSSTIES, HOOPS & STIRRUPS	
REINF	Dmin
#3	1 1/2"
#4	2"
#5	2 1/2"

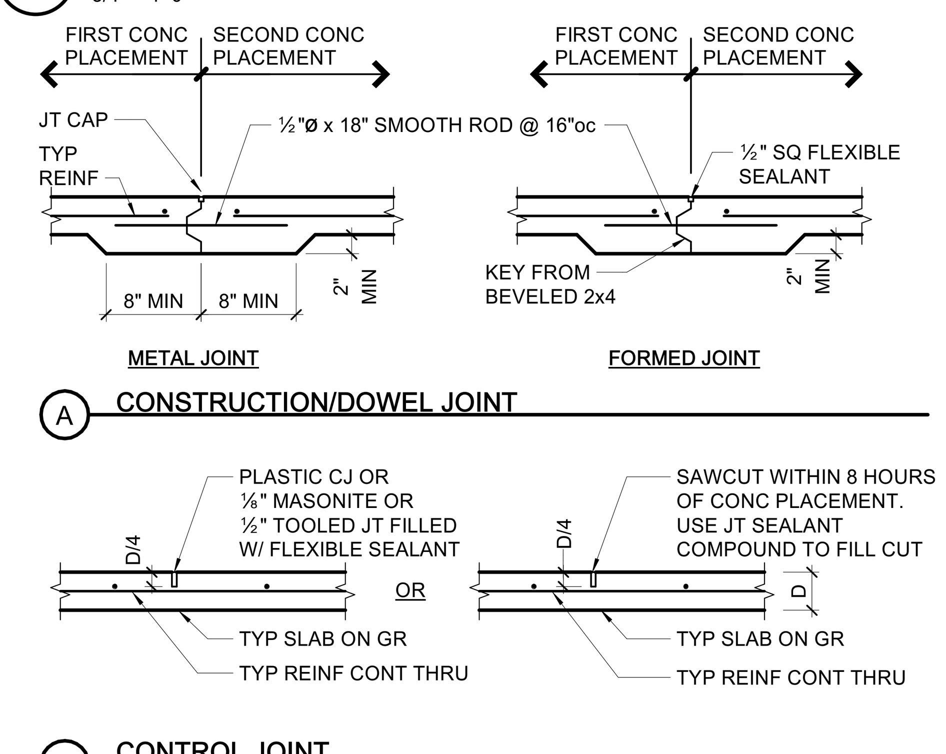
NOTE:
1. ALL BENDS SHALL BE MADE COLD.

1 TYPICAL REINFORCING DETAILS (f'c = 2500psi MIN)
1" = 1'-0"

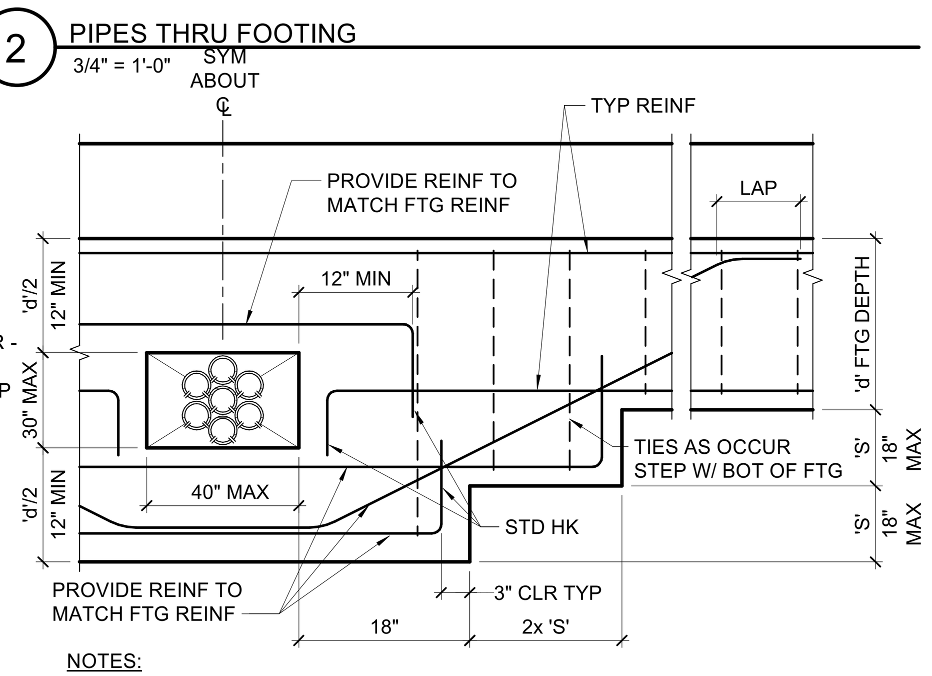


NOTE:
FOOTING REINFORCING AT CORNER AND INTERSECTION TO BE SIMILAR

11 TYPICAL CORNER, INTERSECTION AND END REINFORCING
3/4" = 1'-0"



6 SLAB ON GRADE JOINTS
3/4" = 1'-0"

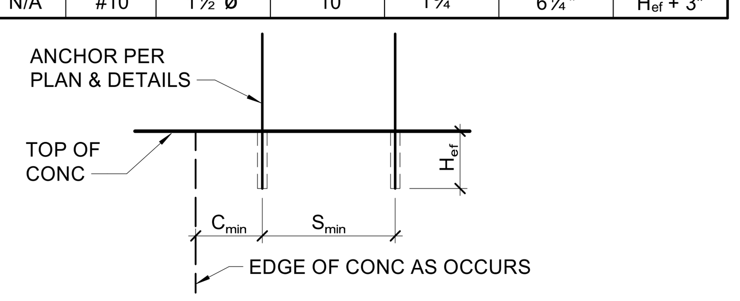


NOTES:

1. DO NOT LOCATE BLOCKOUT WITHIN 48" OF SHEAR WALL HOLDOWN, IN FRAME FOUNDATIONS OR COLUMN PAD FOOTINGS.
2. MINIMUM DISTANCE BETWEEN BLOCKOUTS OR OTHER PIPES TO BE 48".

3 FOUNDATION BLOCKOUT
3/4" = 1'-0"

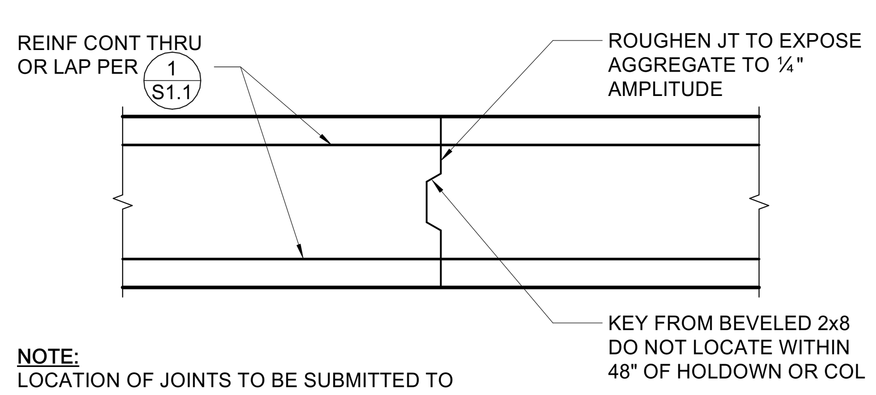
ADHESIVE ANCHOR IN 2500 PSI MIN CONCRETE							
ADHESIVE TYPE	ANCHOR THRD ROD	ANCHOR REBAR	PILOT HOLE	MIN EMBED UNO H_{ef}	MIN EDGE DISTANCE C_{min}	MIN SPCG S_{min}	MIN CONC DEPTH H_{min}
SIMPSON SET-3G (ICC-ESR 4057)	-	#3	½"Ø	3"	1¾"	3"	H_{ef} + 1¼"
	-	#4	⅝"Ø	4"	1¾"	3"	H_{ef} + 1¼"
	-	#5	¾"Ø	5"	1¾"	3"	H_{ef} + 1½"
	⅜"Ø	-	7⁄16"Ø	3"	1¾"	3"	H_{ef} + 1¼"
	½"Ø	-	9⁄16"Ø	4"	1¾"	3"	H_{ef} + 1¼"
	⅝"Ø	-	11⁄16"Ø	5"	1¾"	3"	H_{ef} + 1⅜"
	¾"Ø	#6	⅞"Ø	6"	1¾"	3"	H_{ef} + 1¾"
	⅞"Ø	#7	1"Ø	7"	1¾"	3"	H_{ef} + 2"
	1"Ø	#8	1⅛"Ø	8"	1¾"	3"	H_{ef} + 2¼"
	1¼"Ø	#10	1⅜"Ø	10"	2¾"	6"	H_{ef} + 2¾"
HILTI HIT-HY 200R V3 (ICC-ESR 4868)	⅜"Ø	N/A	7⁄16"Ø	3"	1¾"	1⅞"	H_{ef} + 1¼"
	N/A	#3	½"Ø	3"	1¾"	1⅞"	
	½"Ø	N/A	9⁄16"Ø	4"	1¾"	2½"	
	N/A	#4	⅝"Ø	4"	1¾"	2½"	
	⅝"Ø	#5	¾"Ø	5"	1¾"	3⅛"	H_{ef} + 1½"
	¾"Ø	#6	⅞"Ø	6"	1¾"	3¾"	H_{ef} + 1¾"
	⅞"Ø	#7	1"Ø	7"	1¾"	4⅜"	H_{ef} + 2"
	1"Ø	#8	1⅛"Ø	8"	1¾"	5"	H_{ef} + 2¼"
	N/A	#9	1⅜"Ø	9"	1¾"	5⅝"	H_{ef} + 2¾"
	1¼"Ø	N/A	1⅜"Ø	10"	1¾"	6¼"	
	N/A	#10	1½"Ø	10"	1¾"	6¼"	H_{ef} + 3"



NOTES:

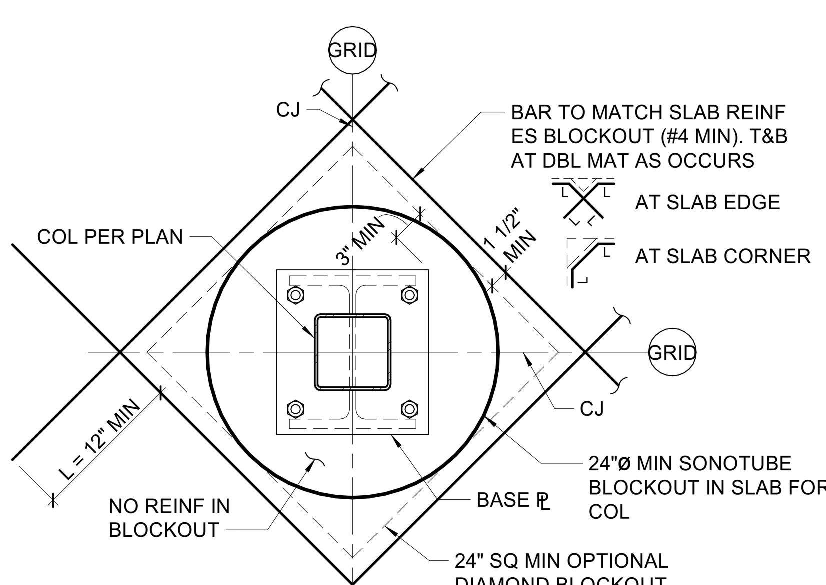
1. INSTALL ADHESIVE ANCHORS PER MANUFACTURER'S INFORMATION AND ICC REPORT.
2. CONTRACTOR TO VERIFY MINIMUM EDGE DISTANCES, SPACING, AND THICKNESS ARE IN ACCORDANCE W/ SCHEDULE PRIOR TO INSTALLING ANCHOR.
3. HOLES TO BE DRILLED W/ ROTARY DRILL ONLY. WHEN DRILLING HOLES IN EXISTING CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN 1" CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR. FILL ABANDONED HOLES W/ HIGH STRENGTH GROUT.
4. SPECIAL INSPECTION IS REQUIRED PER SECTION 1705 AND THE REQUIREMENTS OF THE ICC REPORTS. THE SPECIAL INSPECTOR SHALL PERFORM PERIODIC/CONTINUOUS INSPECTION IN ACCORDANCE WITH TABLE 1705.3. THE SPECIAL INSPECTOR SHALL INSPECT ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE(S), ANCHOR SPACING(S), CONCRETE THICKNESS, AND ADHESIVE INJECTION.

15 ADHESIVE ANCHOR IN CONCRETE
3/4" = 1'-0"



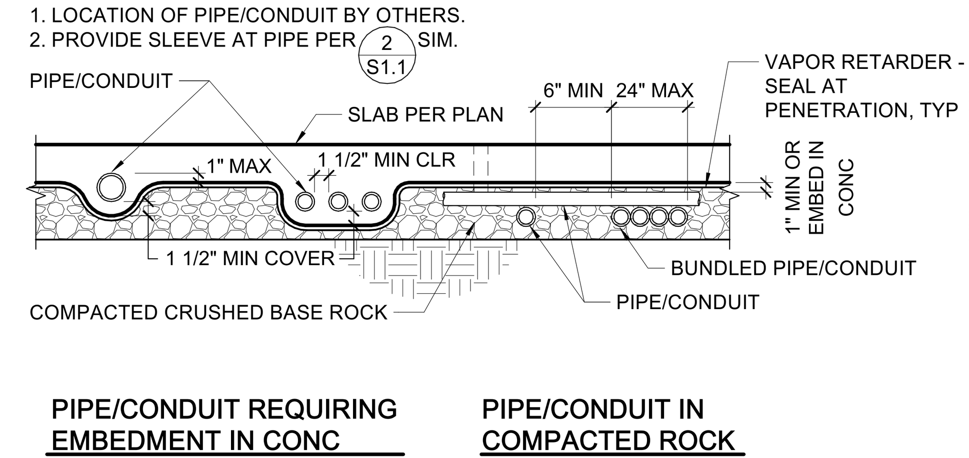
NOTE:
LOCATION OF JOINTS TO BE SUBMITTED TO ARCHITECT/ENGINEER FOR REVIEW PRIOR TO PLACEMENT OF CONCRETE

12 FOOTING CONSTRUCTION JOINT
3/4" = 1'-0"

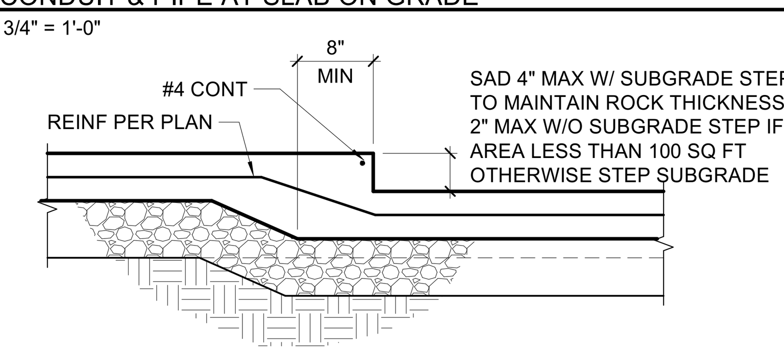


13 SLAB BLOCKOUT
1" = 1'-0"

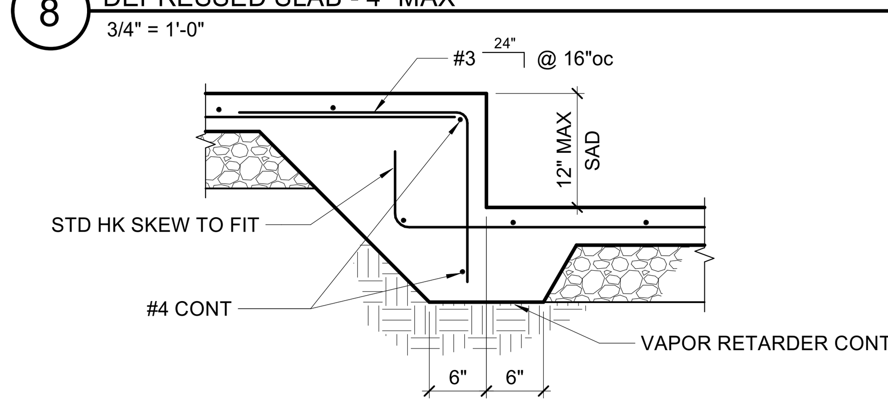
NOTES:
1. LOCATION OF PIPE/CONDUIT BY OTHERS.
2. PROVIDE SLEEVE AT PIPE PER 2/S1.1 SIM.



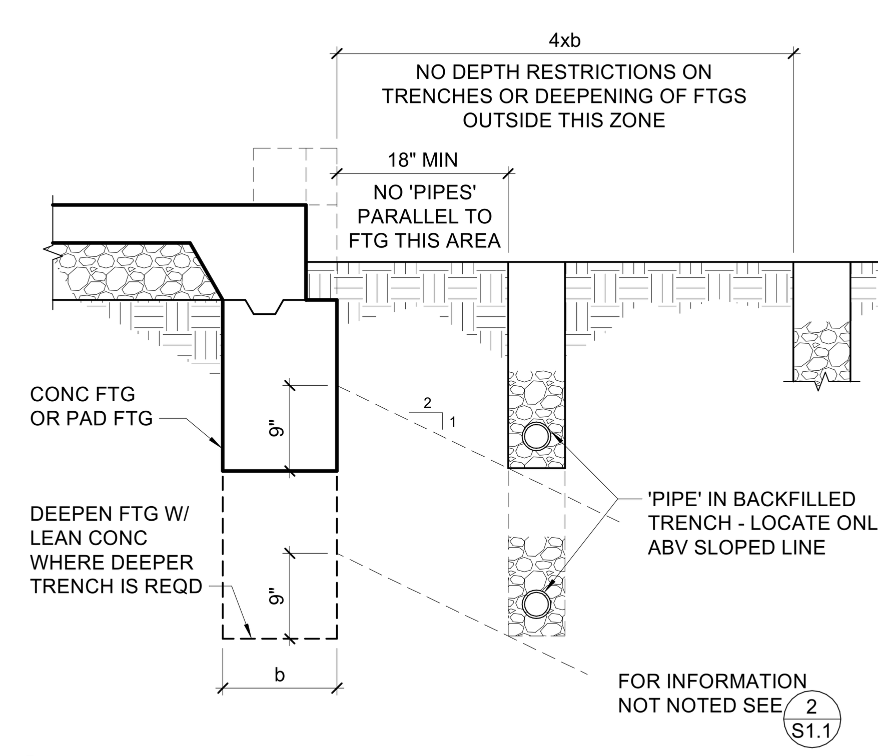
7 CONDUIT & PIPE AT SLAB ON GRADE
3/4" = 1'-0"



8 DEPRESSED SLAB - 4" MAX
3/4" = 1'-0"



9 DEPRESSED SLAB - 12" MAX
3/4" = 1'-0"



4 TRENCHING ADJACENT TO FOOTING
3/4" = 1'-0"

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Revision Schedule		
#	Revision Description	Date

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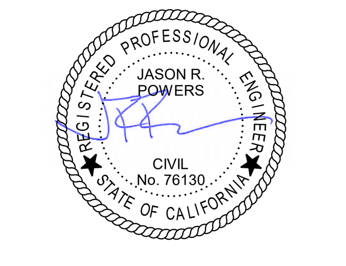


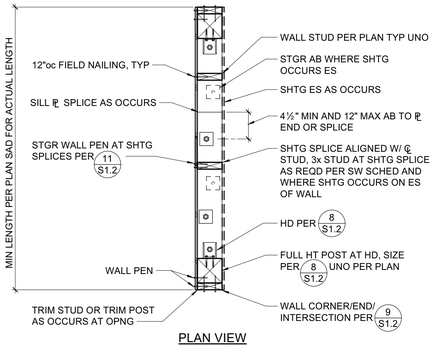
PROJECT
WARD RESIDENCE
23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION
TYPICAL CONCRETE DETAILS

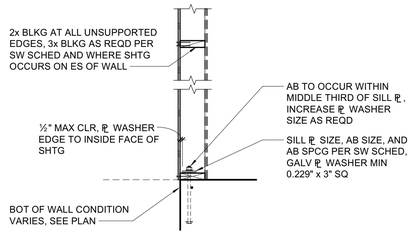
ENGR: EA
PM: JMR
DATE: MAY 16, 2025

SHEET
S1.1

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION



PLAN VIEW



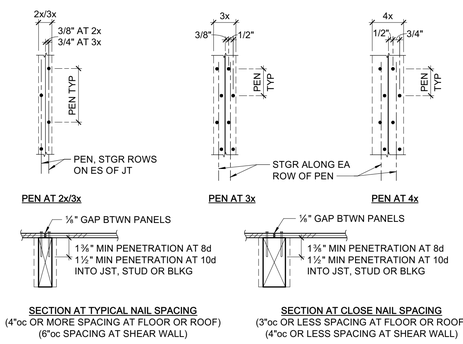
SECTION

NOTES:
1. PEN = PLYWOOD/OSB EDGE NAILING PER SW SCHED.
2. SILL ℄ AB WASHER HOLE MAY BE OVERSIZED UP TO ⅜". WASHER MAY BE DIAG SLOTTED UP TO 1¾" IN LENGTH. WHERE HOLE IS OVERSIZED OR SLOTTED, PROVIDE STD CUT WASHER.

7 SCHEMATIC SHEAR WALL CONSTRUCTION
3/4" = 1'-0"

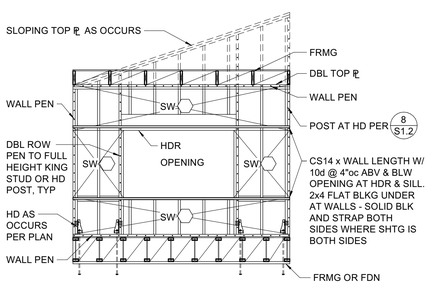
RIM JOIST/BLKG TO TOP ℄, TOE NAIL	10d @ 6"oc
TRUSSES, JOISTS OR RAFTERS AT ALL BEARING POINTS	
TOE NAILS EACH SIDE	(2) 10d
TRUSSES, JOISTS OR RAFTERS TO SIDE OF STUDS	
EIGHT (8) INCH JOISTS OR LESS	(3) 16d
FOR EACH ADDITIONAL 4 INCHES OF DEPTH OF JOIST	(1) 16d
BLOCKING BETWEEN JOISTS OR RAFTERS:	
TO JOIST OR RAFTERS - TOE NAILS EA SIDE, EA END	(2) 10d
TO JOIST OR RAFTER BEARINGS - TOE NAILS EA SIDE	(2) 10d
BLOCKING BETWEEN STUDS, EACH END TOE NAILS	(2) 10d OR (2) 16d
BRIDGING TO JOIST, TOE NAIL EACH END	(2) 8d
2" SUBFLOOR TO JOIST OR GIRDER, BLIND & FACE NAIL	(2) 16d
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	16d @ 16"oc
SOLE PLATE TO JOIST OR BLOCKING AT BRACED WALL PANELS	(3) 16d @ 16"oc
TOP PLATE TO STUD, END NAIL	(2) 16d
STUD TO SOLE PLATE, TOE NAIL	(4) 8d
DOUBLE STUDS AT EXTERIOR WALLS, FACE NAIL	16d @ 12"oc
DOUBLE STUDS, FACE NAIL	16d @ 24"oc
DOUBLE TOP PLATES, FACE NAIL	16d @ 12"oc
TOP PLATES, LAPS & INTERSECTIONS, FACE NAIL	(3) 16d
CONTINUOUS HEADER, TWO PIECES	16d @ 16"oc ALONG EACH EDGE
DOUBLE TOP PLATE LAP AT CORNER	(3) 16d
CONTINUOUS HEADER TO STUD, TOE NAIL	(4) 8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	(3) 16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	(3) 16d
BUILT-UP CORNER STUDS	16d @ 12"oc
POST TO SILL/SOLE/TOP PLATE, EACH SIDE TOE NAIL	(4) 10d

10 NAILING SCHEDULE
3/4" = 1'-0"



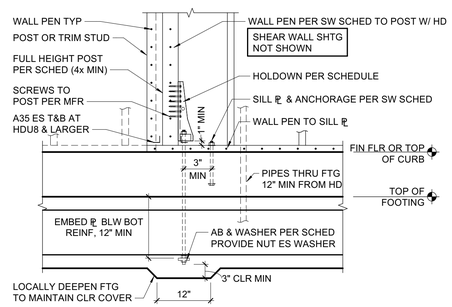
NOTE:
SHEATHING SHEETS ARE TO BE AS LARGE AS POSSIBLE. STAGGER SHEETS. JOINTS ARE TO BE CENTERED OVER BEARING. NAIL HEADS SHALL BE DRIVEN FLUSH W/ SHEATHING. MINIMUM SHEATHING SIZE IS 24" WIDTH x 48" LENGTH AT FLOOR AND ROOF, AND 12"x48" AT WALLS.

11 SHEATHING NAILING
1 1/2" = 1'-0"



NOTE:
FRAMING SHOWN IS SCHEMATIC,
SEE PLAN FOR SPECIFIC REQUIREMENTS

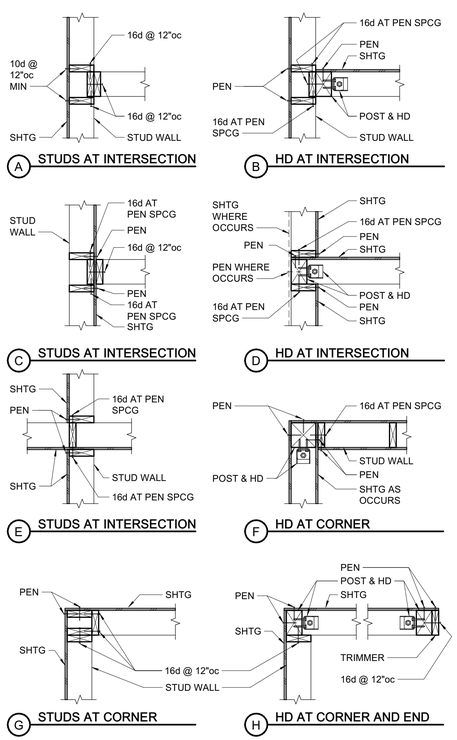
12 SCHEMATIC SHEAR WALL ELEVATION
1/4" = 1'-0"



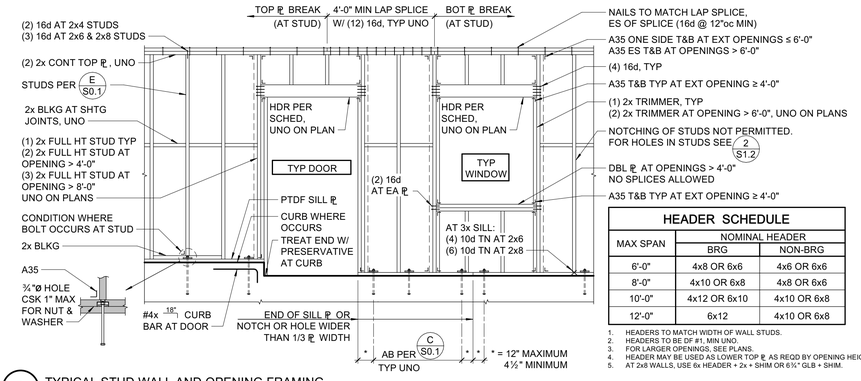
HOLDOWN	AB OR THRD ROD	WASHER AT AB	MIN POST SIZE UNO ON PLANS
HDU2	⅝"ø	¼"x2½" SQ	4x
HDU4	⅝"ø	¼"x2½" SQ	4x
HDU5	⅝"ø	¼"x2½" SQ	4x
HDU8	⅞"ø	⅝"x3" SQ	4x6
HDU11	1"ø	⅜"x3½" SQ	6x6
HDU14*	1"ø	⅜"x3½" SQ	6x6

*NUTS AT ANCHOR ROD TO BE HEAVY HEX

8 TYPICAL HOLDOWN
3/4" = 1'-0"



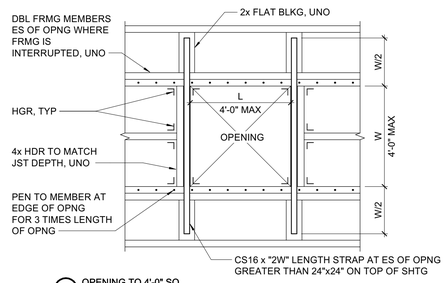
9 TYPICAL PLAN VIEW OF STUD WALL INTERSECTIONS
3/4" = 1'-0"



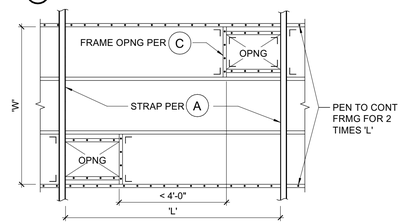
HEADER SCHEDULE		
MAX SPAN	NOMINAL HEADER	
	BRG	NON-BRG
6'-0"	4x8 OR 6x6	4x6 OR 6x6
8'-0"	4x10 OR 6x8	4x8 OR 6x6
10'-0"	4x12 OR 6x10	4x10 OR 6x8
12'-0"	6x12	4x10 OR 6x8

1. HEADERS TO MATCH WIDTH OF WALL STUDS.
2. HEADERS TO BE DF #1, MIN UNO.
3. FOR LARGER OPENINGS, SEE PLANS.
4. HEADER MAY BE USED AS LOWER TOP ℄ AS REQD BY OPENING HEIGHT.
5. AT 2x8 WALLS, USE 6x HEADER + 2x + SHIM OR 6½" GLB + SHIM.

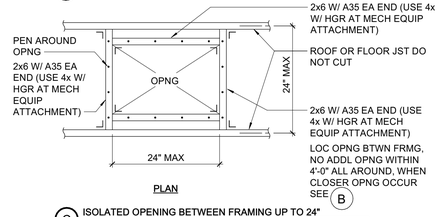
1 TYPICAL STUD WALL AND OPENING FRAMING
3/8" = 1'-0"



A OPENING TO 4'-0" SQ

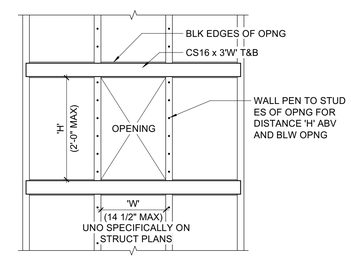


B CLOSELY SPACED OPENINGS BETWEEN FRAMING



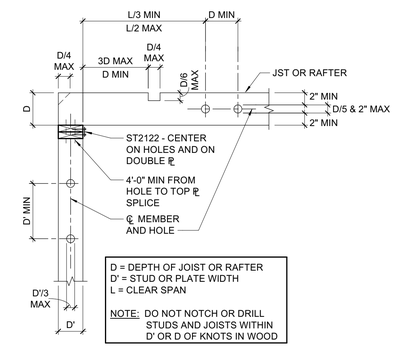
C ISOLATED OPENING BETWEEN FRAMING UP TO 24"

5 OPENING IN DIAPHRAGM
3/4" = 1'-0"

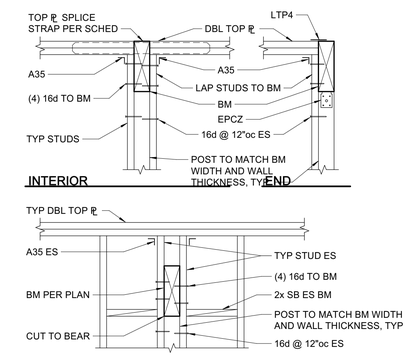


NOTES:
1. OPENINGS < 6" SQ DO NOT REQUIRE BLOCKING AND STRAPPING.
2. NO ADDITIONAL OPENINGS WITHIN 4'-0" ALL AROUND.
3. NO OPENINGS PERMITTED IN SHEAR WALL C OR HIGHER OR IN SHEAR WALLS LESS THAN 10'-0" LONG UNLESS SPECIFICALLY DETAILED ON STRUCTURAL PLANS. CONTACT STRUCTURAL ENGINEER FOR ASSISTANCE.
4. FRAME OPENINGS PER 1/S1.2 WHERE STUDS ARE INTERRUPTED.

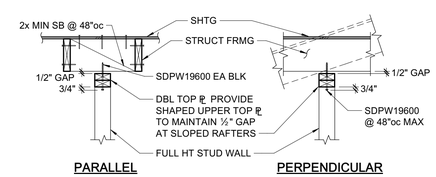
6 SMALL OPENINGS IN SHEAR WALLS
3/4" = 1'-0"



2 HOLES AND NOTCHES IN WOOD STUDS, JOISTS, AND PLATES
3/4" = 1'-0"



3 TYPICAL BEAM IN AND THRU STUD WALL
3/4" = 1'-0"



NOMINAL OR MANUFACTURED LUMBER FRAMING

NOTE:
INSTALL SDPW AT ℄ OF BLOCKING OR STRUCTURAL FRAMING AND WITHIN MIDDLE HALF OF DOUBLE TOP PLATES

4 TYPICAL NON-STRUCTURAL STUD WALL DETAILS
3/4" = 1'-0"

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REGISTERED PROFESSIONAL ENGINEER
JASON R. POWERS
CIVIL
No. 78130
STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION

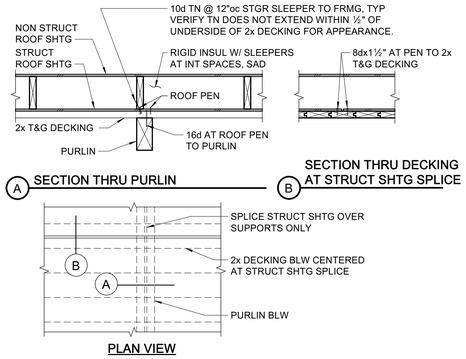
SHEET DESCRIPTION

TYPICAL WOOD DETAILS

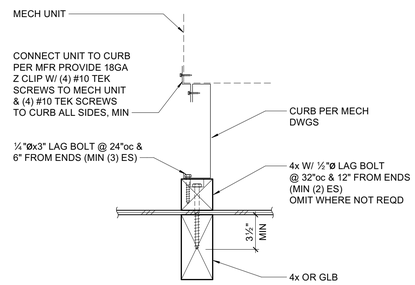
ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

SHEET

S1.2



7 RIGID INSULATION OVER 2x T&G DECKING W/ SLEEPERS
3/4" = 1'-0"

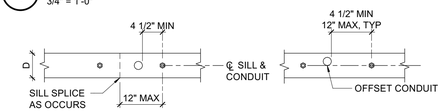


8 MECHANICAL CURB DETAIL ABOVE 4x OR GLB
1 1/2" = 1'-0"

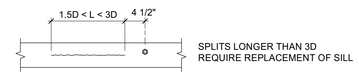
CEILING JOIST SCHEDULE			
MAX SPAN	JOIST SIZE	HANGER IF REQUIRED	LEDGER IF REQUIRED
9'-0"	2x4 @ 16"oc	LU24	2x4 W/ (2) 16d @ 16"oc
12'-6"	2x6 @ 16"oc	LU26	2x6 W/ (3) 16d @ 16"oc
14'-0"	2x8 @ 16"oc	LU28	2x8 W/ (4) 16d @ 16"oc
19'-0"	2x10 @ 16"oc	LU210	2x10 W/ (5) 16d @ 16"oc

NOTES:
1. CEILING JOIST SCHEDULE IS BASED ON LL = 10 psf.
2. WHERE LEDGERS ARE NAILED THROUGH WALL SHTG, USE 20d NAILS IN LIEU OF 16d NAILS.
3. PROVIDE MIDSPAN BLOCKING AT 2x10 JOISTS.

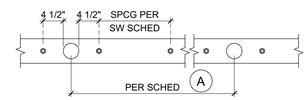
4 CEILING JOIST SCHEDULE
3/4" = 1'-0"



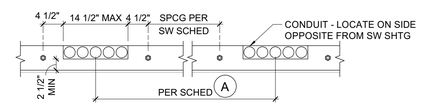
CASE 1 - SINGLE, CONDUIT DIAMETER ≤ D/3, MIN SPCG = 16"oc



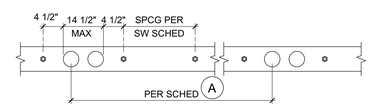
CASE 2 - SPLIT IN SILL



CASE 3 - SINGLE, CONDUIT DIAMETER > D/3



CASE 4 - NOTCH FOR CONDUIT

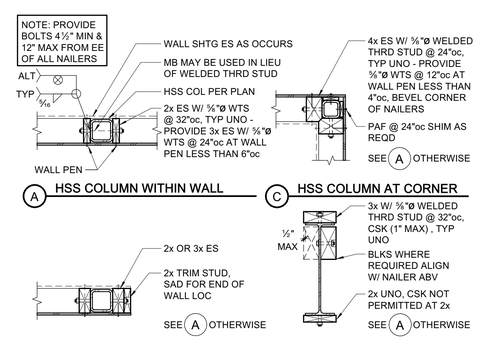


CASE 5 - MULTI CONDUIT, DIAMETER > D/3

SCHEDULE A			
	CASE 3	CASE 4	CASE 5
SW A	48"	32"	48"
SW B	64"	48"	64"
SW C	80"	64"	N/A
SW D AND HIGHER	N/A	N/A	N/A

NOTE:
1. ALL PENETRATIONS THROUGH SHEAR WALL SILL PLATE SHALL CONFORM TO THE REQUIREMENTS OF THIS DETAIL OR BE REROUTED PRIOR TO INSTALLATION OF SILL.
2. PROVIDE ADDITIONAL ANCHOR BOLTS AS REQUIRED TO MEET INDICATED SPACINGS. ADDITIONAL ANCHOR BOLTS TO BE INSTALLED AT CENTERLINE OF SILL PLATE PER 14/S1.1 WHERE NECESSARY. AB DIA AS REQD BY SW SCHED. MATCH CAST-IN-PLACE EMBED.

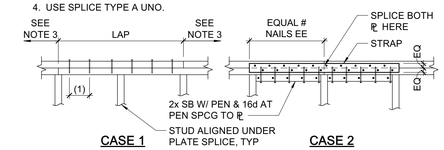
5 HOLES IN PLATES AT SHEAR WALLS
3/4" = 1'-0"



6 TYPICAL STEEL BEAM/COLUMN NAILERS
3/4" = 1'-0"

TOP PLATE SPLICE SCHEDULE		
MARK	LAP SPLICE (CASE 1)	STRAP SPLICE (CASE 2)
A	(12) 16d PER 4'-0" MIN LAP	MSTC28
B	(22) 16d PER 4'-0" MIN LAP	MSTC40
C	(26) 16d PER 6'-0" MIN LAP	MSTC52
D	(32) 16d PER 6'-0" MIN LAP	MSTC66
E	(36) 16d PER 8'-0" MIN LAP	MSTC28 EA SIDE
F	(44) 16d PER 8'-0" MIN LAP	MSTC40 EA SIDE
G	(50) 16d PER 10'-0" MIN LAP	MSTC52 EA SIDE

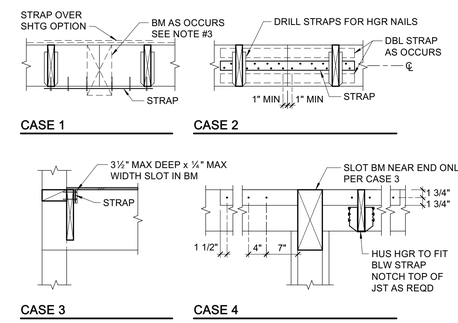
NOTES:
1. AT LAP SPLICES, SPACE NAILS @ 3"oc MIN (MAX 12"oc). STAGGER AT 2½" GAGE.
2. USE STRAP SPLICE WHERE BM INTERSECTS TOP ℞.
3. NAILS TO MATCH LAP SPLICE ES OF SPLICE (16d @ 12"oc MAX)
4. USE SPLICE TYPE A UNO.



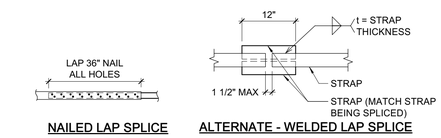
1 TOP PLATE SPLICE SCHEDULE AND DETAILS
3/4" = 1'-0"

LEDGER SPLICE SCHEDULE					
MARK	CASE	STRAP/PLATE	CASE	STRAP/PLATE
A	1	MSTA24	-	
B	1	MSTA30	-	
C	2	MSTI48	3	MSTI60
D	2	CMST14x5'-6"	3	CMST14x6'-0"
E	2	(2) MSTI48	4	℞ ¼" W/ (6) 1"ø MB ES OF SPLICE

SPLICE NOTES:
1. PROVIDE 3x OR (2) 2x STUDS AT SPLICE
2. ALL NAILS TO BE 10d NAIL ALL HOLES
3. FOR CASE 1, SPLICE W/ MSTA36 AT BM
4. USE SPLICE TYPE 'A' UNO

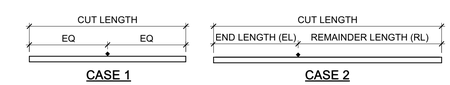


2 LEDGER OR RIM SPLICE SCHEDULE
3/4" = 1'-0"



TIE STRAP SCHEDULE						
MARK	STRAP	MIN. NAILING ES OF ◆	MAX. NAIL SPACING (SEE NOTES #1 & #2)			MIN. END LENGTH (EL)
			CASE 1	CASE 2		
				EL	RL	
A	CS16	(10) 10d	10d @ 4"oc STGR	FILL ALL NAIL HOLES	10d @ 4"oc STGR	12"
B	CS14	(13) 10d	10d @ 4"oc STGR	FILL ALL NAIL HOLES	10d @ 4"oc STGR	16"
C	CMSTC16	(25) 10d	10d @ 3"oc STGR	FILL ALL NAIL HOLES	10d @ 3"oc STGR	24"
D	CMST14	(33) 10d	10d @ 3½"oc STGR	FILL ALL NAIL HOLES	10d @ 3½"oc STGR	32"
E	CMST12	(43) 10d	10d @ 3½"oc STGR	FILL ALL NAIL HOLES	10d @ 3½"oc STGR	48"

1. CASE 1 APPLIES UNLESS END LENGTH (EL) IS NOTED ON PLANS. WHERE END LENGTH (EL) IS NOTED, SEE CASE 2.
2. AS REQUIRED, PROVIDE CLOSER NAIL SPACING TO MEET MINIMUM NAILING EACH SIDE OF ◆ .



3. LOCATE STRAPS OVER SHEATHING AND BLOCK UNDER STRAP W/ FLAT 2x6 (2x4 AT CS16/CS14) WHERE NO FRAMING OCCURS, UNO.
4. SEE PLANS FOR STRAP LENGTHS, LOCATIONS AND DETAILS, UNO.
5. SPLICE STRAPS AS SHOWN WHERE LENGTH PER PLAN EXCEEDS AVAILABLE PRODUCT LENGTH

3 TIE STRAP SCHEDULE
3/4" = 1'-0"

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JASON R. POWERS
CIVIL
No. 78130
STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION

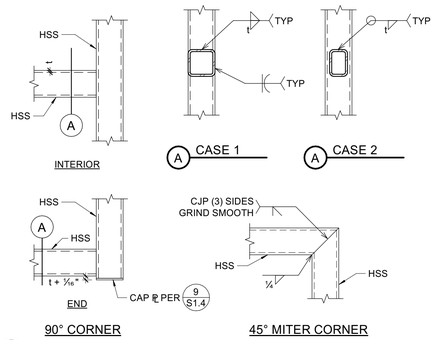
SHEET DESCRIPTION

TYPICAL WOOD DETAILS

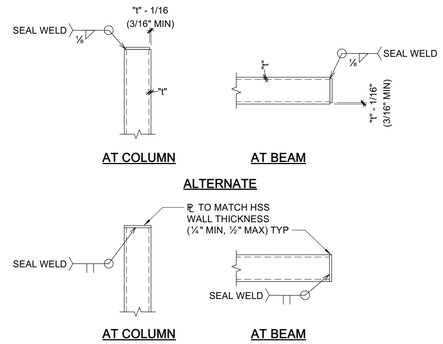
ENGR: EA
DATE: MAY 16, 2025
PM: JMR

SHEET

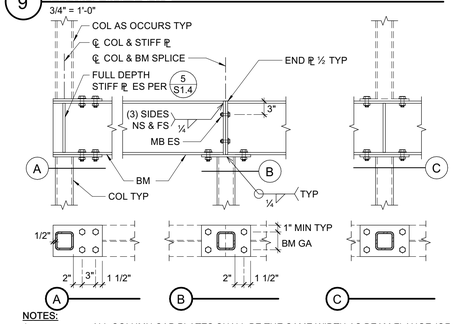
S1.3



13 TYPICAL HSS TO HSS CONNECTION
3/4" = 1'-0"

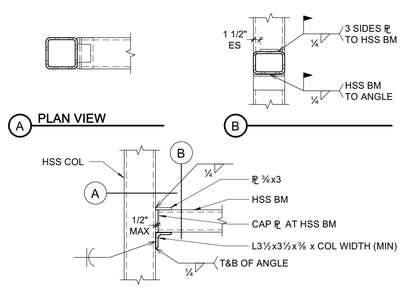


9 TYPICAL CAP PLATE
3/4" = 1'-0"

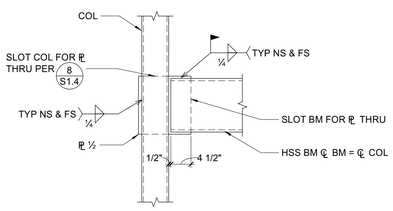


NOTES:
1. ALL COLUMN CAP PLATES SHALL BE THE SAME WIDTH AS BEAM FLANGE (OR COLUMN DIMENSION + 1/2", WHICHEVER IS GREATER), THICKNESS SAME AS BEAM FLANGE, 1/2" MINIMUM.
2. ALL FASTENERS TO BE MB 3/4 ø.

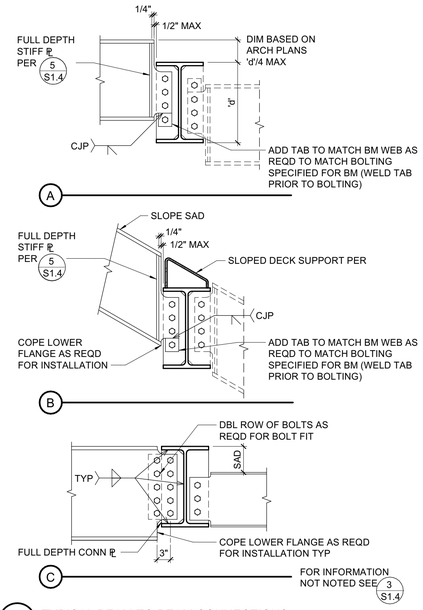
10 COLUMN ABOVE AND BELOW
3/4" = 1'-0"



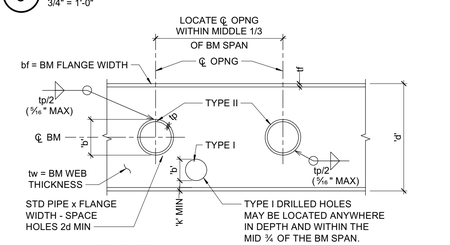
11 HSS BEAM TO HSS COLUMN
3/4" = 1'-0"



12 HSS BEAM TO HSS COLUMN
3/4" = 1'-0"



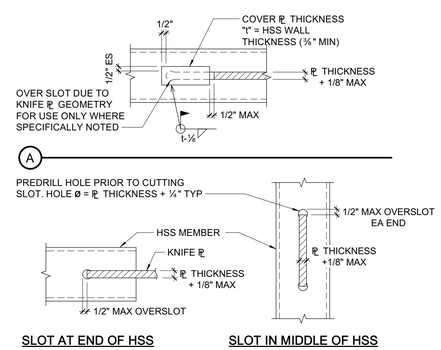
6 TYPICAL BEAM TO BEAM CONNECTIONS
3/4" = 1'-0"



LIMITS OF OPENINGS:
TYPE I: b = 1/5d MAX
SPACED A MINIMUM OF 2d APART
TYPE II: b = 2/3d MAX
SPACED A MINIMUM 2d APART

NOTES:
1. PROVIDE HOLES IN BEAMS ONLY WHERE SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS.
2. DO NOT TORCH CUT OPENINGS ON SITE. TORCH CUT OPENINGS MADE IN SHOP TO BE GROUND SMOOTH. NO OVERCUTS OF ANY TYPE ALLOWED WITHOUT REPAIR.

7 OPENING IN STEEL BEAM
3/4" = 1'-0"

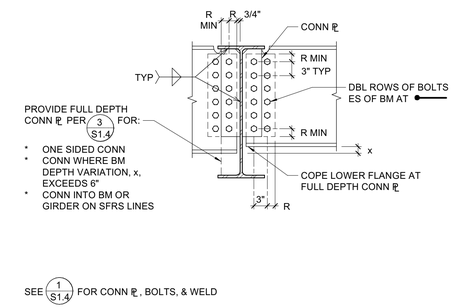


8 TYPICAL SLOTTED HSS FOR GUSSET CONNECTION
1 1/2" = 1'-0"

BEAM DEPTH	NO. BOLTS PER ROW [2]	CONN. PLATE	WELD SIZE
W8, W10	2	℞ 3/8	5/16"
W12, W14	3	℞ 3/8	5/16"
W16	4	℞ 3/8	5/16"
W18	5	℞ 3/8	5/16"

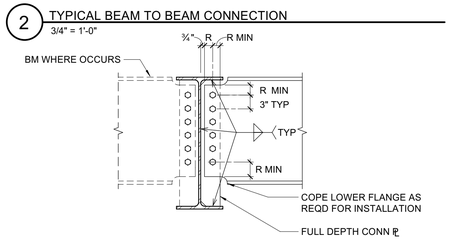
NOTES:
1. R = 1 1/2" SEE TYP CONNECTION DETAILS. BOLT SPACING AND EDGE DISTANCE SHALL CONFORM TO AISC SPECIFICATIONS.
2. GRADE A307 GRADE A 3/4"ø MACHINE BOLTS (MB) UNO.
3. A COMPLETE PENETRATION BEVEL WELD MAY BE SUBSTITUTED FOR THE FILLET WELDS SPECIFIED.
4. USE ASTM A36 CONNECTION PLATES UNO.
5. HOLE SIZE = BOLT SIZE + 1/16". SHORT SLOTTED HOLES (+ 1/16" VERT, + 1/4" HORIZ) MAY BE SUBSTITUTED (EXCEPT AS NOTED). ROUND HOLES ARE REQUIRED AT SFRS CONNECTIONS.
6. USE SAME CONNECTIONS AT CHANNELS. FOR W6, C6 & ANGLES USE PLATE, WELD & BOLT SIZE PER W8 & SEE 4/S1.4 .

1 3/4"ø MACHINE BOLT (MB) CONNECTION SCHEDULE
3/4" = 1'-0"



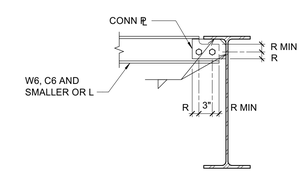
SEE 1 S1.4 FOR CONN ℞, BOLTS, & WELD

2 TYPICAL BEAM TO BEAM CONNECTION
3/4" = 1'-0"



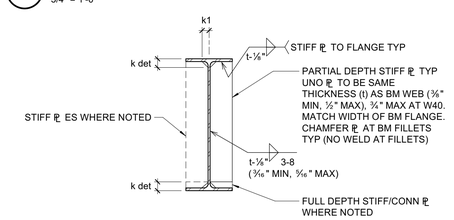
SEE 1 S1.4 FOR CONN ℞, BOLTS, & WELD

3 TYPICAL FULL DEPTH BEAM TO BEAM CONNECTION
3/4" = 1'-0"



SEE 1 S1.4 FOR CONN ℞, BOLTS, & WELD

4 TYPICAL SHALLOW BEAM DETAIL
3/4" = 1'-0"



5 TYPICAL BEAM WEB STIFFENER PLATE DETAIL
3/4" = 1'-0"

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CARMEL, CA 93923

SHEET DESCRIPTION

TYPICAL STEEL DETAILS

ENGR: EA
DATE: MAY 16, 2025
PM: JMR
SHEET

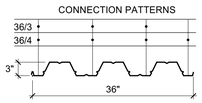
S1.4

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION

MARK	STEEL DECK GAGE & PROFILE TYPE SEE 5/S1.5	DECK CONNECTIONS						MINIMUM SLAB FILL THICKNESS ABV DECK	MINIMUM SLAB FILL REINFORCING	REMARKS
		END/INT BEARING CONN (A)		SIDE BEARING CONN (B)		SIDELAP CONNECTION (C)				
		SIZE & TYPE	PATTERN	SIZE & TYPE	SPACING	SIZE & TYPE	SPACING			
1	B - 18 GA	PINS	24/4	PINS	12"	SCREWS	12"	2" CONCRETE MIN (5" TOT THICKNESS MIN)	#3 @ 16"oc EW AT MID HEIGHT	

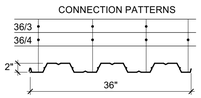
NOTES:
1. ATTACH DECK TO ALL STEEL SUPPORT FRAMING AS OCCURS.
2. PW = ¾"ø PUDDLE WELD WITH ½"ø MIN OF FUSION (EFFECTIVE WELD).
3. TSW = 1½" TOP SEAM WELD (¼" FILLET).
4. ASW = ⅜"x1½" ARC SEAM WELD.
5. BP = BUTTON PUNCH.
6. VSC2 = VERCO SIDE LAP CONNECTION.
7. PINS = HILTI X-ENP-19 L15 AT BASE MATERIAL GREATER THAN ¼". HILTI X-HSN 24 AT BASE MATERIAL ¼" OR LESS. ICC-ESR-2197 AND ESR-2776.
8. SIDELAP SCREWS = HILTI S-SLC01, HILTI S-SLC02, OR #12 SELF-DRILLING OR SELF-PIERCING SCREWS PER ASTM C1513. PROVIDE NEOPRENE WASHERS AT DECK EXPOSED TO RAIN.
9. ABOVE REFERENCED DECKS AND COMPOSITE DEPTHS ARE BASED ON ALLOWABLE DESIGN LOADS PER IAPMO ER-2018 VERCO MANUFACTURING - EQUIVALENT DECK MUST HAVE EQUIVALENT ALLOWABLE VERTICAL LOADS, DIAPHRAGM SHEAR VALUES, AND FLEXIBILITY FACTORS.
10. SHORING OF CONCRETE FILLED METAL DECK REQUIRED AT SINGLE SPAN & 2 SPAN CONDITIONS. NOT REQUIRED AT 3 SPAN CONDITIONS. AT CONTRACTOR'S OPTION, HEAVIER DECK MAY BE USED TO AVOID SHORING PER SEOR WRITTEN APPROVAL. SHORING OF UNTOPPED METAL DECK NOT REQUIRED UNLESS SPECIFICALLY NOTED OTHERWISE.
11. PROVIDE EXTRA CONCRETE TOPPING TO PROVIDE FLAT LEVEL SURFACE, 1" MAX.
12. WHERE A WELDED HEADED STUD OCCURS COINCIDENT WITH A TYPE 'A' OR TYPE 'B' DECK ATTACHMENT, THE TYPE 'A' OR TYPE 'B' ATTACHMENT MAY BE OMITTED.
13. NO CONTROL JOINTS IN CONCRETE OVER METAL DECK ALLOWED.
14. HORIZONTAL CONDUIT, PIPING, RADIANT HEATING TUBING, ETC NOT PERMITTED WITHIN CONCRETE TOPPING.
15. CONTRACTOR TO COORDINATE LIGHTWEIGHT CONCRETE DENSITY TO MEET REQUIRED FIRE ASSEMBLY RATINGS AT THE DEPTHS NOTED PER SCHEDULE ABOVE (MAXIMUM PER SPECIFICATIONS).

1 DECKING SCHEDULE
3/4" = 1'-0"



TYPE "B" DECK (F_y = 50 KSI)

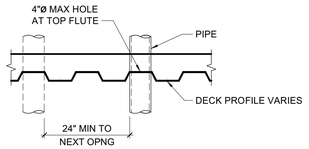
VERCO PLW3 FORMLOK, W3 FORMLOK, W3-SS FORMLOK OR APPROVED EQUAL



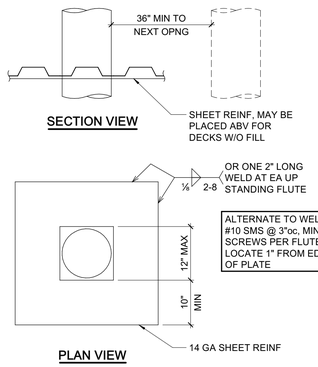
TYPE "A" DECK (F_y = 50 KSI)

VERCO PLW2 FORMLOK, W2 FORMLOK, W2-SS FORMLOK OR APPROVED EQUAL

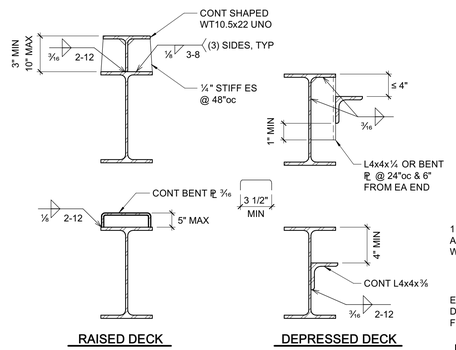
5 DECKING TYPE AND CONNECTION PATTERN
3/4" = 1'-0"



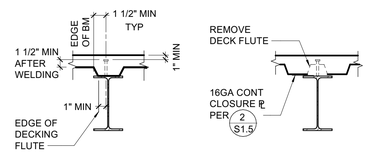
9 TYPICAL UNREINFORCED OPENING IN DECK (≤ 4")
3/4" = 1'-0"



10 TYPICAL REINFORCED OPENING IN DECK (LESS THAN 12")
3/4" = 1'-0"

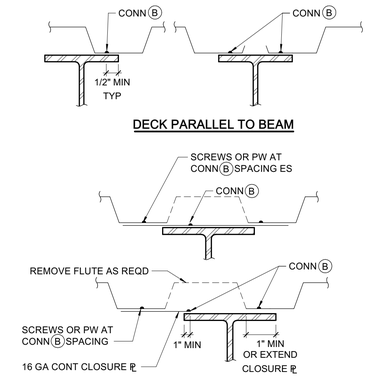


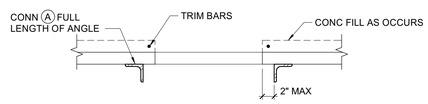
6 TYPICAL RAISED AND DEPRESSED DECK SUPPORT
1 1/2" = 1'-0"

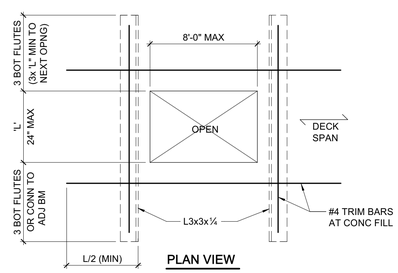


LOW FLUTE AT PARALLEL BM

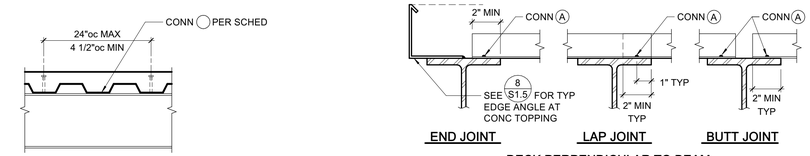
SPLIT DECK AT PARALLEL BM





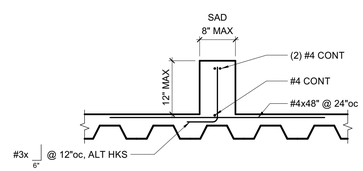


11 TYPICAL REINFORCED OPENING IN DECK (LESS THAN 24")
1" = 1'-0"

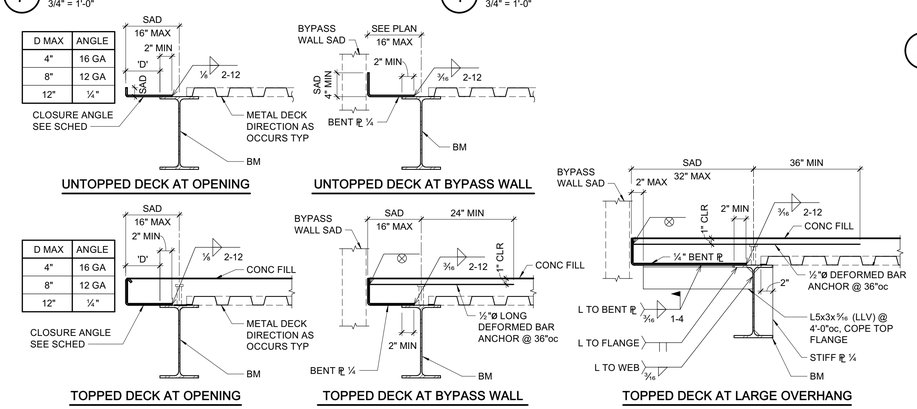


NOTES:
1. (#) DENOTES QUANTITY OF ¾"ø SHEAR STUDS ON BEAM. PROVIDE ADDITIONAL STUDS WHERE REQUIRED TO MAINTAIN MAX SPACING.
2. WHERE DECK IS PERPENDICULAR (OR AT AN ANGLE) TO BEAM, START SHEAR STUD LAYOUT AT FIRST LOW FLUTE AT EACH END OF BEAM. WHEN ALL LOW FLUTES ARE FULL, REMAINING STUDS SHALL BE PLACED IN DOUBLE ROWS STARTING AT FIRST LOW FLUTE FROM EACH END OF BEAM.
3. WHERE DECK IS PARALLEL TO BEAM, SHEAR STUD LAYOUT SHALL BE EQUALLY SPACED SINGLE ROW OR DBL ROW AS REQUIRED TO MAINTAIN MIN SPACING.
4. IF FLANGE IS LESS THAN 3/16" THK PLACE SHEAR STUD AT WEB ℄ ONLY.
5. NO CONSTRUCTION JOINTS ALLOWED PARALLEL TO AND WITHIN 4'-0" OF STUDS.
6. SEE 1/S5.1 OTHERWISE.

4 TYPICAL COMPOSITE BEAM SHEAR STUDS
3/4" = 1'-0"



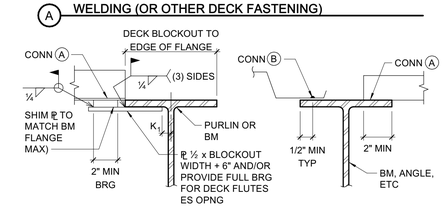
7 TYPICAL CURB ON DECK WITH CONCRETE FILL
3/4" = 1'-0"



NOTES:
NOTCH BENT ℙ AS REQUIRED AT CONFLICT WITH WHS TYPICAL

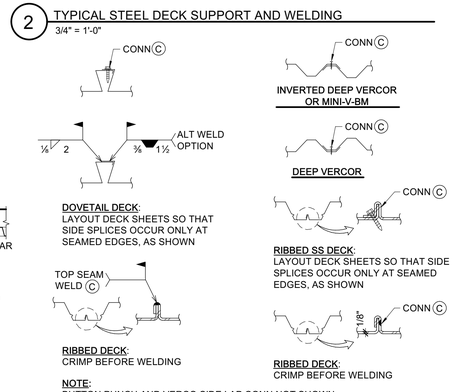
8 TYPICAL EDGE OF DECK
1" = 1'-0"

A WELDING (OR OTHER DECK FASTENING)



NOTES:
1. WELD OR DECK FASTENERS PER SCHEDULE 1/S1.5

2 TYPICAL STEEL DECK SUPPORT AND WELDING
3/4" = 1'-0"



NOTE:
BUTTON PUNCH AND VERCO SIDE LAP CONN NOT SHOWN.

3 TYPICAL DECK SIDE LAP CONNECTION
3" = 1'-0"

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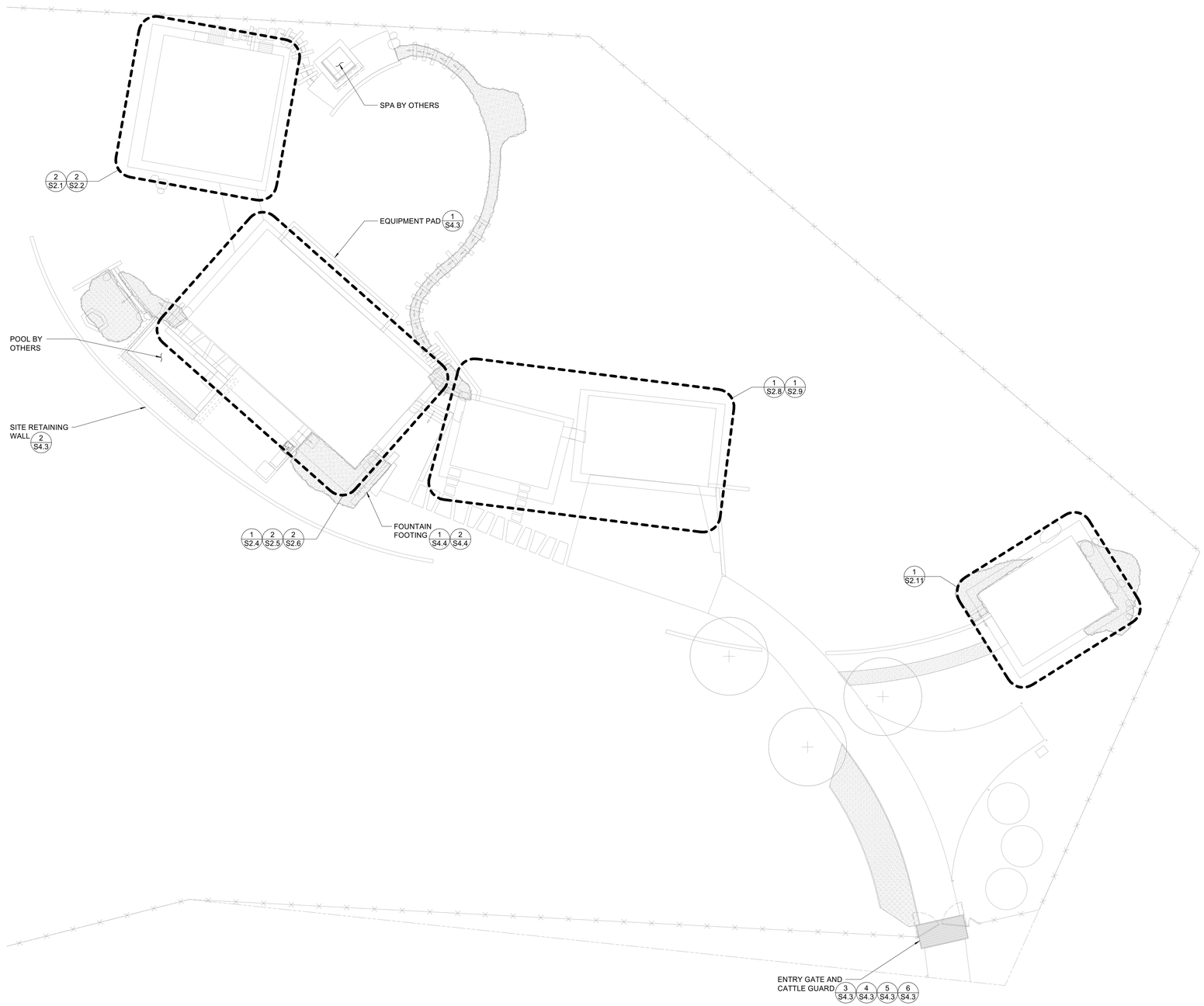
TYPICAL METAL DECKING DETAILS

ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

SHEET

S1.5



NORTH

SITE PLAN

1/16" = 1'-0"

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SITE PLAN

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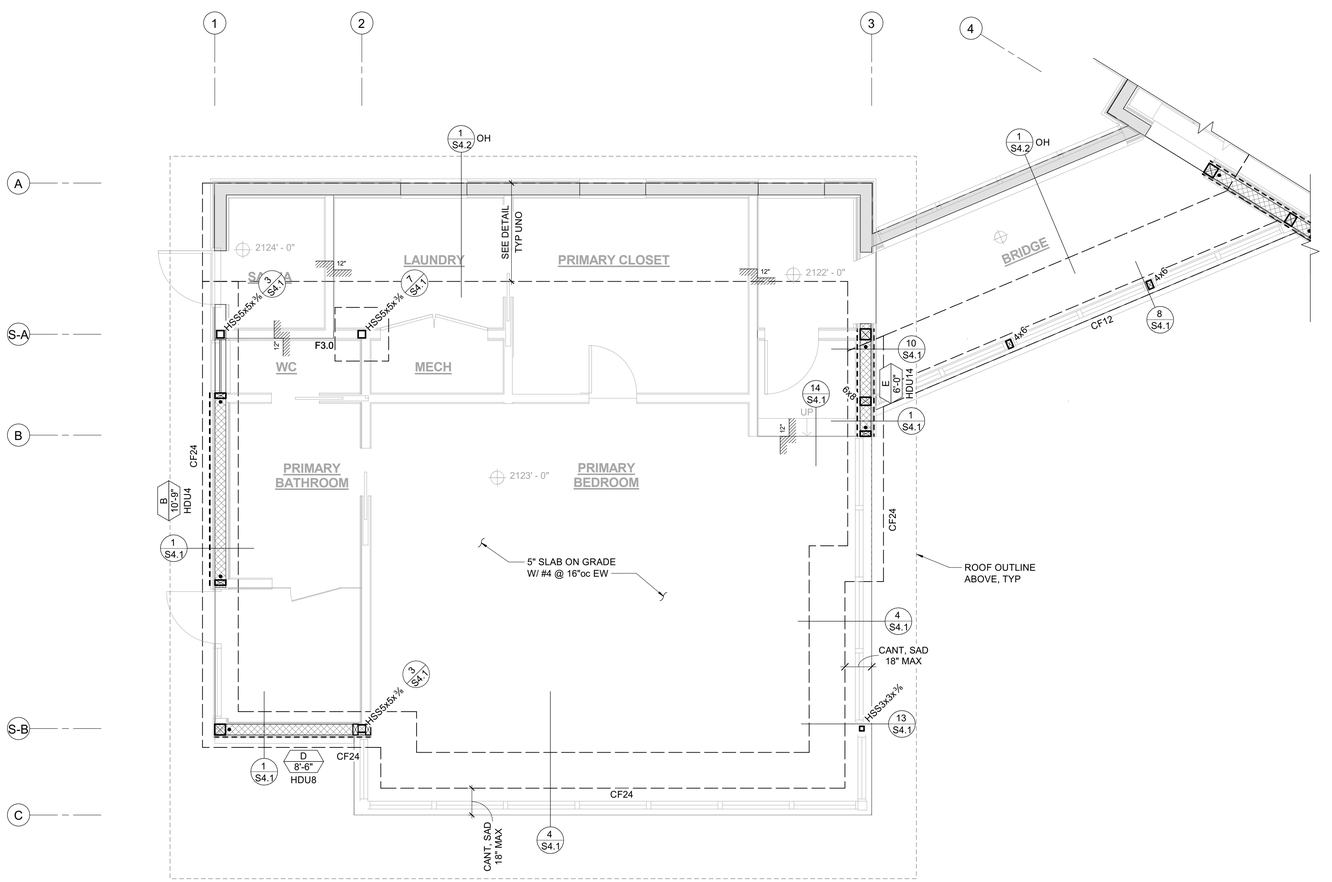
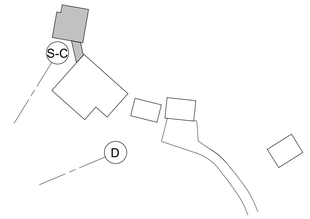
SHEET

S2.0

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION



KEY PLAN



FOUNDATION PLAN NOTES:

1. REFER TO SHEETS S1.1, S1.2, S1.3, S1.4, AND S1.5 FOR GENERAL NOTES AND TYPICAL DETAILS. THE FOLLOWING DETAIL REFERENCES ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL GENERAL NOTES AND TYPICAL DETAIL SHEETS NOTED ABOVE ARE APPLICABLE AND SHALL BE FOLLOWED.
2. DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
3. SEE DETAILS FOR CURB LOCATIONS. COORDINATE WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES. PROVIDE LONGER ANCHOR BOLTS AT CURBS PER C/S0.1 .
4. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEAR WALLS ON PLANS SHALL BE SHEATHED AS SHEAR WALL TYPE 'A' PER SHEAR WALL SCHEDULE, UNO.
5. PLUMBING AND ELECTRICAL CONDUIT AND GROUND STRAP SHALL NOT BE LAID WITHIN FOUNDATIONS. NO UTILITY PIPES OR CONDUITS SHALL BE LOCATED THRU COLUMN FOOTINGS OR FRAME FOOTINGS. NO PIPES OR CONDUITS THRU SILL PLATES SHALL BE WITHIN 12" OF HOLDOWN BOLTS. NO MECHANICAL, ELECTRICAL, OR PLUMBING OPENINGS SHALL BE LOCATED IN SHEAR WALLS UNLESS SHOWN AND DETAILED ON THE STRUCTURAL DRAWINGS. NO VERTICAL OR HORIZONTAL PIPES OR CONDUITS SHALL BE LOCATED THROUGH STEEL FRAMES, STEEL COLUMNS, OR STEEL BASE PLATES. PROVIDE FURRING AND/OR THICKENED CONCRETE WHERE REQUIRED TO CLEAR UTILITY SYSTEMS. NOTIFY STRUCTURAL ENGINEER/ARCHITECT PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

   PIPES THROUGH FOOTINGS SHALL BE PER 2/S1.1 AND 3/S1.1 .

   PIPES PARALLEL TO FOOTINGS SHALL BE PER 4/S1.1.

   PIPES AT SLAB ON GRADE SHALL BE PER 7/S1.1.

   PIPES THROUGH WOOD FRAMING SHALL BE PER 2/S1.2 AND 5/S1.3 .
6. CONTRACTOR SHALL DETERMINE FOUNDATION STEP LOCATIONS BASED ON GEOTECHNICAL REPORT, CIVIL, ARCHITECTURAL AND LANDSCAPE DRAWINGS. STEP FOOTING PER 5/S1.1.

PLAN LEGEND

SYMBOL	REFERENCE DETAIL	DESCRIPTION
	1/S1.2	INDICATES STRUCTURAL WALL.
A 10'-0" HDUx	7/S1.2 F/S0.1	INDICATES SHEAR WALL TYPE AND MINIMUM WALL LENGTH. SYMBOL LOCATION INDICATES SHEATHED FACE OF WALL UNLESS NOTED OTHERWISE. "HDUx" INDICATES SIMPSON HOLDOWN AT EACH END UNO.
A ST 20'-0" HDUx	12/S1.2	INDICATES STRAPPED SHEAR WALL WITH TYPE AND MINIMUM OVERALL WALL LENGTH, SEE ARCHITECTURAL DRAWINGS FOR OPENINGS. "HDUx" INDICATES SIMPSON HOLDOWN AT EACH END UNO.
	E/S0.1	INDICATES WOOD POST.
	8/S1.2	INDICATES POST WITH HOLDOWN. POSTS WITH HOLDOWN ARE FULL HEIGHT FROM SILL TO TOP PLATE.
	6/S1.3	INDICATES STEEL COLUMN. LOCATE COLUMN AT ℄ OF WALL FRAMING (EACH WAY AS OCCURS) UNO.
		INDICATES FOUNDATION.
CF24		INDICATES CONTINUOUS FOOTING SIZE AND REINFORCING PER SCHEDULE.
F2.0		INDICATES PAD FOOTING SIZE AND REINFORCING PER SCHEDULE.
DS	8/S1.1 9/S1.1	INDICATES DEPRESSED SLAB, SEE ARCHITECTURAL AND PLUMBING DRAWINGS FOR COMPLETE LOCATIONS, DEPTH AND SLOPE INFORMATION.
		INDICATES STEP IN ELEVATION, SEE ARCHITECTURAL DRAWINGS.
A 3 2'-8"	7/S1.2	INDICATES SHEAR WALL TYPE, MINIMUM NUMBER OF SILL BOLTS (IN ADDITION TO HOLDOWN BOLTS) AND MINIMUM WALL LENGTH.
88		INDICATES GRIDLINE AT FACE OF STUD.
1 S3.1		INDICATES ELEVATION.
		INDICATES CONCRETE WALL.

CONTINUOUS FOOTING SCHEDULE

MARK	'b' WIDTH	'd' DEPTH	REINF 'a'	NOTES
CF12	1' - 0"	1' - 6"	(2) #5 T&B	
CF18	1' - 6"	1' - 6"	(2) #6 T&B	
CF24	2' - 0"	1' - 6"	(3) #6 T&B	
CF36	3' - 0"	1' - 6"	(4) #6 T&B	

PAD FOOTING SCHEDULE

MARK	SIZE	REINFORCING
F2.5	30" SQ x 18" DEEP	(3) #5 T&B EW
F3.0	36" SQ x 18" DEEP	(4) #5 T&B EW

SHEAR WALL SCHEDULE

SW	APA RATED EXP 1 SHEATHING	NAILING (PEN)	ANCHORAGE					REMARKS	
			⅝"ø BOLT FDN		AT FRAMING [2]				
			2x SILL	3x SILL	16d	A35	SCREW [1]	AT SAWN STUD	AT LVL STUD
A	15/32" (32/16) OSB	10d @ 6"oc	32"oc	48"oc	8"oc	24"oc	16"oc		
B	15/32" (32/16) OSB	10d @ 4"oc	24"oc	32"oc	4"oc	16"oc	12"oc	3x MIN AT ALL ADJOINING PANEL EDGES	(2) 1¾ STUD OR 2½" MIN STUD AT ADJOINING PANEL EDGES
C	15/32" (32/16) OSB	10d @ 3"oc	16"oc	24"oc	4"oc	12"oc	8"oc		
D	15/32" (32/16) OSB	10d @ 2"oc	-	16"oc	(2) ROWS @ 3"oc	8"oc	6"oc		(2) 1¾ STUD AT ADJOINING PANEL EDGES, SINGLE MEMBER NOT ACCEPTABLE
E	15/32" (32/16) OSB BOTH SIDES	10d @ 2"oc	-	12"oc	(2) ROWS @ 2"oc	6"oc	(2) ROWS @ 6"oc		

NOTES:
1. 2x SILL: SDS¼x4½" OR SDWS 0.22"x4". AT 3x SILL : SDS¼x6" OR SDWS 0.22"x6"
2. FOR SCREW @ 6"oc OR LESS & DBL ROW OF ANCHORAGE PROVIDE 4x OR EQUIVALENT SB/RIM BLW. AT DBL ROW STGR ROWS TYPICAL.

MAIN HOUSE - PRIMARY SUITE FOUNDATION PLAN

1/4" = 1'-0"

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Revision Schedule

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san francisco ca 94111
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zfa.com
415.243.4091
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REGISTERED PROFESSIONAL ENGINEER JASON R. POWERS CIVIL No. 78130 STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL, CARMEL, CA 93923

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION

SHEET DESCRIPTION

MAIN HOUSE - PRIMARY SUITE FOUNDATION PLAN

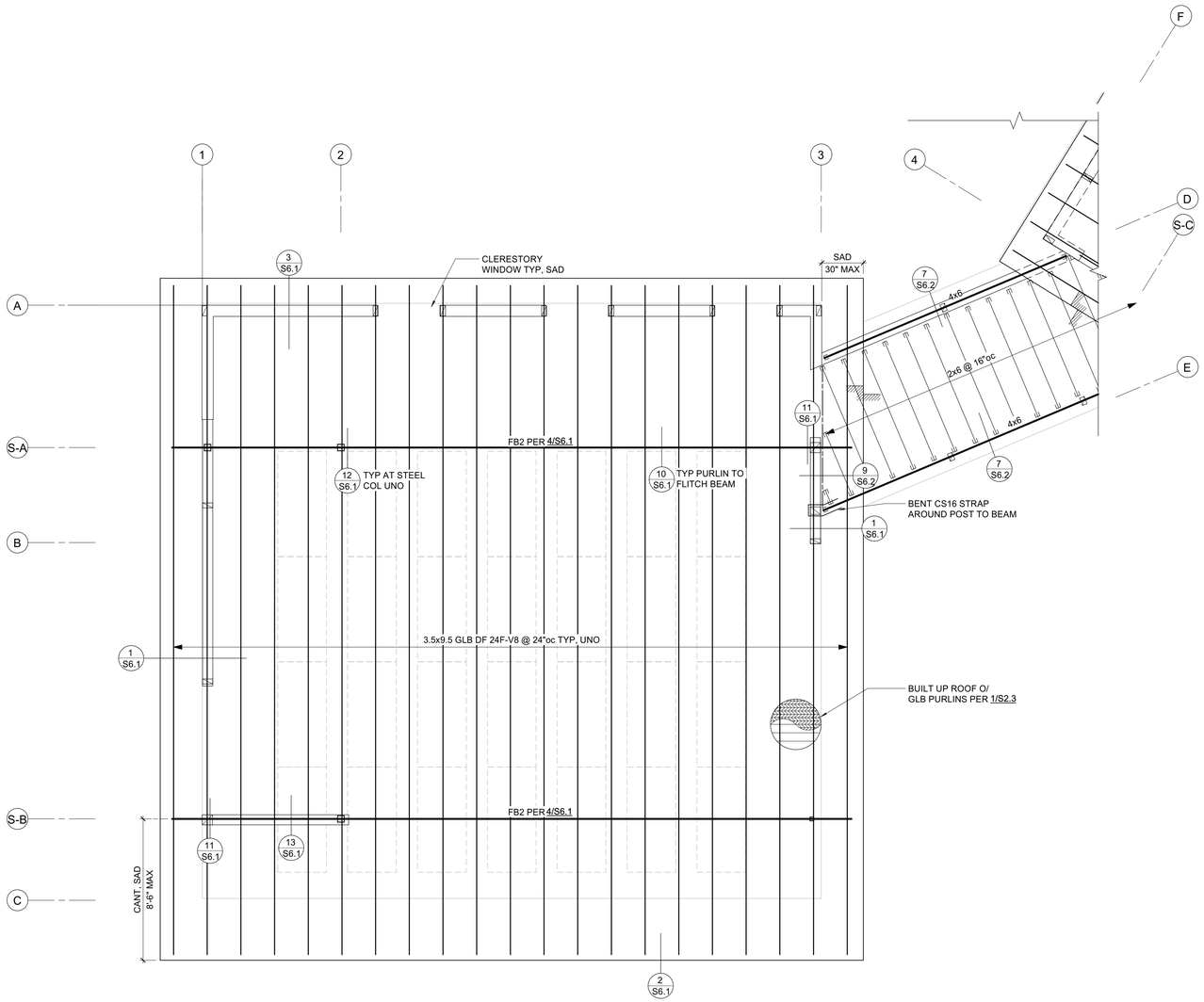
ENGR: EA

DATE: MAY 16, 2025

PM: JMR

SHEET

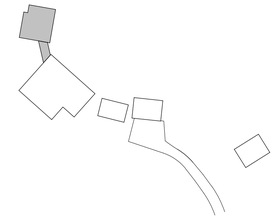
S2.1



MAIN HOUSE - PRIMARY SUITE ROOF FRAMING PLAN

NORTH
1/4" = 1'-0"

KEY PLAN



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   PENETRATIONS THROUGH SHEAR WALLS SHALL BE PER 6/S1.2.

   PENETRATIONS THROUGH FLOORS/ROOFS SHALL BE PER 5/S1.2.
4. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEAR WALLS ON PLANS SHALL BE SHEATHED AS SHEAR WALL TYPE 'A' PER SHEAR WALL SCHEDULE, UNLESS NOTED OTHERWISE.

PLAN LEGEND

SYMBOL	REFERENCE DETAIL	DESCRIPTION
	1/S1.2	INDICATES STRUCTURAL WALL BELOW.
	E/S0.1	INDICATES WOOD POST BELOW.
	6/S1.3	INDICATES STEEL COLUMN BELOW.
3½x12 GLB C=1"	E/S0.1	INDICATES GLULAM BEAM SIZE AND CAMBER. WHERE NO CAMBER IS SPECIFIED SEE WOOD FRAMING NOTES FOR TYPICAL GLULAM BEAM CAMBER.
	11/S1.2	INDICATES PANEL EDGE NAILING ALONG FULL LENGTH OF MEMBER.
	E/S0.1	INDICATES HANGER.
		INDICATES LEDGER. SEE PLAN FOR SIZE AND ANCHORAGE.
88		INDICATES GRIDLINE AT FACE OF STUD.
1 S3.1		INDICATES ELEVATION.
MU 1,000#	8/S1.3	INDICATES APPROXIMATE LOCATION, SIZE AND MAXIMUM WEIGHT OF MECHANICAL UNIT. SEE MECHANICAL DRAWINGS FOR ANCHORAGE AND ADDITIONAL INFORMATION.
		INDICATES STEP IN ELEVATION, SEE ARCHITECTURAL DRAWINGS.
A	1/S1.3	INDICATES TOP PLATE SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE 'A' IF NOT NOTED ON PLANS.
A	2/S1.3	INDICATES LEDGER/RIM SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE 'A' IF NOT NOTED ON PLANS.
A 4'-0"	3/S1.3	INDICATES TIE STRAP. SEE SCHEDULE FOR STRAP, NAILING AND LENGTH.
		INDICATES CONCRETE WALL.

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REGISTERED PROFESSIONAL ENGINEER
JASON R. POWERS
CIVIL
No. 78130
STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

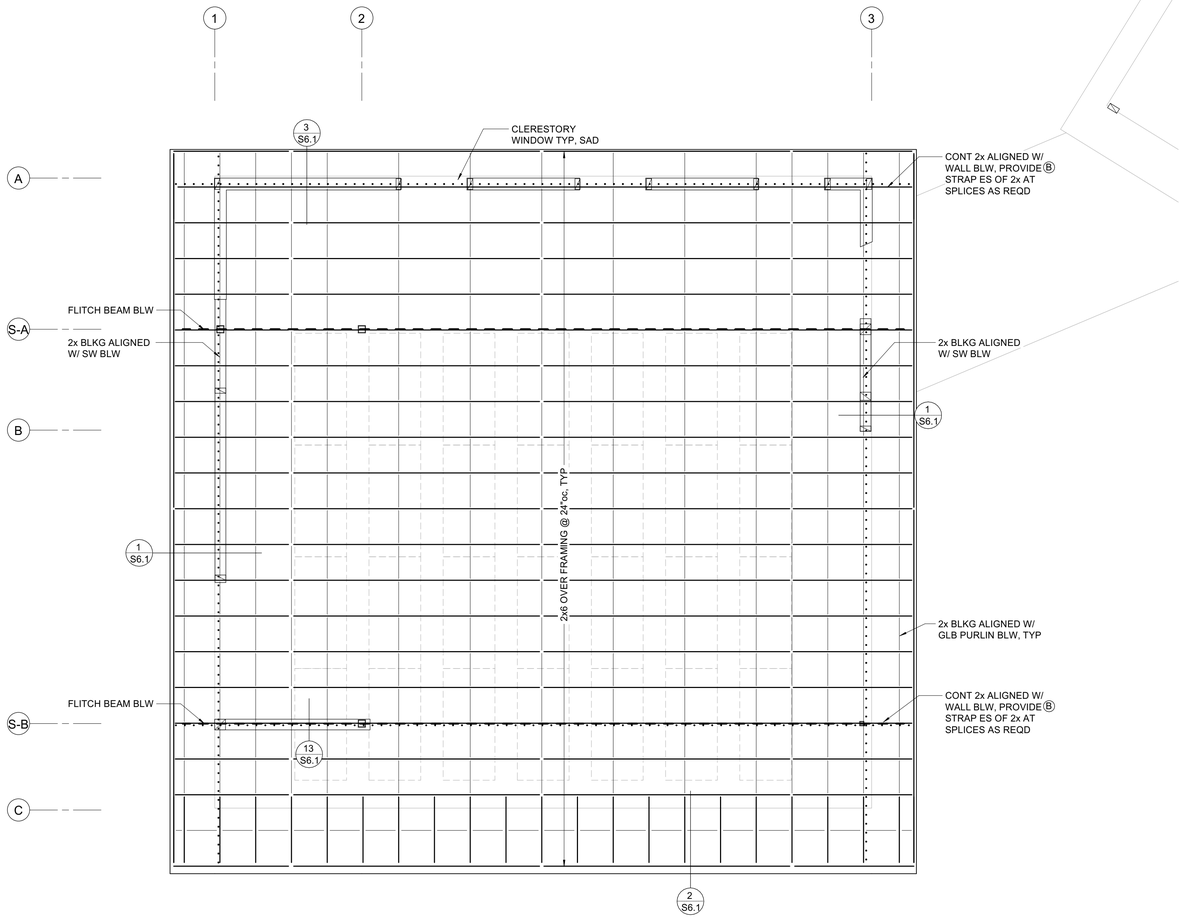
MAIN HOUSE - PRIMARY SUITE ROOF FRAMING PLAN

ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

SHEET

S2.2

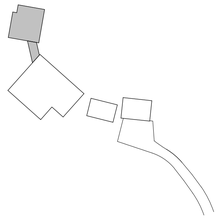
COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION



MAIN HOUSE - PRIMARY SUITE ROOF FRAMING PLAN

1/4" = 1'-0"

KEY PLAN



FRAMING PLAN NOTES:

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   PENETRATIONS THROUGH SHEAR WALLS SHALL BE PER 6/S1.2 .

   PENETRATIONS THROUGH FLOORS/ROOFS SHALL BE PER 5/S1.2 .
4. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEAR WALLS ON PLANS SHALL BE SHEATHED AS SHEAR WALL TYPE 'A' PER SHEAR WALL SCHEDULE, UNLESS NOTED OTHERWISE.

PLAN LEGEND

SYMBOL	REFERENCE DETAIL	DESCRIPTION
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JASON R. POWERS
C/VIL
No. 78130
STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

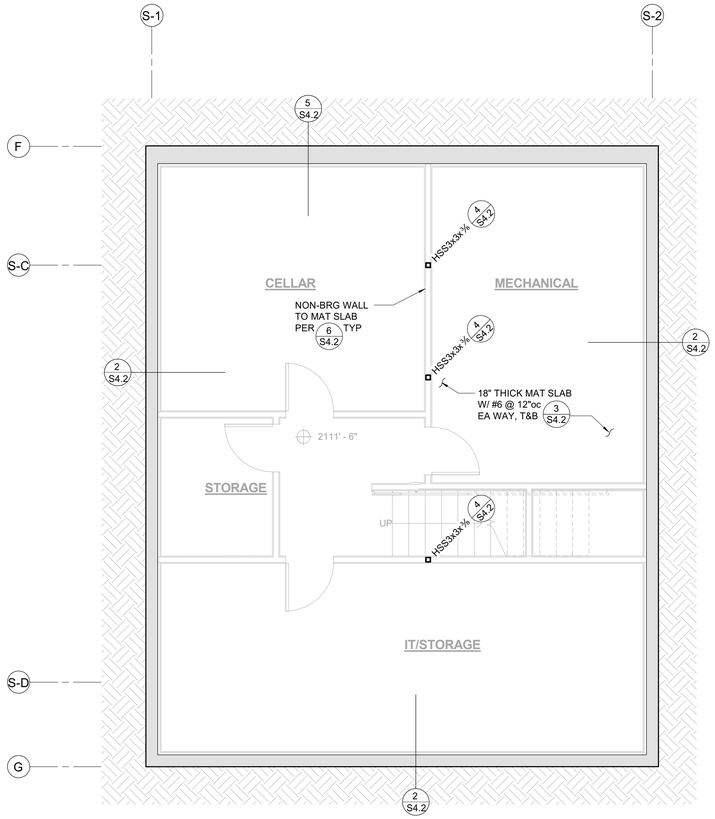
MAIN HOUSE - PRIMARY SUITE ROOF OVER FRAMING PLAN

ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

SHEET

S2.3

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION

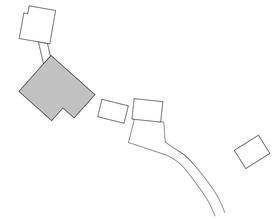


NORTH

MAIN HOUSE - GREAT ROOM BASEMENT FOUNDATION PLAN

1/4" = 1'-0"

KEY PLAN



FOUNDATION PLAN NOTES:

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   PIPES AT SLAB ON GRADE SHALL BE PER 7/S1.1.

   PIPES THROUGH WOOD FRAMING SHALL BE PER 2/S1.2 AND 5/S1.3 .
6. CONTRACTOR SHALL DETERMINE FOUNDATION STEP LOCATIONS BASED ON GEOTECHNICAL REPORT, CIVIL, ARCHITECTURAL AND LANDSCAPE DRAWINGS. STEP FOOTING PER 5/S1.1.

PLAN LEGEND

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	1/S1.2	INDICATES STRUCTURAL WALL.
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PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

MAIN HOUSE - GREAT ROOM BASEMENT FOUNDATION PLAN

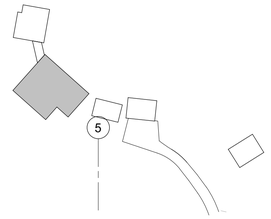
ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

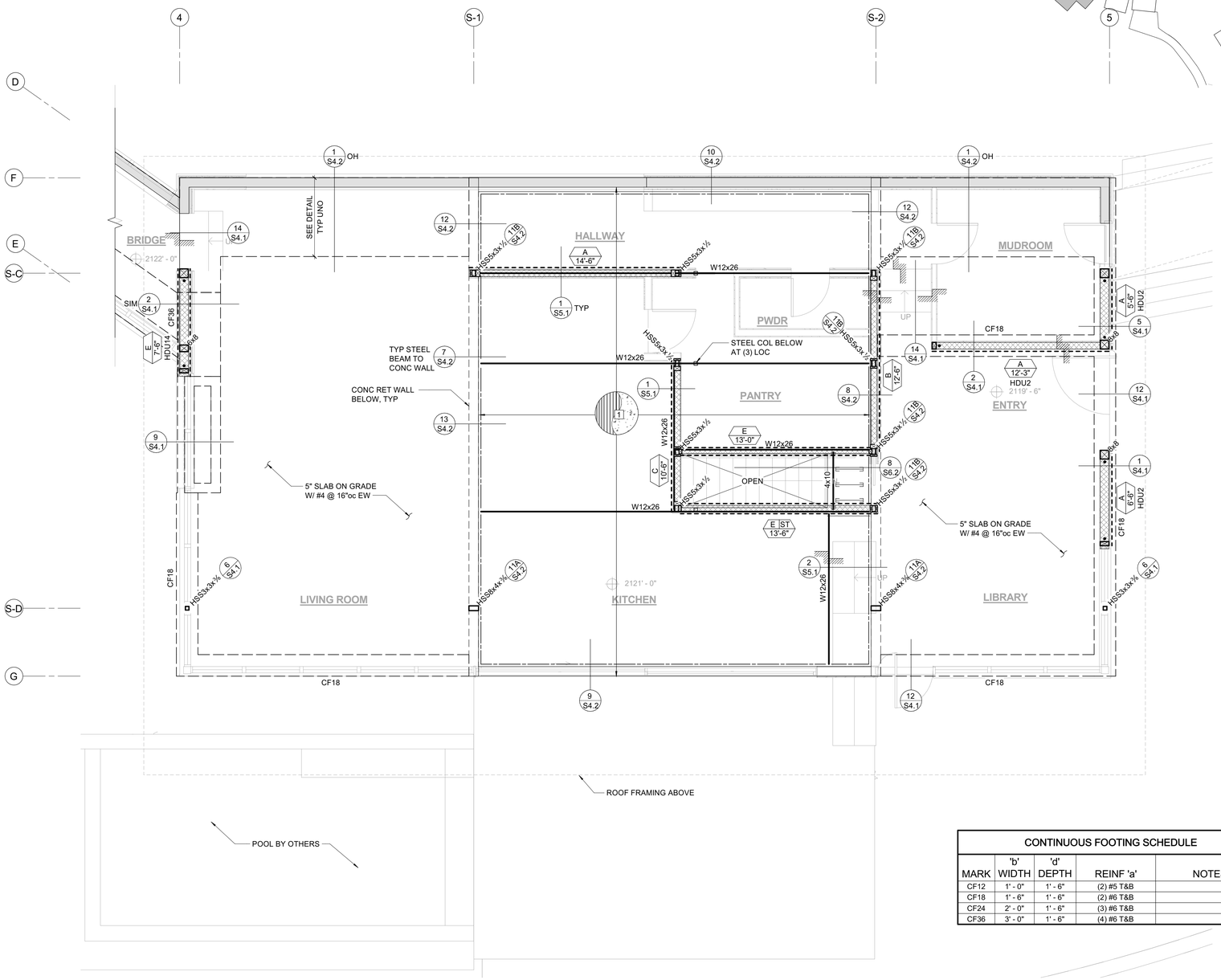
SHEET

S2.4

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION

KEY PLAN





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3. SEE DETAILS PLAN FOR CURB LOCATIONS. COORDINATE WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES. PROVIDE LONGER ANCHOR BOLTS AT CURBS PER C/S0.1 .
4. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEAR WALLS ON PLANS SHALL BE SHEATHED AS SHEAR WALL TYPE **'A'** PER SHEAR WALL SCHEDULE, UNO.
5. PLUMBING AND ELECTRICAL CONDUIT AND GROUND STRAP SHALL NOT BE LAID WITHIN FOUNDATIONS. NO UTILITY PIPES OR CONDUITS SHALL BE LOCATED THRU COLUMN FOOTINGS OR FRAME FOOTINGS. NO PIPES OR CONDUITS THRU SILL PLATES SHALL BE WITHIN 12" OF HOLDOWN BOLTS. NO MECHANICAL, ELECTRICAL, OR PLUMBING OPENINGS SHALL BE LOCATED IN SHEAR WALLS UNLESS SHOWN AND DETAILED ON THE STRUCTURAL DRAWINGS. NO VERTICAL OR HORIZONTAL PIPES OR CONDUITS SHALL BE LOCATED THROUGH STEEL FRAMES, STEEL COLUMNS, OR STEEL BASE PLATES. PROVIDE FURRING AND/OR THICKENED CONCRETE WHERE REQUIRED TO CLEAR UTILITY SYSTEMS. NOTIFY STRUCTURAL ENGINEER/ARCHITECT PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

   PIPES THROUGH FOOTINGS SHALL BE PER 2/S1.1 AND 3/S1.1 .

   PIPES PARALLEL TO FOOTINGS SHALL BE PER 4/S1.1.

   PIPES AT SLAB ON GRADE SHALL BE PER 7/S1.1.

   PIPES THROUGH WOOD FRAMING SHALL BE PER 2/S1.2 AND 5/S1.3 .
6. CONTRACTOR SHALL DETERMINE FOUNDATION STEP LOCATIONS BASED ON GEOTECHNICAL REPORT, CIVIL, ARCHITECTURAL AND LANDSCAPE DRAWINGS. STEP FOOTING PER 5/S1.1 .

PLAN LEGEND

SYMBOL	REFERENCE DETAIL	DESCRIPTION
	1/S1.2	INDICATES STRUCTURAL WALL.
	1/S1.2	INDICATES STRUCTURAL WALL BELOW.
A 10'-0" HDUx	7/S1.2 F/S0.1	INDICATES SHEAR WALL TYPE AND MINIMUM WALL LENGTH. SYMBOL LOCATION INDICATES SHEATHED FACE OF WALL UNLESS NOTED OTHERWISE. "HDUx" INDICATES SIMPSON HOLDOWN AT EACH END UNO.
A ST 20'-0" HDUx	12/S1.2	INDICATES STRAPPED SHEAR WALL WITH TYPE AND MINIMUM OVERALL WALL LENGTH, SEE ARCHITECTURAL DRAWINGS FOR OPENINGS. "HDUx" INDICATES SIMPSON HOLDOWN AT EACH END UNO.
	E/S0.1	INDICATES WOOD POST.
	E/S0.1	INDICATES WOOD POST BELOW.
•	8/S1.2	INDICATES POST WITH HOLDOWN. POSTS WITH HOLDOWN ARE FULL HEIGHT FROM SILL TO TOP PLATE.
	6/S1.3	INDICATES STEEL COLUMN. LOCATE COLUMN AT ℄ OF WALL FRAMING (EACH WAY AS OCCURS) UNO.
		INDICATES FOUNDATION.
CF24		INDICATES CONTINUOUS FOOTING SIZE AND REINFORCING PER SCHEDULE.
F2.0		INDICATES PAD FOOTING SIZE AND REINFORCING PER SCHEDULE.
DS	8/S1.1 9/S1.1	INDICATES DEPRESSED SLAB, SEE ARCHITECTURAL AND PLUMBING DRAWINGS FOR COMPLETE LOCATIONS, DEPTH AND SLOPE INFORMATION.
		INDICATES STEP IN ELEVATION, SEE ARCHITECTURAL DRAWINGS.
A 3 2'-8"	7/S1.2	INDICATES SHEAR WALL TYPE, MINIMUM NUMBER OF SILL BOLTS (IN ADDITION TO HOLDOWN BOLTS) AND MINIMUM WALL LENGTH.
88		INDICATES GRIDLINE AT FACE OF STUD.
1 S3.1		INDICATES ELEVATION.
		INDICATES CONCRETE WALL.
1	1/S1.5	INDICATES METAL DECK (WITH CONCRETE FILL AS OCCURS) AND DIRECTION OF DECK SPAN.
W16x26 (12) C=1"	4/S1.5	INDICATES BEAM SIZE, (NUMBER OF WELDED STUDS) AND CAMBER. PROVIDE STUDS @ 24"oc MAX SPACING AT ALL BEAMS SUPPORTING CONCRETE FILL OVER METAL DECK, UNLESS NOTED OTHERWISE. ADD STUDS AS REQUIRED. (NS) INDICATES NO STUDS. WHERE NO CAMBER IS SPECIFIED FABRICATE BEAM WITH NATURAL CAMBER UP.

CONTINUOUS FOOTING SCHEDULE

MARK	'b' WIDTH	'd' DEPTH	REINF 'a'	NOTES
CF12	1' - 0"	1' - 6"	(2) #5 T&B	
CF18	1' - 6"	1' - 6"	(2) #6 T&B	
CF24	2' - 0"	1' - 6"	(3) #6 T&B	
CF36	3' - 0"	1' - 6"	(4) #6 T&B	

SHEAR WALL SCHEDULE

SW	APA RATED EXP 1 SHEATHING	NAILING (PEN)	ANCHORAGE: ¾"Ø BOLT FDN 2x SILL	ANCHORAGE: ¾"Ø BOLT FDN 3x SILL	ANCHORAGE: AT FRAMING [2] 16d	ANCHORAGE: AT FRAMING [2] A35	ANCHORAGE: AT FRAMING [2] SCREW [1]	REMARKS: AT SAWN STUD	REMARKS: AT LVL STUD
A	15/32 " (32/16) OSB	10d @ 6"oc	32"oc	48"oc	8"oc	24"oc	16"oc		
B	15/32 " (32/16) OSB	10d @ 4"oc	24"oc	32"oc	4"oc	16"oc	12"oc	3x MIN AT ALL ADJOINING PANEL EDGES	(2) 1¾ STUD OR 2½" MIN STUD AT ADJOINING PANEL EDGES
C	15/32 " (32/16) OSB	10d @ 3"oc	16"oc	24"oc	4"oc	12"oc	8"oc		
D	15/32 " (32/16) OSB	10d @ 2"oc	-	16"oc	(2) ROWS @ 3"oc	8"oc	6"oc		(2) 1¾ STUD AT ADJOINING PANEL EDGES, SINGLE MEMBER NOT ACCEPTABLE
E	15/32 " (32/16) OSB **BOTH SIDES**	10d @ 2"oc	-	12"oc	(2) ROWS @ 2"oc	6"oc	(2) ROWS @ 6"oc		

NOTES:
1. 2x SILL: SDS¼x4½" OR SDWS 0.22"x4". AT 3x SILL : SDS¼x6" OR SDWS 0.22"x6"
2. FOR SCREW @ 6"oc OR LESS & DBL ROW OF ANCHORAGE PROVIDE 4x OR EQUIVALENT SB/RIM BLW. AT DBL ROW STGR ROWS TYPICAL.

MAIN HOUSE - GREAT ROOM FOUNDATION PLAN

1/4" = 1'-0"

NORTH

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Revision Schedule

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REGISTERED PROFESSIONAL ENGINEER
JASON R. POWERS
CIVIL
No. 78130
STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION

SHEET DESCRIPTION

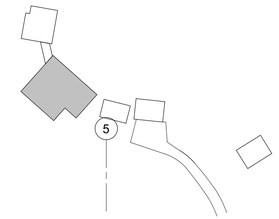
MAIN HOUSE - GREAT ROOM FOUNDATION PLAN

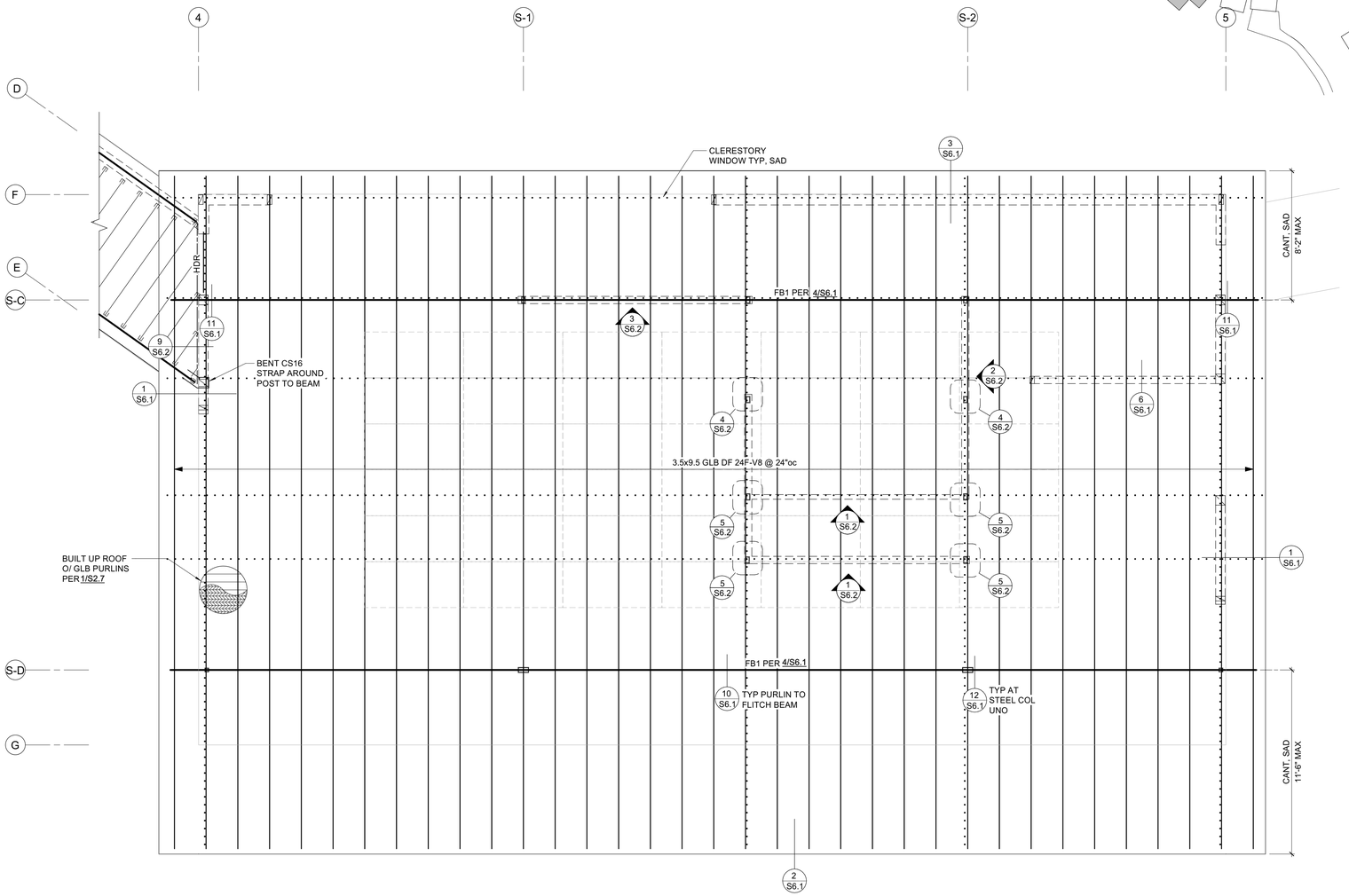
ENGR: EA
DATE: MAY 16, 2025
PM: JMR

SHEET

S2.5

KEY PLAN





MAIN HOUSE - GREAT ROOM ROOF FRAMING PLAN

1/4" = 1'-0"

FRAMING PLAN NOTES:

1. REFER TO SHEETS S0.1, S0.2, S1.1 - S1.5 FOR GENERAL NOTES AND TYPICAL DETAILS. THE FOLLOWING DETAIL REFERENCES ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL GENERAL NOTES AND TYPICAL DETAIL SHEETS NOTED ABOVE ARE APPLICABLE AND SHALL BE FOLLOWED.
2. DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
3. MECHANICAL, ELECTRICAL AND PLUMBING PENETRATIONS THROUGH WALLS, ROOFS OR FLOORS SHALL BE PER REFERENCES BELOW UNLESS SHOWN AND DETAILED OTHERWISE ON THE STRUCTURAL PLANS. NOTIFY ARCHITECT/ENGINEER PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

   PENETRATIONS THROUGH SHEAR WALLS SHALL BE PER 6/S1.2 .

   PENETRATIONS THROUGH FLOORS/ROOFS SHALL BE PER 5/S1.2 .
4. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEAR WALLS ON PLANS SHALL BE SHEATHED AS SHEAR WALL TYPE 'A' PER SHEAR WALL SCHEDULE, UNLESS NOTED OTHERWISE.

PLAN LEGEND

SYMBOL	REFERENCE DETAIL	DESCRIPTION
	1/S1.2	INDICATES STRUCTURAL WALL BELOW.
	E/S0.1	INDICATES WOOD POST BELOW.
	6/S1.3	INDICATES STEEL COLUMN BELOW.
3½x12 GLB C=1"	E/S0.1	INDICATES GLULAM BEAM SIZE AND CAMBER. WHERE NO CAMBER IS SPECIFIED SEE WOOD FRAMING NOTES FOR TYPICAL GLULAM BEAM CAMBER.
	11/S1.2	INDICATES PANEL EDGE NAILING ALONG FULL LENGTH OF MEMBER.
	E/S0.1	INDICATES HANGER.
		INDICATES LEDGER. SEE PLAN FOR SIZE AND ANCHORAGE.
88		INDICATES GRIDLINE AT FACE OF STUD.
1 S3.1		INDICATES ELEVATION.
MU 1,000#	8/S1.3	INDICATES APPROXIMATE LOCATION, SIZE AND MAXIMUM WEIGHT OF MECHANICAL UNIT. SEE MECHANICAL DRAWINGS FOR ANCHORAGE AND ADDITIONAL INFORMATION.
		INDICATES STEP IN ELEVATION, SEE ARCHITECTURAL DRAWINGS.
A	1/S1.3	INDICATES TOP PLATE SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE 'A' IF NOT NOTED ON PLANS.
A	2/S1.3	INDICATES LEDGER/RIM SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE 'A' IF NOT NOTED ON PLANS.
A 4'-0"	3/S1.3	INDICATES TIE STRAP. SEE SCHEDULE FOR STRAP, NAILING AND LENGTH.
		INDICATES CONCRETE WALL.

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REGISTERED PROFESSIONAL ENGINEER
JASON R. POWERS
CIVIL
No. 76130
STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

MAIN HOUSE - GREAT ROOM ROOF FRAMING PLAN

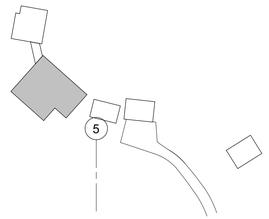
ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

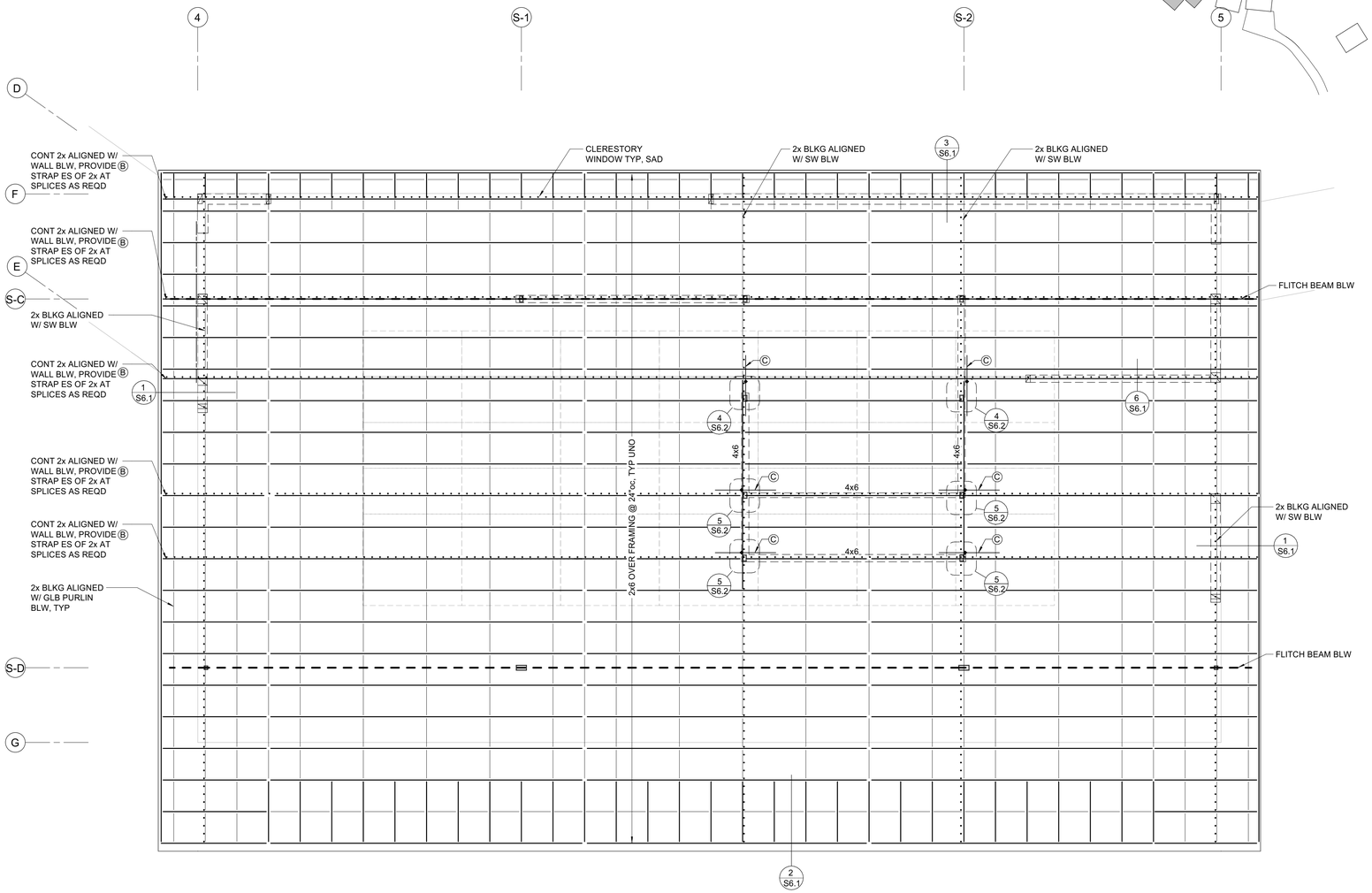
SHEET

S2.6

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION

KEY PLAN





MAIN HOUSE - GREAT ROOM ROOF OVER FRAMING PLAN

1/4" = 1'-0"

FRAMING PLAN NOTES:

1. REFER TO SHEETS S0.1, S0.2, S1.1 - S1.5 FOR GENERAL NOTES AND TYPICAL DETAILS. THE FOLLOWING DETAIL REFERENCES ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL GENERAL NOTES AND TYPICAL DETAIL SHEETS NOTED ABOVE ARE APPLICABLE AND SHALL BE FOLLOWED.
2. DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
3. MECHANICAL, ELECTRICAL AND PLUMBING PENETRATIONS THROUGH WALLS, ROOFS OR FLOORS SHALL BE PER REFERENCES BELOW UNLESS SHOWN AND DETAILED OTHERWISE ON THE STRUCTURAL PLANS. NOTIFY ARCHITECT/ENGINEER PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

   PENETRATIONS THROUGH SHEAR WALLS SHALL BE PER 6/S1.2 .

   PENETRATIONS THROUGH FLOORS/ROOFS SHALL BE PER 5/S1.2 .
4. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEAR WALLS ON PLANS SHALL BE SHEATHED AS SHEAR WALL TYPE 'A' PER SHEAR WALL SCHEDULE, UNLESS NOTED OTHERWISE.

PLAN LEGEND

SYMBOL	REFERENCE DETAIL	DESCRIPTION
	1/S1.2	INDICATES STRUCTURAL WALL BELOW.
	E/S0.1	INDICATES WOOD POST BELOW.
	6/S1.3	INDICATES STEEL COLUMN BELOW.
3 1/4x12 GLB C=1"	E/S0.1	INDICATES GLULAM BEAM SIZE AND CAMBER. WHERE NO CAMBER IS SPECIFIED SEE WOOD FRAMING NOTES FOR TYPICAL GLULAM BEAM CAMBER.
	11/S1.2	INDICATES PANEL EDGE NAILING ALONG FULL LENGTH OF MEMBER.
	E/S0.1	INDICATES HANGER.
		INDICATES LEDGER. SEE PLAN FOR SIZE AND ANCHORAGE.
88		INDICATES GRIDLINE AT FACE OF STUD.
1 S3.1		INDICATES ELEVATION.
MU 1,000#	8/S1.3	INDICATES APPROXIMATE LOCATION, SIZE AND MAXIMUM WEIGHT OF MECHANICAL UNIT. SEE MECHANICAL DRAWINGS FOR ANCHORAGE AND ADDITIONAL INFORMATION.
		INDICATES STEP IN ELEVATION, SEE ARCHITECTURAL DRAWINGS.
A	1/S1.3	INDICATES TOP PLATE SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE 'A' IF NOT NOTED ON PLANS.
A	2/S1.3	INDICATES LEDGER/RIM SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE 'A' IF NOT NOTED ON PLANS.
A 4'-0"	3/S1.3	INDICATES TIE STRAP. SEE SCHEDULE FOR STRAP, NAILING AND LENGTH.
		INDICATES CONCRETE WALL.

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REGISTERED PROFESSIONAL ENGINEER
JASON R. POWERS
C/VIL
No. 78130
STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

MAIN HOUSE - GREAT ROOM ROOF OVER FRAMING PLAN

ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

SHEET

S2.7

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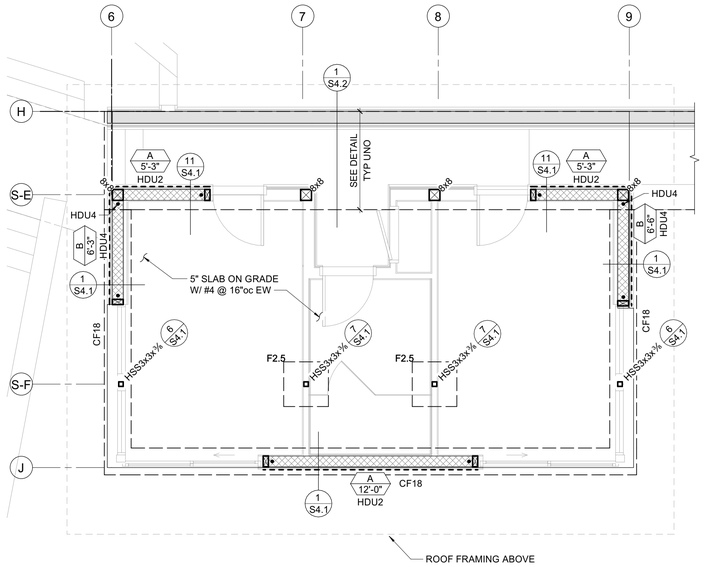
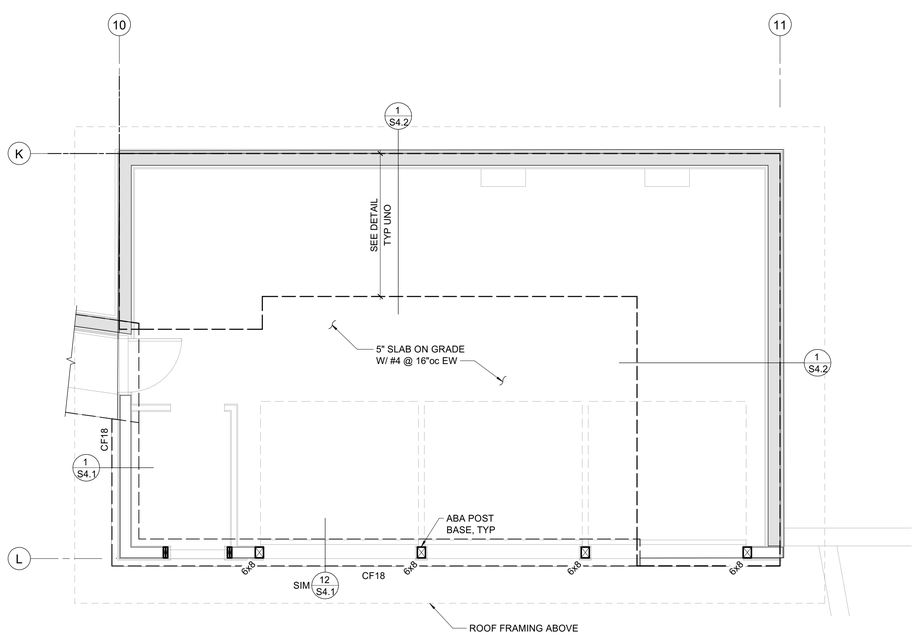


NORTH

MAIN HOUSE - BEDROOMS FOUNDATION PLAN

1/4" = 1'-0"



NORTH

MAIN HOUSE - GARAGE FOUNDATION PLAN

1/4" = 1'-0"

FOUNDATION & FRAMING PLAN NOTES:

1. REFER TO SHEETS S0.1, S0.2, S1.1 - S1.5 FOR GENERAL NOTES AND TYPICAL DETAILS. THE FOLLOWING DETAIL REFERENCES ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL GENERAL NOTES AND TYPICAL DETAIL SHEETS NOTED ABOVE ARE APPLICABLE AND SHALL BE FOLLOWED.
2. DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
3. SEE DETAILS FOR CURB LOCATIONS. COORDINATE WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES. PROVIDE LONGER ANCHOR BOLTS AT CURBS PER C/S0.1 .
4. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEAR WALLS ON PLANS SHALL BE SHEATHED AS SHEAR WALL TYPE 'A' PER SHEAR WALL SCHEDULE, UNO.
5. PLUMBING AND ELECTRICAL CONDUIT AND GROUND STRAP SHALL NOT BE LAID WITHIN FOUNDATIONS. NO UTILITY PIPES OR CONDUITS SHALL BE LOCATED THRU COLUMN FOOTINGS OR FRAME FOOTINGS. NO PIPES OR CONDUITS THRU SILL PLATES SHALL BE WITHIN 12" OF HOLDOWN BOLTS. NO MECHANICAL, ELECTRICAL, OR PLUMBING OPENINGS SHALL BE LOCATED IN SHEAR WALLS UNLESS SHOWN AND DETAILED ON THE STRUCTURAL DRAWINGS. NO VERTICAL OR HORIZONTAL PIPES OR CONDUITS SHALL BE LOCATED THROUGH STEEL FRAMES, STEEL COLUMNS, OR STEEL BASE PLATES. PROVIDE FURRING AND/OR THICKENED CONCRETE WHERE REQUIRED TO CLEAR UTILITY SYSTEMS. NOTIFY STRUCTURAL ENGINEER/ARCHITECT PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

   PIPES THROUGH FOOTINGS SHALL BE PER 2/S1.1 AND 3/S1.1 .

   PIPES PARALLEL TO FOOTINGS SHALL BE PER 4/S1.1.

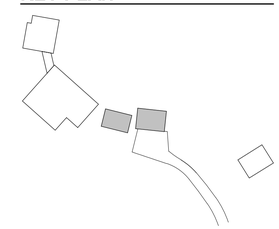
   PIPES AT SLAB ON GRADE SHALL BE PER 7/S1.1.

   PIPES THROUGH WOOD FRAMING SHALL BE PER 2/S1.2 AND 5/S1.3 .
6. MECHANICAL, ELECTRICAL AND PLUMBING PENETRATIONS THROUGH WALLS, ROOFS OR FLOORS SHALL BE PER REFERENCES BELOW UNLESS SHOWN AND DETAILED OTHERWISE ON THE STRUCTURAL PLANS. NOTIFY ARCHITECT/ENGINEER PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

   PENETRATIONS THROUGH SHEAR WALLS SHALL BE PER 6/S1.2 .

   PENETRATIONS THROUGH FLOORS/ROOFS SHALL BE PER 5/S1.2 .
7. CONTRACTOR SHALL DETERMINE FOUNDATION STEP LOCATIONS BASED ON GEOTECHNICAL REPORT, CIVIL, ARCHITECTURAL AND LANDSCAPE DRAWINGS. STEP FOOTING PER 5/S1.1.

KEY PLAN



PLAN LEGEND

SYMBOL	REFERENCE DETAIL	DESCRIPTION
	1/S1.2	INDICATES STRUCTURAL WALL.
A 10'-0" HDUx	7/S1.2 F/S0.1	INDICATES SHEAR WALL TYPE AND MINIMUM WALL LENGTH. SYMBOL LOCATION INDICATES SHEATHED FACE OF WALL UNLESS NOTED OTHERWISE. "HDUx" INDICATES SIMPSON HOLDOWN AT EACH END UNO.
A ST 20'-0" HDUx	12/S1.2	INDICATES STRAPPED SHEAR WALL WITH TYPE AND MINIMUM OVERALL WALL LENGTH, SEE ARCHITECTURAL DRAWINGS FOR OPENINGS. "HDUx" INDICATES SIMPSON HOLDOWN AT EACH END UNO.
	E/S0.1	INDICATES WOOD POST.
	8/S1.2	INDICATES POST WITH HOLDOWN. POSTS WITH HOLDOWN ARE FULL HEIGHT FROM SILL TO TOP PLATE.
	6/S1.3	INDICATES STEEL COLUMN. LOCATE COLUMN AT ℄ OF WALL FRAMING (EACH WAY AS OCCURS) UNO.
		INDICATES FOUNDATION.
CF24		INDICATES CONTINUOUS FOOTING SIZE AND REINFORCING PER SCHEDULE.
F2.0	1/S1.2	INDICATES PAD FOOTING SIZE AND REINFORCING PER SCHEDULE.
DS	8/S1.1 9/S1.1	INDICATES DEPRESSED SLAB, SEE ARCHITECTURAL AND PLUMBING DRAWINGS FOR COMPLETE LOCATIONS, DEPTH AND SLOPE INFORMATION.
		INDICATES STEP IN ELEVATION, SEE ARCHITECTURAL DRAWINGS.
88		INDICATES GRIDLINE AT FACE OF STUD.
1 S3.1		INDICATES ELEVATION.
		INDICATES CONCRETE WALL.
3½x12 GLB C=1"	E/S0.1	INDICATES GLULAM BEAM SIZE AND CAMBER. WHERE NO CAMBER IS SPECIFIED SEE WOOD FRAMING NOTES FOR TYPICAL GLULAM BEAM CAMBER.
	11/S1.2	INDICATES PANEL EDGE NAILING ALONG FULL LENGTH OF MEMBER.
	E/S0.1	INDICATES HANGER.
		INDICATES STRUCTURAL WALL BELOW.
		INDICATES LEDGER. SEE PLAN FOR SIZE AND ANCHORAGE.
MU 1,000#	8/S1.3	INDICATES APPROXIMATE LOCATION, SIZE AND MAXIMUM WEIGHT OF MECHANICAL UNIT. SEE MECHANICAL DRAWINGS FOR ANCHORAGE AND ADDITIONAL INFORMATION.
A	1/S1.3	INDICATES TOP PLATE SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE 'A' IF NOT NOTED ON PLANS.
A	2/S1.3	INDICATES LEDGER/RIM SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE 'A' IF NOT NOTED ON PLANS.
A 4'-0"	3/S1.3	INDICATES TIE STRAP. SEE SCHEDULE FOR STRAP, NAILING AND LENGTH.

SHEAR WALL SCHEDULE

SW	APA RATED EXP 1 SHEATHING	NAILING (PEN)	ANCHORAGE: ½"ø BOLT FDN 2x SILL	ANCHORAGE: ½"ø BOLT FDN 3x SILL	ANCHORAGE: AT FRAMING [2] 16d	ANCHORAGE: AT FRAMING [2] A35	ANCHORAGE: AT FRAMING [2] SCREW [1]	REMARKS: AT SAWN STUD	REMARKS: AT LVL STUD
A	15/32" (32/16) OSB	10d @ 6"oc	32"oc	48"oc	8"oc	24"oc	16"oc		
B	15/32" (32/16) OSB	10d @ 4"oc	24"oc	32"oc	4"oc	16"oc	12"oc	3x MIN AT ALL ADJOINING PANEL EDGES	(2) 1¾ STUD OR 2½" MIN STUD AT ADJOINING PANEL EDGES
C	15/32" (32/16) OSB	10d @ 3"oc	16"oc	24"oc	4"oc	12"oc	8"oc		
D	15/32" (32/16) OSB	10d @ 2"oc	-	16"oc	(2) ROWS @ 3"oc	8"oc	6"oc		(2) 1¾ STUD AT ADJOINING PANEL EDGES, SINGLE MEMBER NOT ACCEPTABLE
E	15/32" (32/16) OSB BOTH SIDES	10d @ 2"oc	-	12"oc	(2) ROWS @ 2"oc	6"oc	(2) ROWS @ 6"oc		

NOTES:
1. 2x SILL: SDS¼x4½" OR SDWS 0.22"x4", AT 3x SILL : SDS¼x6" OR SDWS 0.22"x6"
2. FOR SCREW @ 6"oc OR LESS & DBL ROW OF ANCHORAGE PROVIDE 4x OR EQUIVALENT SB/RIM BLW. AT DBL ROW STGR ROWS TYPICAL.

CONTINUOUS FOOTING SCHEDULE

MARK	'b' WIDTH	'd' DEPTH	REINF 'a'	NOTES
CF12	1' - 0"	1' - 6"	(2) #5 T&B	
CF18	1' - 6"	1' - 6"	(2) #6 T&B	
CF24	2' - 0"	1' - 6"	(3) #6 T&B	
CF36	3' - 0"	1' - 6"	(4) #6 T&B	

PAD FOOTING SCHEDULE

MARK	SIZE	REINFORCING
F2.5	30" SQ x 18" DEEP	(3) #5 T&B EW
F3.0	36" SQ x 18" DEEP	(4) #5 T&B EW

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION

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Revision Schedule

#	Revision Description	Date

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san francisco ca 94111
zfa job no.25013
zfa.com
415.243.4091
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REGISTERED PROFESSIONAL ENGINEER JASON R. POWERS CIVIL No. 78130 STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL, CARMEL, CA 93923

SHEET DESCRIPTION

MAIN HOUSE - BEDROOMS AND GARAGE FOUNDATION PLAN

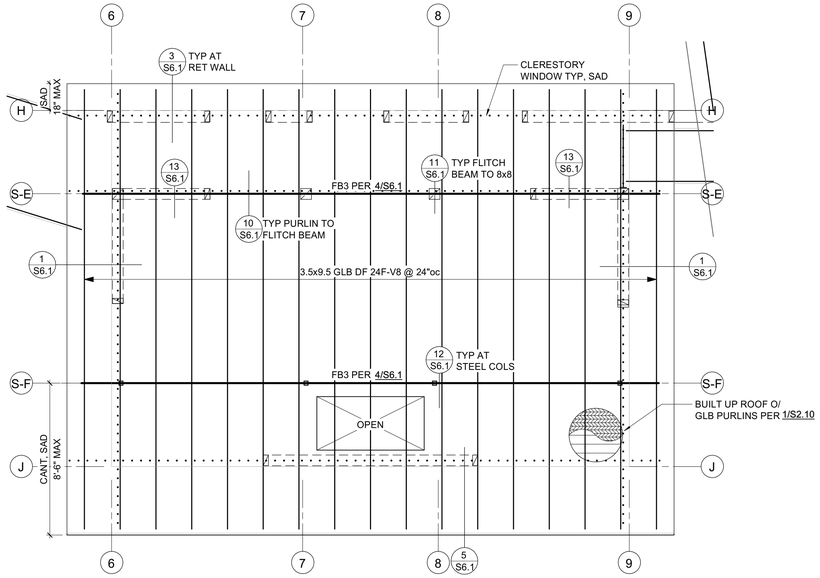
ENGR: EA

PM: JMR

DATE: MAY 16, 2025

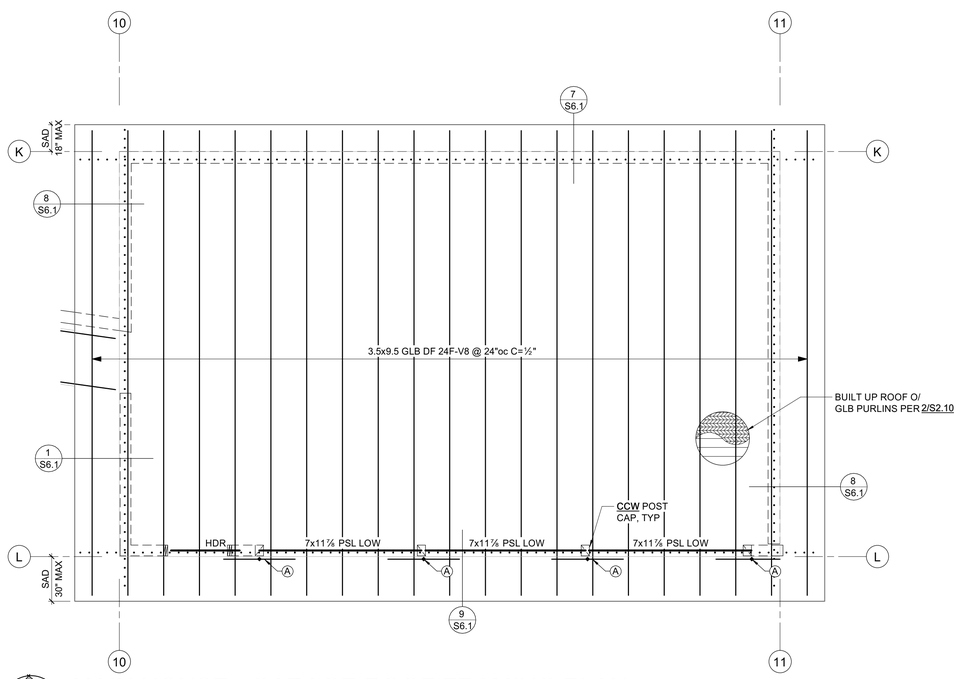
SHEET

S2.8



MAIN HOUSE - BEDROOMS ROOF FRAMING PLAN

1/4" = 1'-0"



MAIN HOUSE - GARAGE ROOF FRAMING PLAN

1/4" = 1'-0"

FRAMING PLAN NOTES:

1. REFER TO SHEETS S0.1, S0.2, S1.1 - S1.5 FOR GENERAL NOTES AND TYPICAL DETAILS. THE FOLLOWING DETAIL REFERENCES ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL GENERAL NOTES AND TYPICAL DETAIL SHEETS NOTED ABOVE ARE APPLICABLE AND SHALL BE FOLLOWED.
2. DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
3. MECHANICAL, ELECTRICAL AND PLUMBING PENETRATIONS THROUGH WALLS, ROOFS OR FLOORS SHALL BE PER REFERENCES BELOW UNLESS SHOWN AND DETAILED OTHERWISE ON THE STRUCTURAL PLANS. NOTIFY ARCHITECT/ENGINEER PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

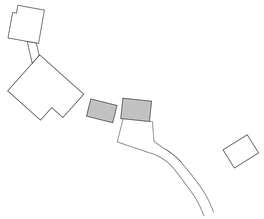
   PENETRATIONS THROUGH SHEAR WALLS SHALL BE PER 6/S1.2 .

   PENETRATIONS THROUGH FLOORS/ROOFS SHALL BE PER 5/S1.2 .
4. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEAR WALLS ON PLANS SHALL BE SHEATHED AS SHEAR WALL TYPE 'A' PER SHEAR WALL SCHEDULE, UNLESS NOTED OTHERWISE.

PLAN LEGEND

SYMBOL	REFERENCE DETAIL	DESCRIPTION
	1/S1.2	INDICATES STRUCTURAL WALL BELOW.
	E/S0.1	INDICATES WOOD POST BELOW.
	6/S1.3	INDICATES STEEL COLUMN BELOW.
3¼x12 GLB C=1"	E/S0.1	INDICATES GLULAM BEAM SIZE AND CAMBER. WHERE NO CAMBER IS SPECIFIED SEE WOOD FRAMING NOTES FOR TYPICAL GLULAM BEAM CAMBER.
	11/S1.2	INDICATES PANEL EDGE NAILING ALONG FULL LENGTH OF MEMBER.
	E/S0.1	INDICATES HANGER.
		INDICATES LEDGER. SEE PLAN FOR SIZE AND ANCHORAGE.
88		INDICATES GRIDLINE AT FACE OF STUD.
1 S3.1		INDICATES ELEVATION.
MU 1,000#	8/S1.3	INDICATES APPROXIMATE LOCATION, SIZE AND MAXIMUM WEIGHT OF MECHANICAL UNIT. SEE MECHANICAL DRAWINGS FOR ANCHORAGE AND ADDITIONAL INFORMATION.
		INDICATES STEP IN ELEVATION, SEE ARCHITECTURAL DRAWINGS.
A	1/S1.3	INDICATES TOP PLATE SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE 'A' IF NOT NOTED ON PLANS.
A	2/S1.3	INDICATES LEDGER/RIM SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE 'A' IF NOT NOTED ON PLANS.
A 4'-0"	3/S1.3	INDICATES TIE STRAP. SEE SCHEDULE FOR STRAP, NAILING AND LENGTH.
		INDICATES CONCRETE WALL.

KEY PLAN



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STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

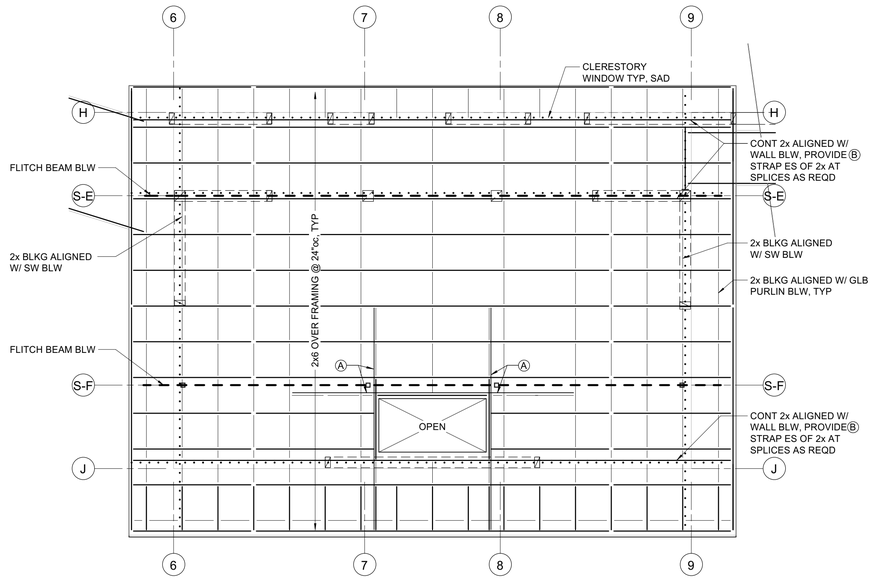
MAIN HOUSE - BEDROOMS AND GARAGE ROOF FRAMING PLAN

ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

SHEET

S2.9

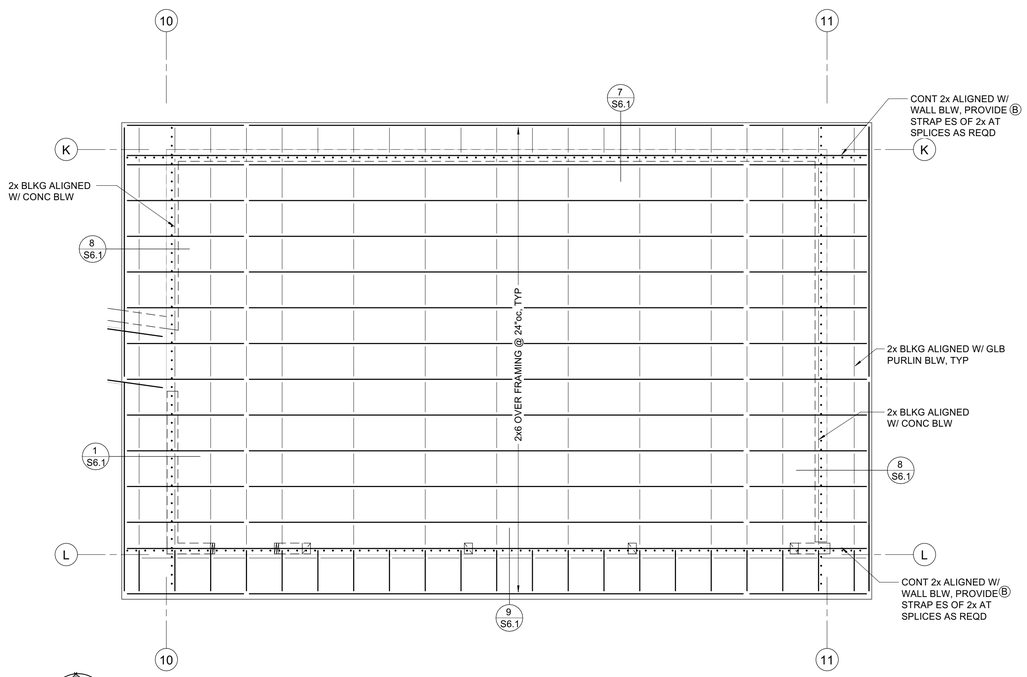
COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION



NORTH

MAIN HOUSE - BEDROOMS ROOF OVER FRAMING PLAN

1/4" = 1'-0"



NORTH

MAIN HOUSE - GARAGE ROOF OVER FRAMING PLAN

1/4" = 1'-0"

FRAMING PLAN NOTES:

1. REFER TO SHEETS S0.1, S0.2, S1.1 - S1.5 FOR GENERAL NOTES AND TYPICAL DETAILS. THE FOLLOWING DETAIL REFERENCES ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL GENERAL NOTES AND TYPICAL DETAIL SHEETS NOTED ABOVE ARE APPLICABLE AND SHALL BE FOLLOWED.
2. DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
3. MECHANICAL, ELECTRICAL AND PLUMBING PENETRATIONS THROUGH WALLS, ROOFS OR FLOORS SHALL BE PER REFERENCES BELOW UNLESS SHOWN AND DETAILED OTHERWISE ON THE STRUCTURAL PLANS. NOTIFY ARCHITECT/ENGINEER PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

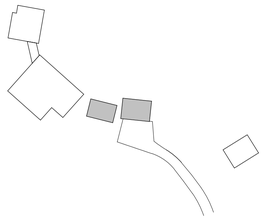
   PENETRATIONS THROUGH SHEAR WALLS SHALL BE PER 6/S1.2 .

   PENETRATIONS THROUGH FLOORS/ROOFS SHALL BE PER 5/S1.2 .
4. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEAR WALLS ON PLANS SHALL BE SHEATHED AS SHEAR WALL TYPE **'A'** PER SHEAR WALL SCHEDULE, UNLESS NOTED OTHERWISE.

PLAN LEGEND

SYMBOL	REFERENCE DETAIL	DESCRIPTION
	1/S1.2	INDICATES STRUCTURAL WALL BELOW.
	E/S0.1	INDICATES WOOD POST BELOW.
	6/S1.3	INDICATES STEEL COLUMN BELOW.
3¼x12 GLB C=1"	E/S0.1	INDICATES GLULAM BEAM SIZE AND CAMBER. WHERE NO CAMBER IS SPECIFIED SEE WOOD FRAMING NOTES FOR TYPICAL GLULAM BEAM CAMBER.
	11/S1.2	INDICATES PANEL EDGE NAILING ALONG FULL LENGTH OF MEMBER.
	E/S0.1	INDICATES HANGER.
		INDICATES LEDGER. SEE PLAN FOR SIZE AND ANCHORAGE.
88		INDICATES GRIDLINE AT FACE OF STUD.
1 S3.1		INDICATES ELEVATION.
MU 1,000#	8/S1.3	INDICATES APPROXIMATE LOCATION, SIZE AND MAXIMUM WEIGHT OF MECHANICAL UNIT. SEE MECHANICAL DRAWINGS FOR ANCHORAGE AND ADDITIONAL INFORMATION.
		INDICATES STEP IN ELEVATION, SEE ARCHITECTURAL DRAWINGS.
A	1/S1.3	INDICATES TOP PLATE SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE **'A'** IF NOT NOTED ON PLANS.
A	2/S1.3	INDICATES LEDGER/RIM SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE **'A'** IF NOT NOTED ON PLANS.
A 4"-0"	3/S1.3	INDICATES TIE STRAP. SEE SCHEDULE FOR STRAP, NAILING AND LENGTH.
		INDICATES CONCRETE WALL.

KEY PLAN



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PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

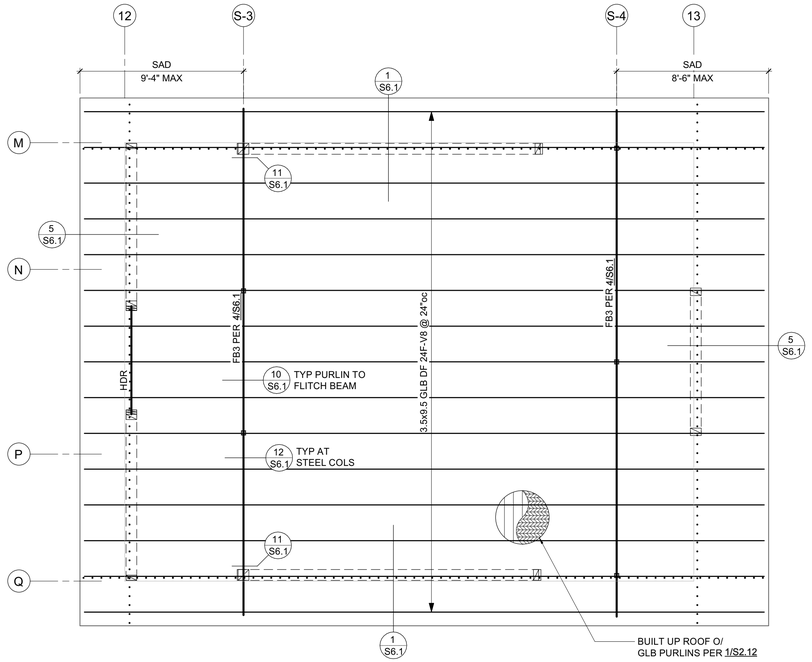
MAIN HOUSE - BEDROOMS AND GARAGE ROOF OVER FRAMING PLAN

ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

SHEET

S2.10

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION



HOME OFFICES ROOF FRAMING PLAN

1/4" = 1'-0"

FOUNDATION & FRAMING PLAN NOTES:

1. REFER TO SHEETS S0.1, S0.2, S1.1 - S1.5 FOR GENERAL NOTES AND TYPICAL DETAILS. THE FOLLOWING DETAIL REFERENCES ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL GENERAL NOTES AND TYPICAL DETAIL SHEETS NOTED ABOVE ARE APPLICABLE AND SHALL BE FOLLOWED.
2. DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
3. SEE DETAILS FOR CURB LOCATIONS. COORDINATE WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES. PROVIDE LONGER ANCHOR BOLTS AT CURBS PER C/S0.1 .
4. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEAR WALLS ON PLANS SHALL BE SHEATHED AS SHEAR WALL TYPE 'A' PER SHEAR WALL SCHEDULE, UNO.
5. PLUMBING AND ELECTRICAL CONDUIT AND GROUND STRAP SHALL NOT BE LAID WITHIN FOUNDATIONS. NO UTILITY PIPES OR CONDUITS SHALL BE LOCATED THRU COLUMN FOOTINGS OR FRAME FOOTINGS. NO PIPES OR CONDUITS THRU SILL PLATES SHALL BE WITHIN 12" OF HOLDOWN BOLTS. NO MECHANICAL, ELECTRICAL, OR PLUMBING OPENINGS SHALL BE LOCATED IN SHEAR WALLS UNLESS SHOWN AND DETAILED ON THE STRUCTURAL DRAWINGS. NO VERTICAL OR HORIZONTAL PIPES OR CONDUITS SHALL BE LOCATED THROUGH STEEL FRAMES, STEEL COLUMNS, OR STEEL BASE PLATES. PROVIDE FURRING AND/OR THICKENED CONCRETE WHERE REQUIRED TO CLEAR UTILITY SYSTEMS. NOTIFY STRUCTURAL ENGINEER/ARCHITECT PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

   PIPES THROUGH FOOTINGS SHALL BE PER 2/S1.1 AND 3/S1.1 .

   PIPES PARALLEL TO FOOTINGS SHALL BE PER 4/S1.1 .

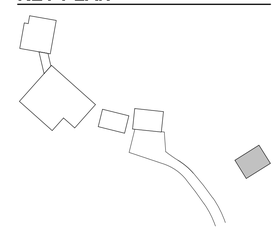
   PIPES AT SLAB ON GRADE SHALL BE PER 7/S1.1 .

   PIPES THROUGH WOOD FRAMING SHALL BE PER 2/S1.2 AND 5/S1.3 .
6. MECHANICAL, ELECTRICAL AND PLUMBING PENETRATIONS THROUGH WALLS, ROOFS OR FLOORS SHALL BE PER REFERENCES BELOW UNLESS SHOWN AND DETAILED OTHERWISE ON THE STRUCTURAL PLANS. NOTIFY ARCHITECT/ENGINEER PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

   PENETRATIONS THROUGH SHEAR WALLS SHALL BE PER 6/S1.2 .

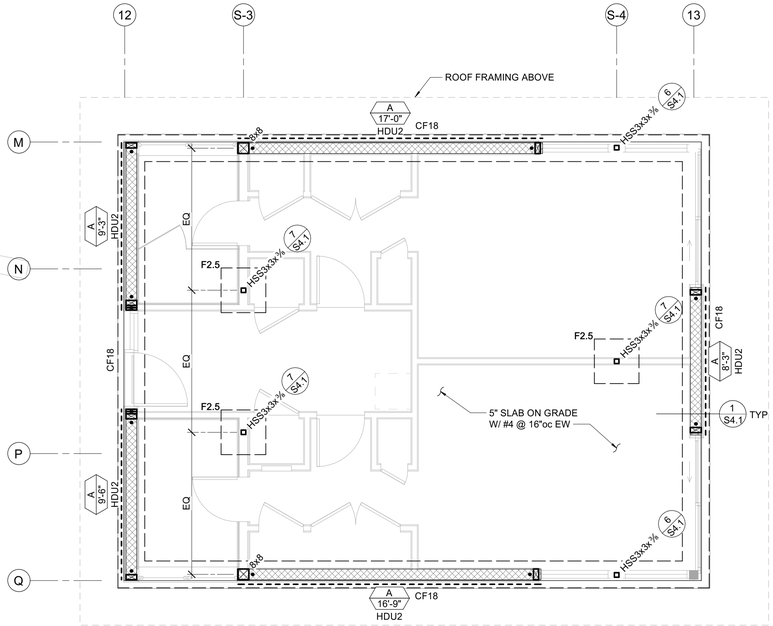
   PENETRATIONS THROUGH FLOORS/ROOFS SHALL BE PER 5/S1.2 .
7. CONTRACTOR SHALL DETERMINE FOUNDATION STEP LOCATIONS BASED ON GEOTECHNICAL REPORT, CIVIL, ARCHITECTURAL AND LANDSCAPE DRAWINGS. STEP FOOTING PER 5/S1.1 .

KEY PLAN



PLAN LEGEND

SYMBOL	REFERENCE DETAIL	DESCRIPTION
	1/S1.2	INDICATES STRUCTURAL WALL.
A 10'-0" HDUx	7/S1.2 F/S0.1	INDICATES SHEAR WALL TYPE AND MINIMUM WALL LENGTH. SYMBOL LOCATION INDICATES SHEATHED FACE OF WALL UNLESS NOTED OTHERWISE. "HDUx" INDICATES SIMPSON HOLDOWN AT EACH END UNO.
A ST 20'-0" HDUx	12/S1.2	INDICATES STRAPPED SHEAR WALL WITH TYPE AND MINIMUM OVERALL WALL LENGTH, SEE ARCHITECTURAL DRAWINGS FOR OPENINGS. "HDUx" INDICATES SIMPSON HOLDOWN AT EACH END UNO.
	E/S0.1	INDICATES WOOD POST.
	8/S1.2	INDICATES POST WITH HOLDOWN. POSTS WITH HOLDOWN ARE FULL HEIGHT FROM SILL TO TOP PLATE.
	6/S1.3	INDICATES STEEL COLUMN. LOCATE COLUMN AT ℄ OF WALL FRAMING (EACH WAY AS OCCURS) UNO.
		INDICATES FOUNDATION.
CF24		INDICATES CONTINUOUS FOOTING SIZE AND REINFORCING PER SCHEDULE.
F2.0	1/S1.2	INDICATES PAD FOOTING SIZE AND REINFORCING PER SCHEDULE.
DS	8/S1.1 9/S1.1	INDICATES DEPRESSED SLAB, SEE ARCHITECTURAL AND PLUMBING DRAWINGS FOR COMPLETE LOCATIONS, DEPTH AND SLOPE INFORMATION.
		INDICATES STEP IN ELEVATION, SEE ARCHITECTURAL DRAWINGS.
88		INDICATES GRIDLINE AT FACE OF STUD.
1 S3.1		INDICATES ELEVATION.
		INDICATES CONCRETE WALL.
3¼x12 GLB C=1"	E/S0.1	INDICATES GLULAM BEAM SIZE AND CAMBER. WHERE NO CAMBER IS SPECIFIED SEE WOOD FRAMING NOTES FOR TYPICAL GLULAM BEAM CAMBER.
	11/S1.2	INDICATES PANEL EDGE NAILING ALONG FULL LENGTH OF MEMBER.
	E/S0.1	INDICATES HANGER.
		INDICATES STRUCTURAL WALL BELOW.
		INDICATES LEDGER. SEE PLAN FOR SIZE AND ANCHORAGE.
MU 1,000#	8/S1.3	INDICATES APPROXIMATE LOCATION, SIZE AND MAXIMUM WEIGHT OF MECHANICAL UNIT. SEE MECHANICAL DRAWINGS FOR ANCHORAGE AND ADDITIONAL INFORMATION.
A	1/S1.3	INDICATES TOP PLATE SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE 'A' IF NOT NOTED ON PLANS.
A	2/S1.3	INDICATES LEDGER/RIM SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE 'A' IF NOT NOTED ON PLANS.
A 4'-0"	3/S1.3	INDICATES TIE STRAP. SEE SCHEDULE FOR STRAP, NAILING AND LENGTH.



HOME OFFICES FOUNDATION PLAN

1/4" = 1'-0"

SHEAR WALL SCHEDULE

SW	APA RATED EXP 1 SHEATHING	NAILING (PEN)	ANCHORAGE: ½"Ø BOLT FDN 2x SILL	½"Ø BOLT FDN 3x SILL	AT FRAMING 2 16d	AT FRAMING 2 A35	AT FRAMING 2 SCREW 1	REMARKS: AT SAWN STUD	REMARKS: AT LVL STUD
A	15/32 " (32/16) OSB	10d @ 6"oc	32"oc	48"oc	8"oc	24"oc	16"oc	3x MIN AT ALL ADJOINING PANEL EDGES	(2) 1¾ STUD OR 2½" MIN STUD AT ADJOINING PANEL EDGES
B	15/32 " (32/16) OSB	10d @ 4"oc	24"oc	32"oc	4"oc	16"oc	12"oc		
C	15/32 " (32/16) OSB	10d @ 3"oc	16"oc	24"oc	4"oc	12"oc	8"oc		
D	15/32 " (32/16) OSB	10d @ 2"oc	-	16"oc	(2) ROWS @ 3"oc	8"oc	6"oc		(2) 1¾ STUD AT ADJOINING PANEL EDGES, SINGLE MEMBER NOT ACCEPTABLE
E	15/32 " (32/16) OSB BOTH SIDES	10d @ 2"oc	-	12"oc	(2) ROWS @ 2"oc	6"oc	(2) ROWS @ 6"oc		

NOTES:
1. 2x SILL: SDS¼x4½" OR SDWS 0.22"x4". AT 3x SILL : SDS¼x6" OR SDWS 0.22"x6"
2. FOR SCREW @ 6"oc OR LESS & DBL ROW OF ANCHORAGE PROVIDE 4x OR EQUIVALENT SB/RIM BLW. AT DBL ROW STGR ROWS TYPICAL.

CONTINUOUS FOOTING SCHEDULE

MARK	'b' WIDTH	'd' DEPTH	REINF 'a'	NOTES
CF12	1' - 0"	1' - 6"	(2) #5 T&B	
CF18	1' - 6"	1' - 6"	(2) #6 T&B	
CF24	2' - 0"	1' - 6"	(3) #6 T&B	
CF36	3' - 0"	1' - 6"	(4) #6 T&B	

PAD FOOTING SCHEDULE

MARK	SIZE	REINFORCING
F2.5	30" SQ x 18" DEEP	(3) #5 T&B EW
F3.0	36" SQ x 18" DEEP	(4) #5 T&B EW

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SHEET DESCRIPTION

HOME OFFICES - FOUNDATION & ROOF FRAMING PLAN

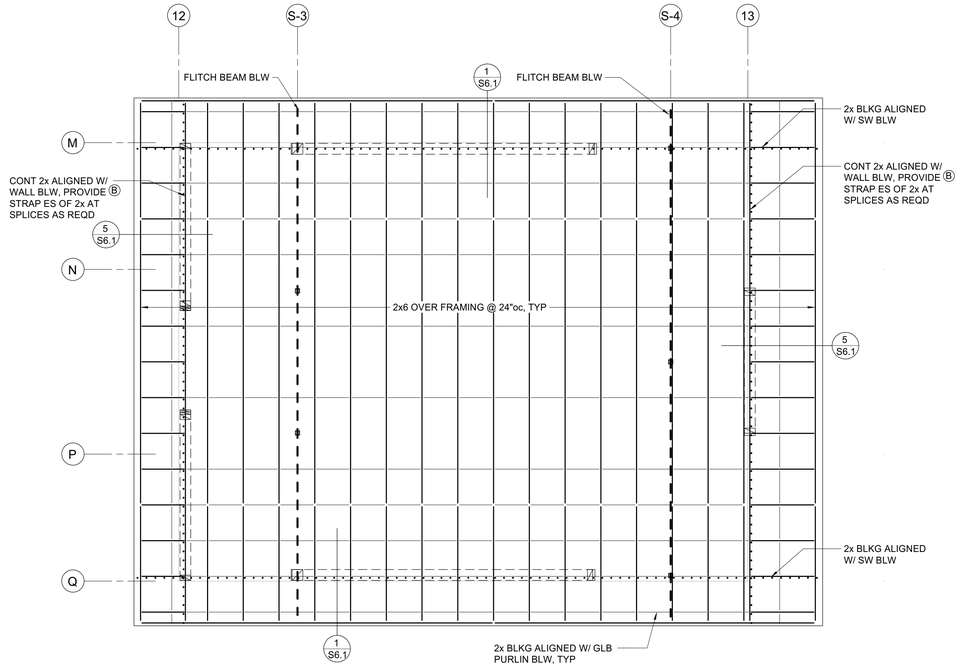
ENGR: EA

DATE: MAY 16, 2025

PM: JMR

SHEET

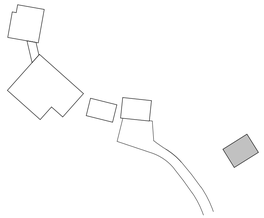
S2.11



HOME OFFICES ROOF OVER FRAMING PLAN

1/4" = 1'-0"

KEY PLAN



FRAMING PLAN NOTES:

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3. MECHANICAL, ELECTRICAL AND PLUMBING PENETRATIONS THROUGH WALLS, ROOFS OR FLOORS SHALL BE PER REFERENCES BELOW UNLESS SHOWN AND DETAILED OTHERWISE ON THE STRUCTURAL PLANS. NOTIFY ARCHITECT/ENGINEER PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

   PENETRATIONS THROUGH SHEAR WALLS SHALL BE PER 6/S1.2 .

   PENETRATIONS THROUGH FLOORS/ROOFS SHALL BE PER 5/S1.2 .
4. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEAR WALLS ON PLANS SHALL BE SHEATHED AS SHEAR WALL TYPE 'A' PER SHEAR WALL SCHEDULE, UNLESS NOTED OTHERWISE.

PLAN LEGEND

SYMBOL	REFERENCE DETAIL	DESCRIPTION
	1/S1.2	INDICATES STRUCTURAL WALL BELOW.
	E/S0.1	INDICATES WOOD POST BELOW.
	6/S1.3	INDICATES STEEL COLUMN BELOW.
3⅛x12 GLB C=1"	E/S0.1	INDICATES GLULAM BEAM SIZE AND CAMBER. WHERE NO CAMBER IS SPECIFIED SEE WOOD FRAMING NOTES FOR TYPICAL GLULAM BEAM CAMBER.
	11/S1.2	INDICATES PANEL EDGE NAILING ALONG FULL LENGTH OF MEMBER.
	E/S0.1	INDICATES HANGER.
		INDICATES LEDGER. SEE PLAN FOR SIZE AND ANCHORAGE.
88		INDICATES GRIDLINE AT FACE OF STUD.
1 S3.1		INDICATES ELEVATION.
MU 1,000#	8/S1.3	INDICATES APPROXIMATE LOCATION, SIZE AND MAXIMUM WEIGHT OF MECHANICAL UNIT. SEE MECHANICAL DRAWINGS FOR ANCHORAGE AND ADDITIONAL INFORMATION.
		INDICATES STEP IN ELEVATION, SEE ARCHITECTURAL DRAWINGS.
A	1/S1.3	INDICATES TOP PLATE SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE 'A' IF NOT NOTED ON PLANS.
A	2/S1.3	INDICATES LEDGER/RIM SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE 'A' IF NOT NOTED ON PLANS.
A 4'-0"	3/S1.3	INDICATES TIE STRAP. SEE SCHEDULE FOR STRAP, NAILING AND LENGTH.
		INDICATES CONCRETE WALL.

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Revision Schedule

#	Revision Description	Date

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601 montgomery street | suite 1450
san francisco ca 94111
zfa job no.25013
zfa.com
415.243.4091
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REGISTERED PROFESSIONAL ENGINEER
JASON R. POWERS
CIVIL
No. 78130
STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

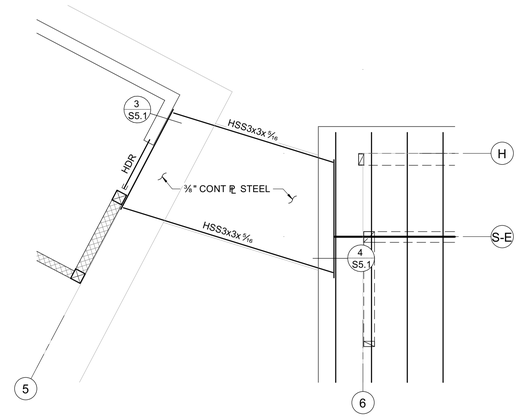
HOME OFFICES - ROOF OVER FRAMING PLAN

ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

SHEET

S2.12

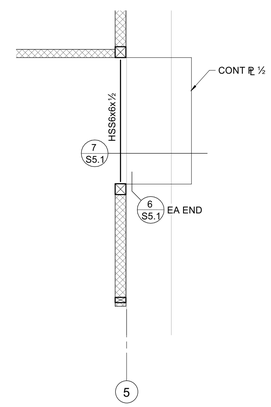
COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION



NORTH

AWNING FRAMING PLAN AT GREAT ROOM

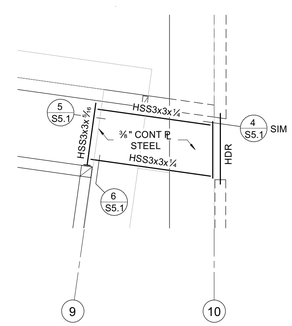
1/4" = 1'-0"



NORTH

AWNING FRAMING PLAN AT ENTRY

1/4" = 1'-0"



NORTH

AWNING FRAMING PLAN AT GARAGE

1/4" = 1'-0"

FRAMING PLAN NOTES:

1. REFER TO SHEETS S0.1, S0.2, S1.1 - S1.5 FOR GENERAL NOTES AND TYPICAL DETAILS. THE FOLLOWING DETAIL REFERENCES ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL GENERAL NOTES AND TYPICAL DETAIL SHEETS NOTED ABOVE ARE APPLICABLE AND SHALL BE FOLLOWED.
2. DIMENSIONS ARE TO FACE OF STUD UNLESS NOTED OTHERWISE. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
3. MECHANICAL, ELECTRICAL AND PLUMBING PENETRATIONS THROUGH WALLS, ROOFS OR FLOORS SHALL BE PER REFERENCES BELOW UNLESS SHOWN AND DETAILED OTHERWISE ON THE STRUCTURAL PLANS. NOTIFY ARCHITECT/ENGINEER PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

   PENETRATIONS THROUGH SHEAR WALLS SHALL BE PER 6/S1.2 .

   PENETRATIONS THROUGH FLOORS/ROOFS SHALL BE PER 5/S1.2 .
4. ALL EXTERIOR WALLS NOT DESIGNATED AS SHEAR WALLS ON PLANS SHALL BE SHEATHED AS SHEAR WALL TYPE **'A'** PER SHEAR WALL SCHEDULE, UNLESS NOTED OTHERWISE.

PLAN LEGEND

SYMBOL	REFERENCE DETAIL	DESCRIPTION
	1/S1.2	INDICATES STRUCTURAL WALL BELOW.
	E/S0.1	INDICATES WOOD POST BELOW.
	6/S1.3	INDICATES STEEL COLUMN BELOW.
3½x12 GLB C=1"	E/S0.1	INDICATES GLULAM BEAM SIZE AND CAMBER. WHERE NO CAMBER IS SPECIFIED SEE WOOD FRAMING NOTES FOR TYPICAL GLULAM BEAM CAMBER.
	11/S1.2	INDICATES PANEL EDGE NAILING ALONG FULL LENGTH OF MEMBER.
	E/S0.1	INDICATES HANGER.
		INDICATES LEDGER. SEE PLAN FOR SIZE AND ANCHORAGE.
88		INDICATES GRIDLINE AT FACE OF STUD.
1 S3.1		INDICATES ELEVATION.
MU 1,000#	8/S1.3	INDICATES APPROXIMATE LOCATION, SIZE AND MAXIMUM WEIGHT OF MECHANICAL UNIT. SEE MECHANICAL DRAWINGS FOR ANCHORAGE AND ADDITIONAL INFORMATION.
		INDICATES STEP IN ELEVATION, SEE ARCHITECTURAL DRAWINGS.
A	1/S1.3	INDICATES TOP PLATE SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE **'A'** IF NOT NOTED ON PLANS.
A	2/S1.3	INDICATES LEDGER/RIM SPLICE. SPLICE TYPE SHALL OCCUR ALONG THE ENTIRE LENGTH OF THE WALL, UNO. PROVIDE SPLICE TYPE **'A'** IF NOT NOTED ON PLANS.
A 4'-0"	3/S1.3	INDICATES TIE STRAP. SEE SCHEDULE FOR STRAP, NAILING AND LENGTH.
		INDICATES CONCRETE WALL.

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CIVIL
No. 78130
STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

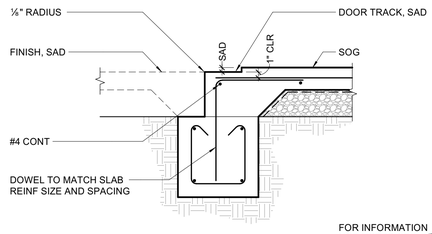
AWNING
FRAMING PLANS

ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

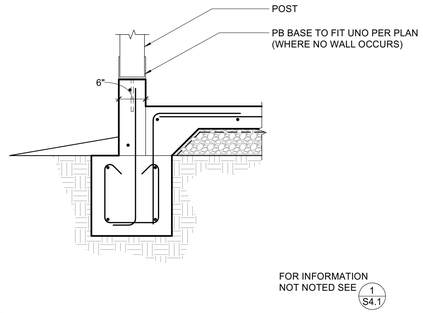
SHEET

S2.13

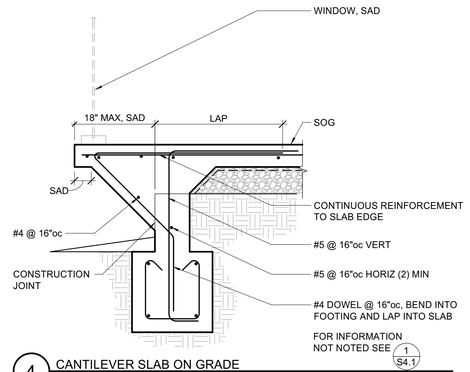
COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION



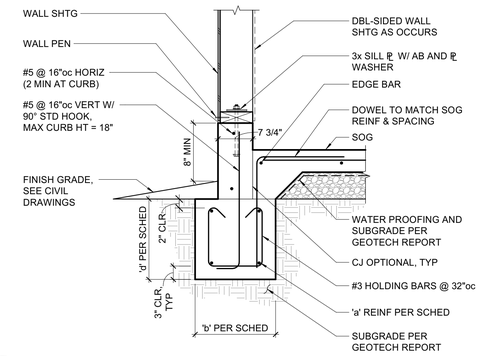
12 EXTERIOR FOOTING AT DOOR
3/4" = 1'-0"



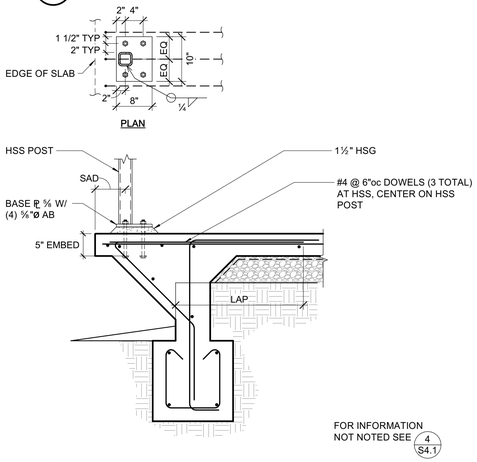
8 EXTERIOR FOOTING AT BRIDGE
3/4" = 1'-0"



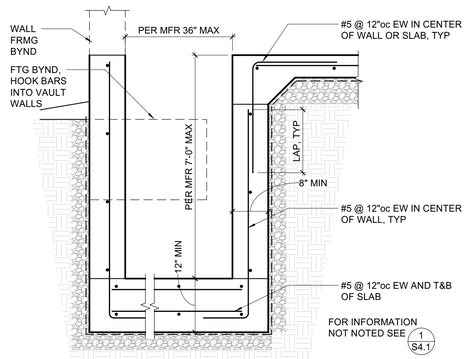
4 CANTILEVER SLAB ON GRADE
3/4" = 1'-0"



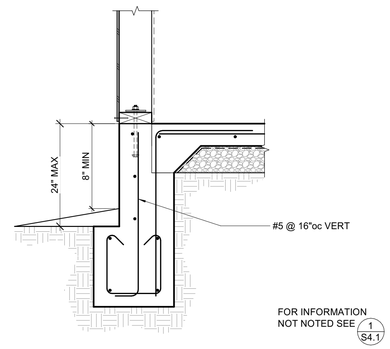
1 SHEAR WALL AT EXTERIOR FOOTING
3/4" = 1'-0"



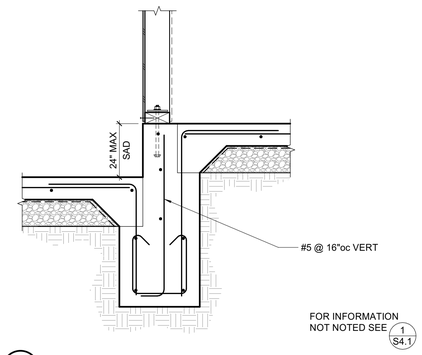
13 HSS COLUMN AT CANTILEVERED SLAB
3/4" = 1'-0"



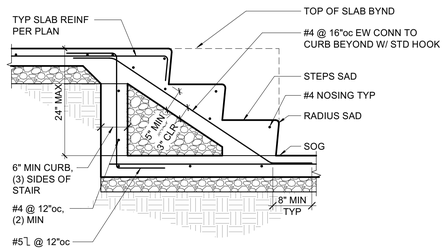
9 TV VAULT FOOTING
3/4" = 1'-0"



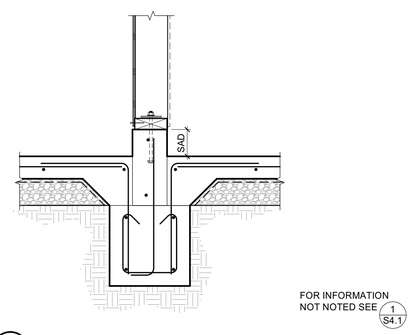
5 SHEAR WALL AT EXTERIOR FOOTING W/ RAISED SLAB
3/4" = 1'-0"



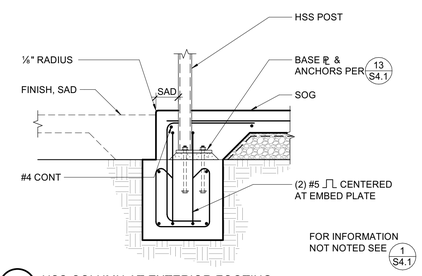
2 SHEAR WALL AT INTERIOR FOOTING WITH SLAB STEP
3/4" = 1'-0"



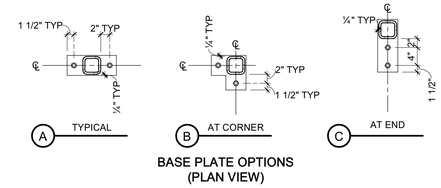
14 INTERIOR CONCRETE STAIRS
3/4" = 1'-0"

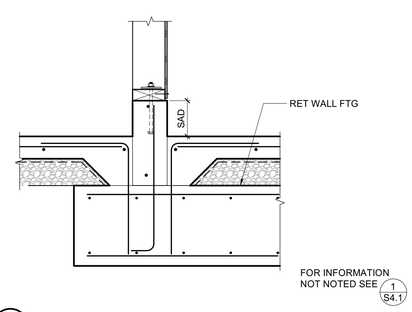


10 INTERIOR FOOTING WITH CURB
3/4" = 1'-0"

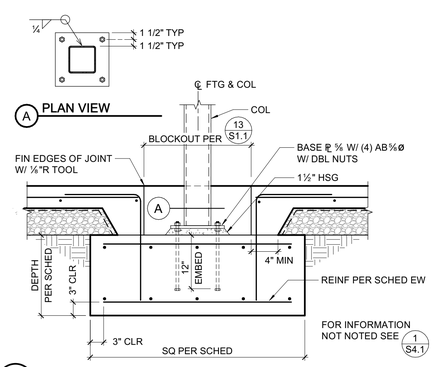


6 HSS COLUMN AT EXTERIOR FOOTING
3/4" = 1'-0"

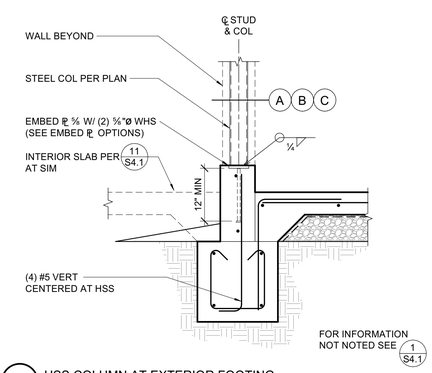




11 SHEAR WALL ABOVE RETAINING WALL FTG
3/4" = 1'-0"



7 HSS COLUMN PAD FOOTING
3/4" = 1'-0"



3 HSS COLUMN AT EXTERIOR FOOTING
3/4" = 1'-0"

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WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

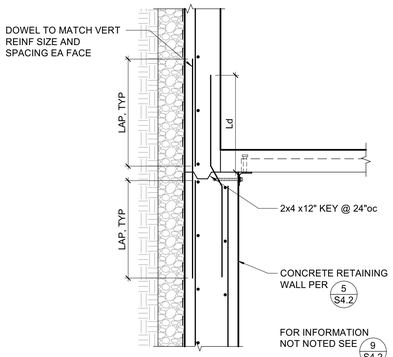
FOUNDATION
DETAILS

ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

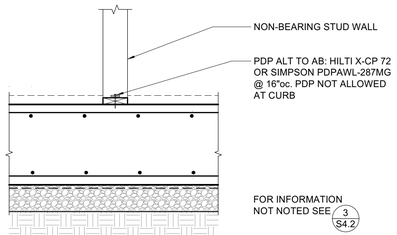
SHEET

S4.1

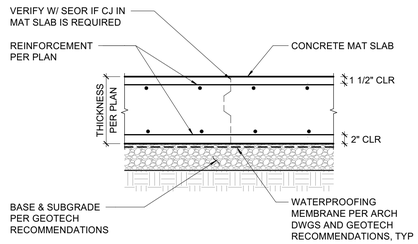
COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION



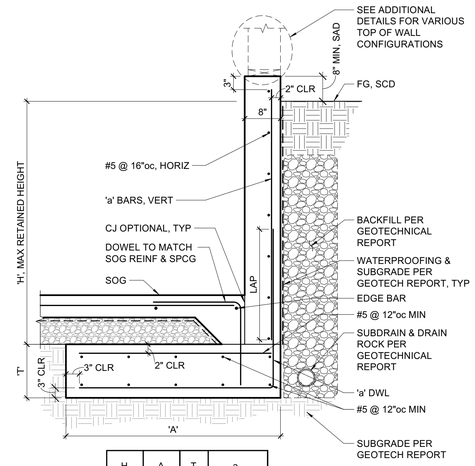
10 CONTINUOUS BASEMENT RETAINING WALL
3/4" = 1'-0"



6 NON-BEARING WALL STUD WALL AT MAT SLAB
3/4" = 1'-0"

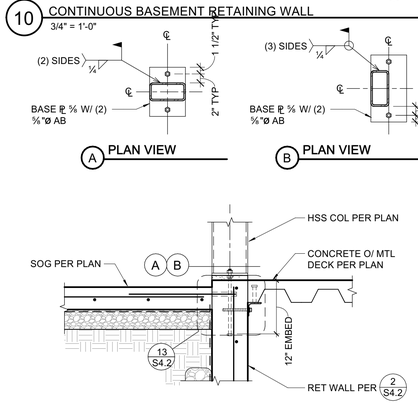


3 TYPICAL MAT SLAB
3/4" = 1'-0"

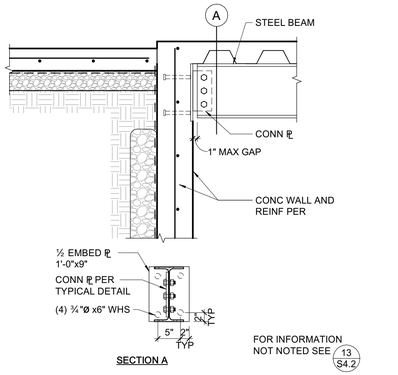


H	A	T	a
4'-0"	3'-8"	18"	#5 @ 16"oc
5'-0"	4'-4"	18"	#5 @ 16"oc
6'-0"	5'-4"	18"	#5 @ 16"oc
7'-0"	6'-4"	18"	#6 @ 16"oc
8'-0"	7'-4"	18"	#6 @ 16"oc
9'-0"	8'-4"	18"	#6 @ 8"oc

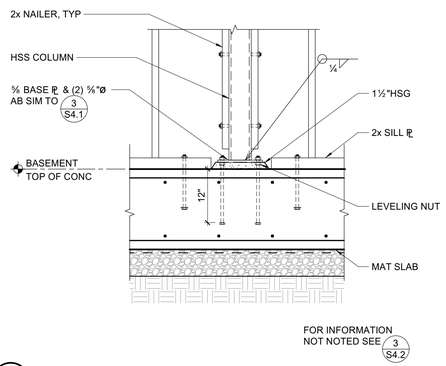
1 TYPICAL RETAINING WALL
3/4" = 1'-0"



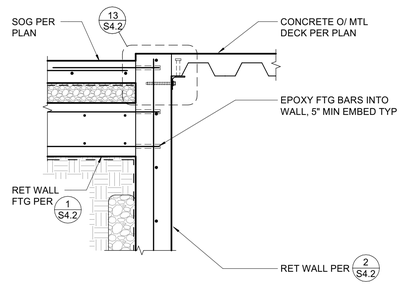
11 HSS COLUMN AT BASEMENT RETAINING WALL
3/4" = 1'-0"



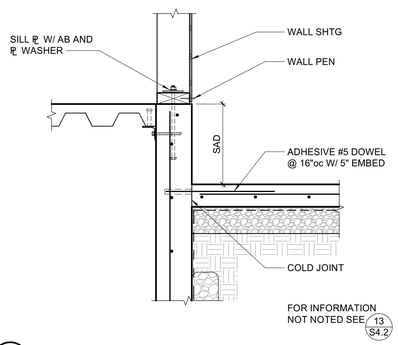
7 STEEL BEAM TO BASEMENT RETAINING WALL
3/4" = 1'-0"



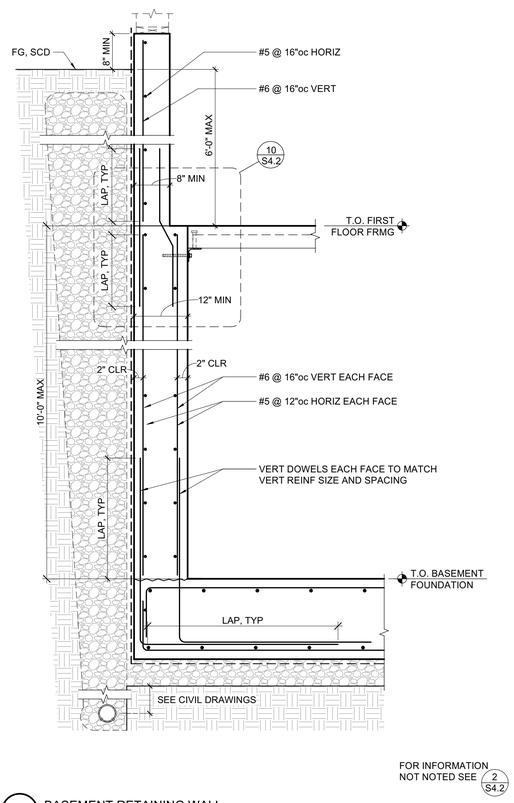
4 HSS POST AT FOUNDATION
3/4" = 1'-0"



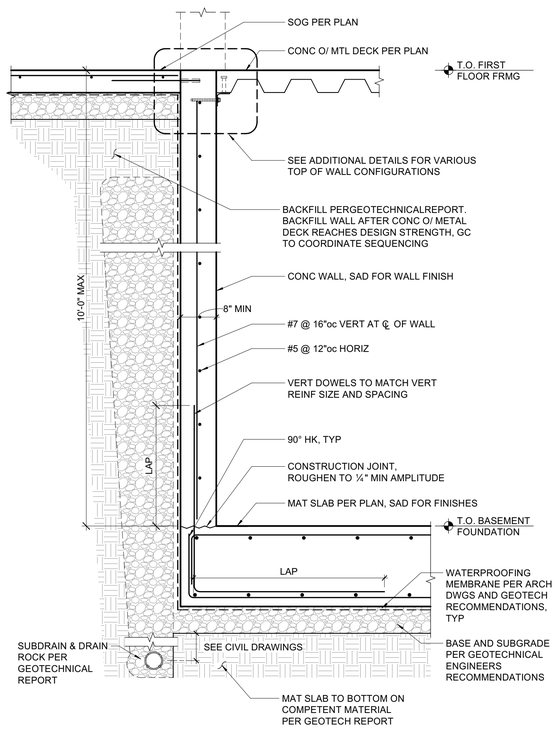
12 FOOTING CONNECTION TO BASEMENT RETAINING WALL
3/4" = 1'-0"



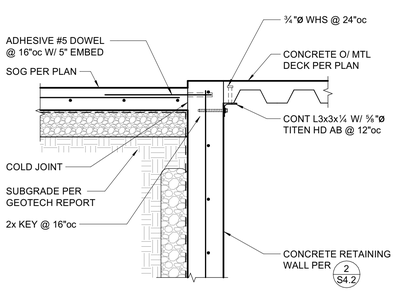
8 TOP OF BASEMENT RETAINING WALL
3/4" = 1'-0"



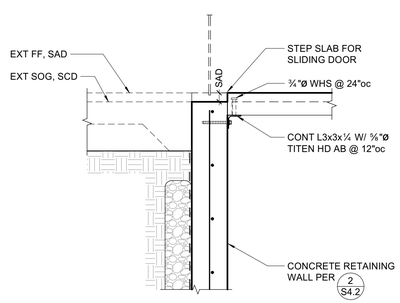
5 BASEMENT RETAINING WALL
3/4" = 1'-0"



2 BASEMENT RETAINING WALL
3/4" = 1'-0"



13 TOP OF BASEMENT RETAINING WALL
3/4" = 1'-0"



9 TOP OF BASEMENT RETAINING WALL
3/4" = 1'-0"

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WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

FOUNDATION DETAILS

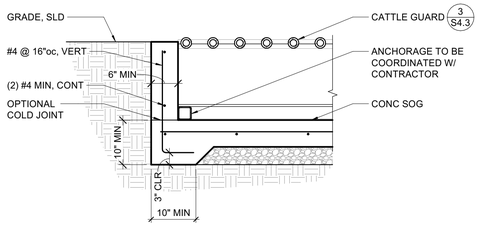
ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

SHEET

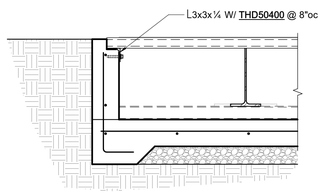
S4.2

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION

NOTE:
PROVIDE FIELD WELDS FOR
STEEL TO STEEL CONNECTIONS.

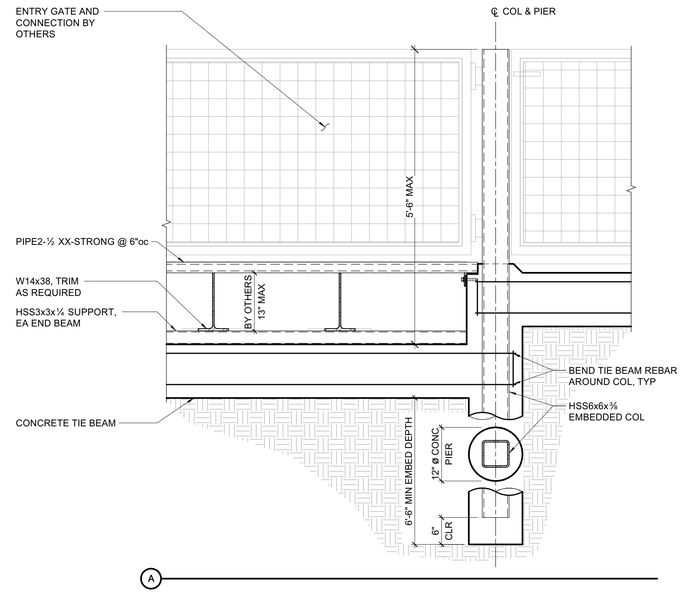


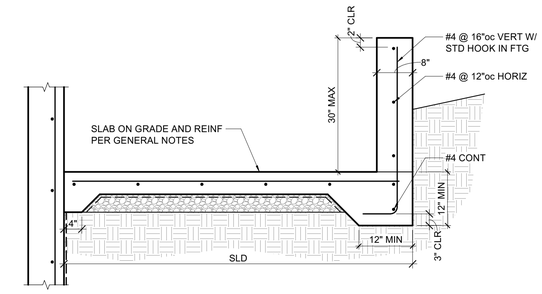
4 CATTLE GUARD FOUNDATION AT SLAB
3/4" = 1'-0"



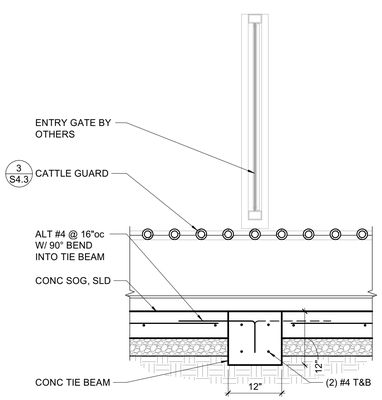
FOR INFORMATION
NOT NOTED SEE 4 S4.3

5 CATTLE GUARD FOUNDATION AT SLAB
3/4" = 1'-0"

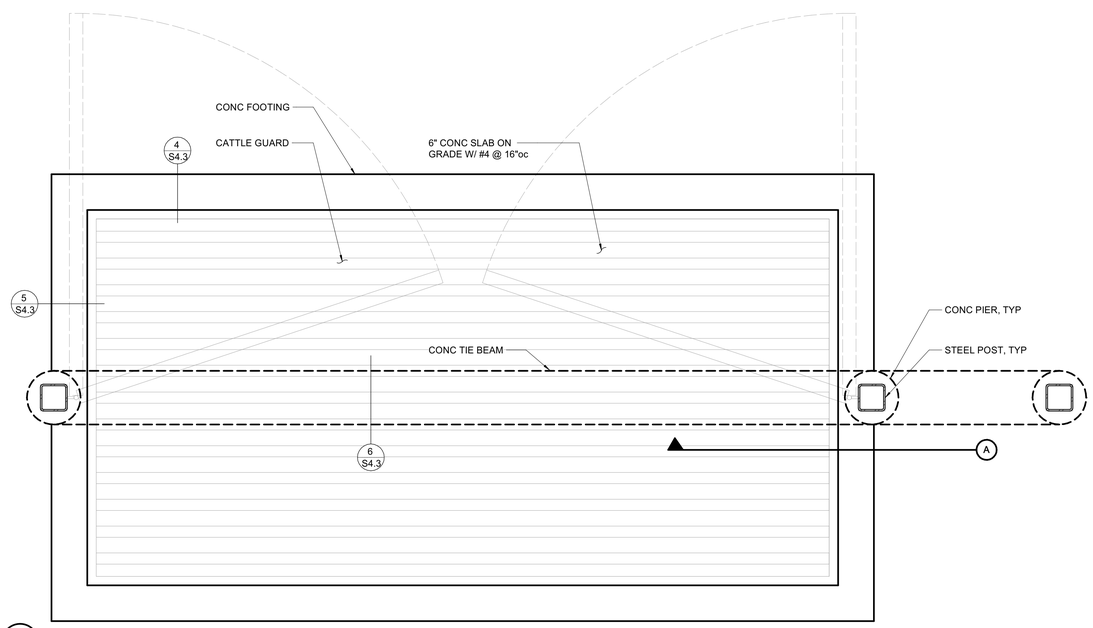




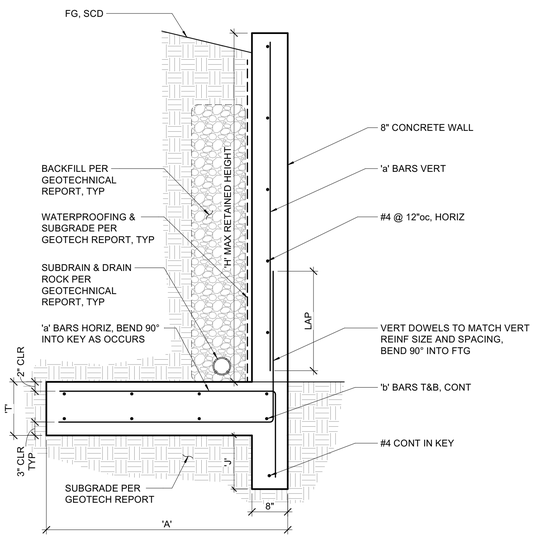
1 EQUIPMENT PAD
3/4" = 1'-0"



6 CATTLE GUARD CONCRETE TIE BEAM AT SLAB
3/4" = 1'-0"



3 ENTRY GATE AND CATTLE GUARD
3/4" = 1'-0"



H	A	T	J	a	b
2'-0"	2'-0"	12"	0"	#4 @ 12"oc	#4 @ 16"oc
4'-0"	2'-0"	12"	12"	#4 @ 12"oc	#4 @ 16"oc
6'-0"	3'-6"	12"	15"	#4 @ 12"oc	#4 @ 16"oc
8'-0"	5'-0"	15"	18"	#6 @ 12"oc	#5 @ 16"oc

2 TYPICAL SITE RETAINING WALL
3/4" = 1'-0"

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Revision Schedule

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REGISTERED PROFESSIONAL ENGINEER
JASON R. POWERS
CIVIL
No. 76130
STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

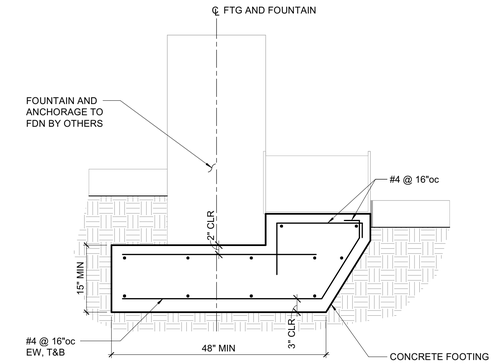
FOUNDATION
DETAILS

ENGR: EA
DATE: MAY 16, 2025
PM: JMR

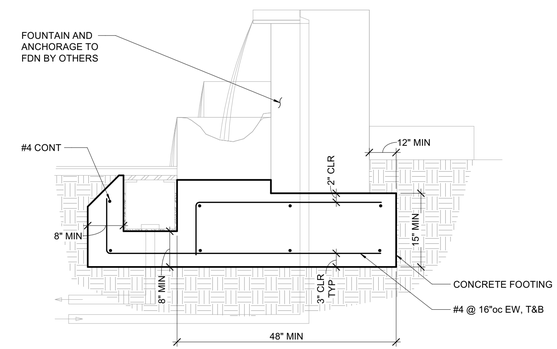
SHEET

S4.3

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION



1 FOUNDATION AT ENTRY FOUNTAIN
3/4" = 1'-0"



2 FOUNDATION AT ENTRY FOUNTAIN
3/4" = 1'-0"

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CARMEL, CA 93923

SHEET DESCRIPTION

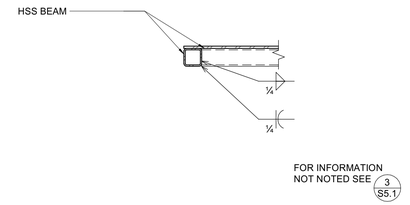
FOUNDATION DETAILS

ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

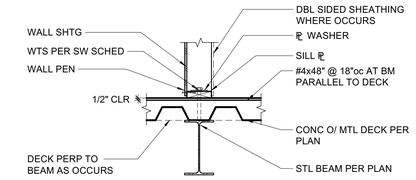
SHEET

S4.4

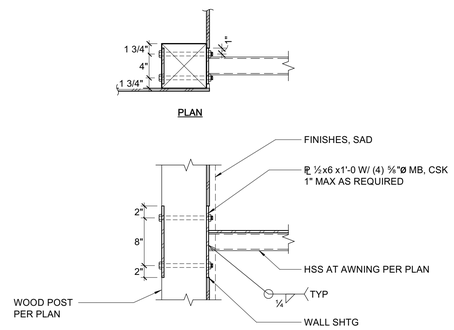
COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION



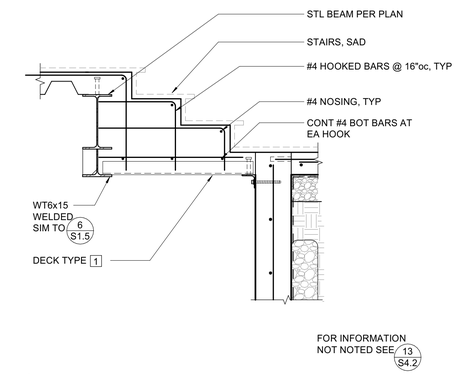
5 HSS TO HSS BEAM
1" = 1'-0"



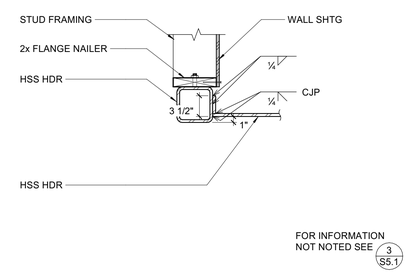
1 TYPICAL SHEAR WALL AT CONCRETE OVER METAL DECK
3/4" = 1'-0"



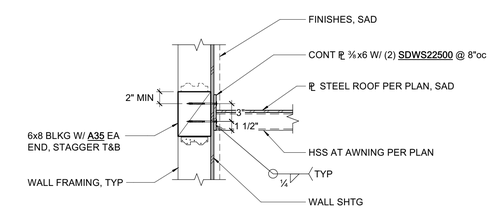
6 CANTILEVER HSS TO WOOD POST
1" = 1'-0"



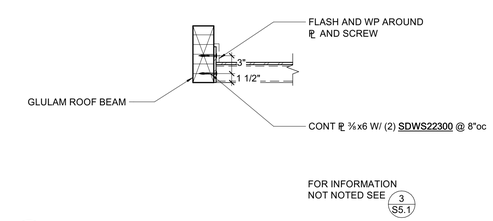
2 STEEL FRAMING AT STAIRS
3/4" = 1'-0"



7 AWNING AT ENTRY DOOR
1" = 1'-0"



3 AWNING SUPPORT AT WALL FRAMING
1" = 1'-0"



4 AWNING SUPPORT AT GLB
1" = 1'-0"

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No. 78130
STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

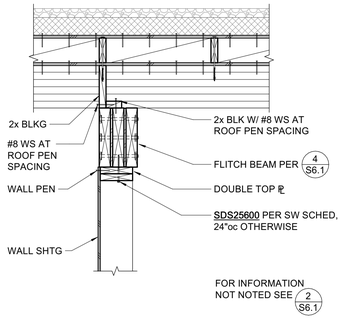
STEEL DETAILS

ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

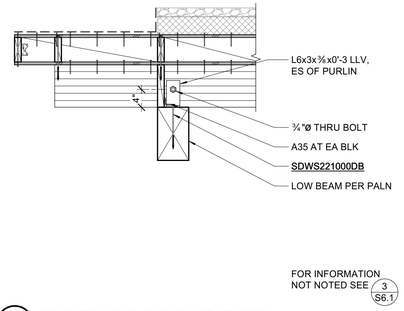
SHEET

S5.1

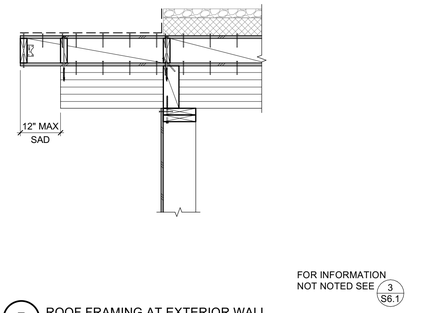
COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION



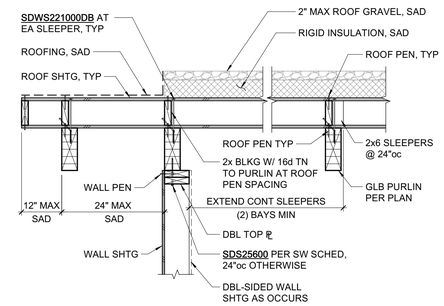
13 ROOF FRAMING AT SHEAR WALL
3/4" = 1'-0"



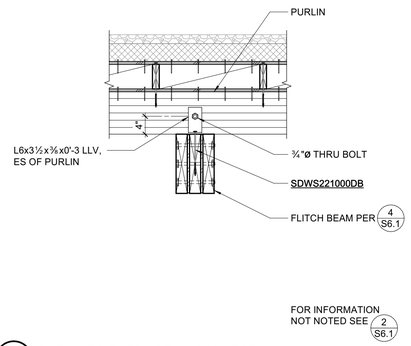
9 ROOF FRAMING AT GARAGE HEADER
3/4" = 1'-0"



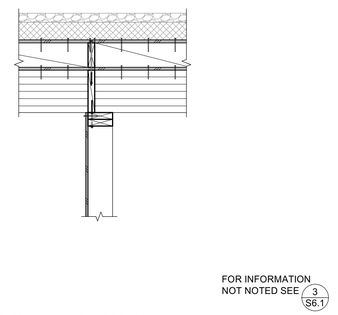
5 ROOF FRAMING AT EXTERIOR WALL
3/4" = 1'-0"



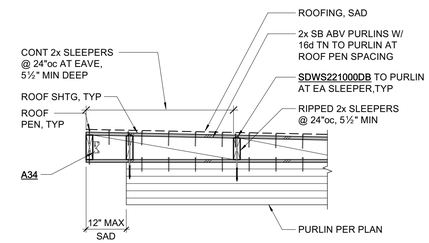
1 ROOF FRAMING AT EXTERIOR WALL
3/4" = 1'-0"



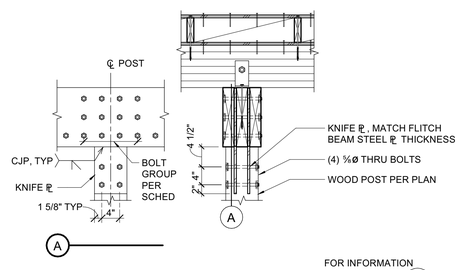
10 PURLIN TO FLITCH BEAM CONNECTION
3/4" = 1'-0"



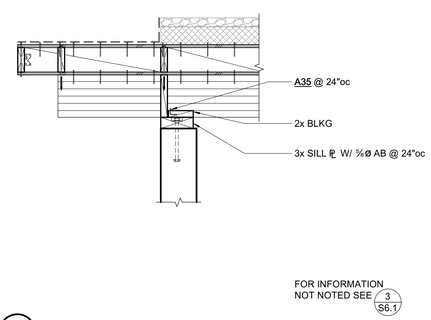
6 ROOF FRAMING AT INTERIOR WALL
3/4" = 1'-0"



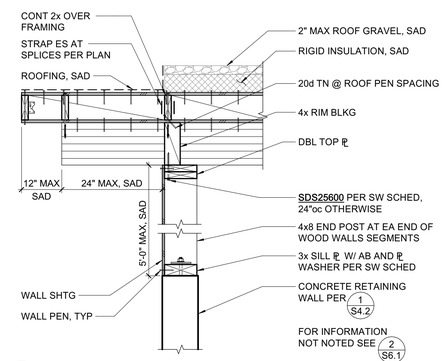
2 ROOF FRAMING AT CANTILEVER PURLINS ENDS
3/4" = 1'-0"



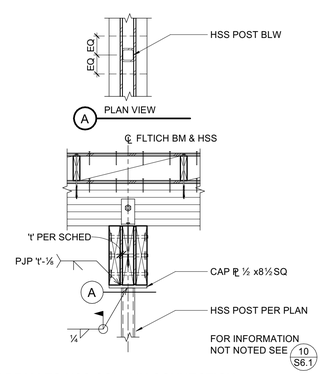
11 FLITCH BEAM TO WOOD POST CONNECTION
3/4" = 1'-0"



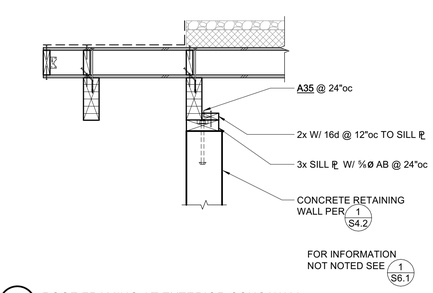
7 ROOF FRAMING AT EXTERIOR CONC WALL
3/4" = 1'-0"



3 ROOF FRAMING AT EXTERIOR WALL
3/4" = 1'-0"



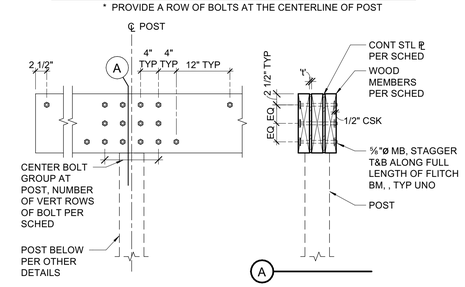
12 FLITCH BEAM TO HSS COLUMN CONNECTION
3/4" = 1'-0"



8 ROOF FRAMING AT EXTERIOR CONC WALL
3/4" = 1'-0"

FLITCH BEAM #	't' STL ⅊ THICKNESS	WOOD MEMBERS	# OF VERT ROWS OF BOLTS AT POSTS
FB1	½"	(3) 3x14 DF SS	(4) ROWS, (12) BOLTS TOTAL
FB2	¾"	(3) 3x14 DF SS	(4) ROWS, (12) BOLTS TOTAL
FB3	½"	(3) 3x12 DF SS	(3) ROWS, (9) BOLTS TOTAL*

* PROVIDE A ROW OF BOLTS AT THE CENTERLINE OF POST



4 FLITCH BEAM
3/4" = 1'-0"

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STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL,
CARMEL, CA 93923

SHEET DESCRIPTION

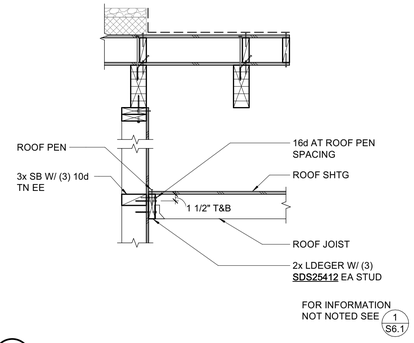
WOOD DETAILS

ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

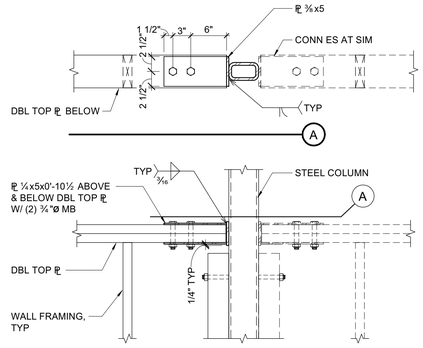
SHEET

S6.1

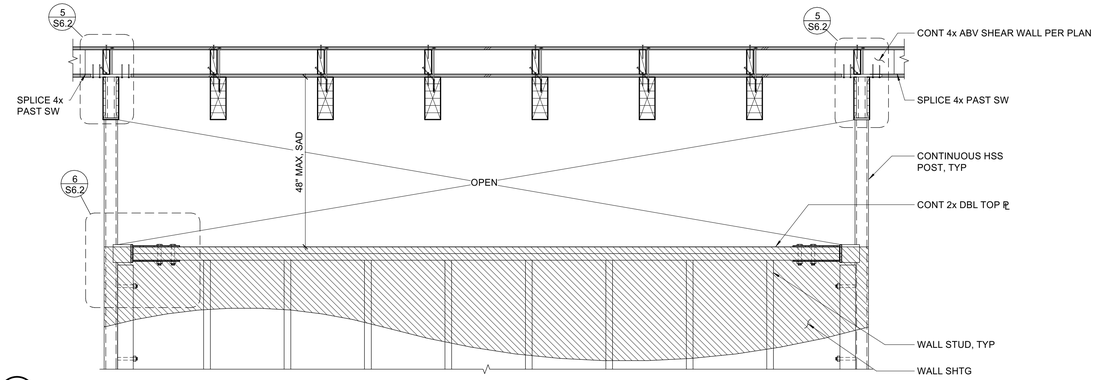
COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION



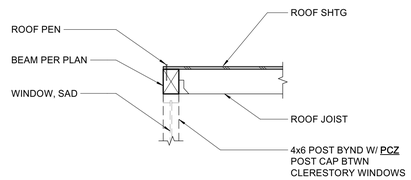
9 ROOF FRAMING AT BRIDGE
3/4" = 1'-0"



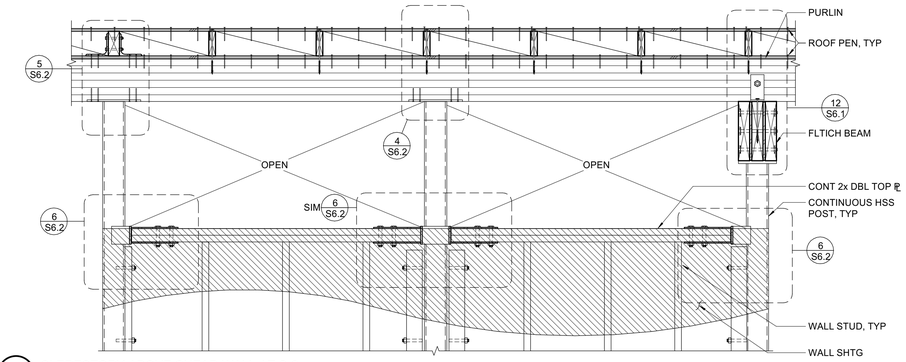
6 TOP PLATE SLICE AT CLERESTORY SHEAR WALL
1" = 1'-0"



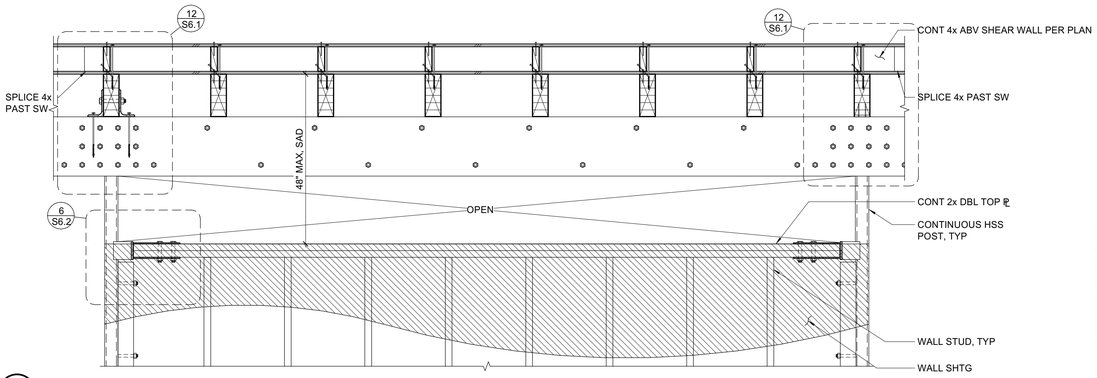
1 TYPICAL CLERESTORY ABOVE SHEAR WALL
3/4" = 1'-0"



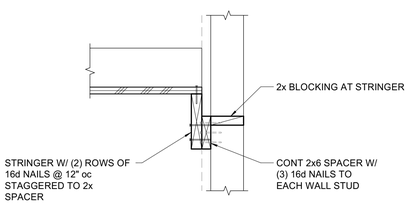
7 ROOF FRAMING AT BRIDGE
3/4" = 1'-0"



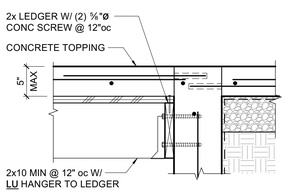
2 CLERESTORY ABOVE SHEAR WALL AT S-2
3/4" = 1'-0"



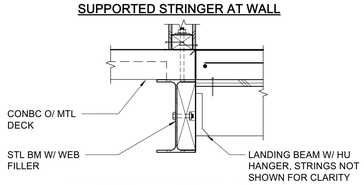
3 TYPICAL CLERESTORY ABOVE SHEAR WALL
3/4" = 1'-0"



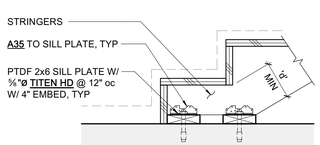
SUPPORTED STRINGER AT WALL



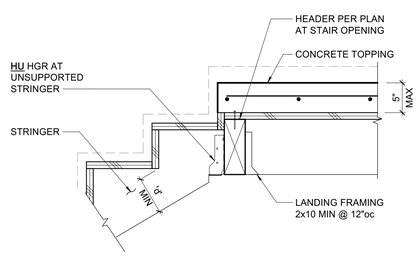
TYP LANDING FRAMING AT WALL



LANDING BEAM TO STEEL FRAMING



BOTTOM OF STRINGER AT CONC

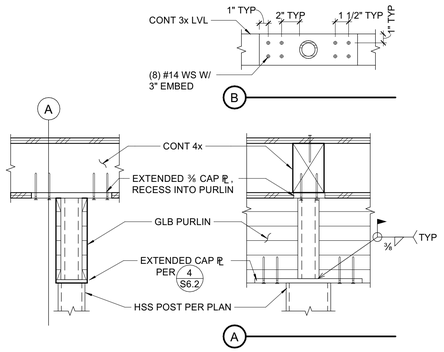


TOP OF STRINGER AT LANDING

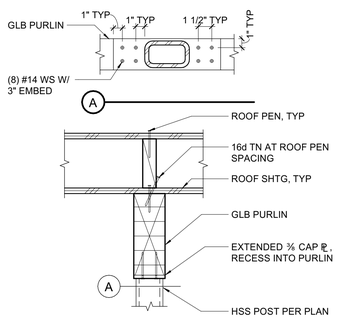
STRINGER SCHEDULE		
MAX SPAN	'd'	MATERIAL
8'-0"	5½"	LVL 2.0E
10'-0"	7½"	LVL 2.0E
12'-0"	9½"	LVL 2.0E

NOTES:
1. MIN SIZES UNLESS LARGER DIMENSIONS SHOWN ON PLANS.
2. STRINGERS @ 16"oc UNO, (3) STRINGERS MINIMUM, EVENLY SPACED.
3. SPAN = HORIZ PROJECTION OF STAIR.
4. ALTERNATE FRAMING DETAILS AND CONFIGURATIONS ARE ACCEPTABLE ONLY IF APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
5. SAD FOR RISE:RUN DIMENSIONS.
6. SAD FOR TREAD AND FINISH INFORMATION.

8 TYPICAL STAIR FRAMING
1" = 1'-0"



5 CLERESTORY COLUMN TO PURLIN CONNECTION
1 1/2" = 1'-0"



4 CLERESTORY COLUMN TO PURLIN CONNECTION
1 1/2" = 1'-0"

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REGISTERED PROFESSIONAL ENGINEER JASON R. POWERS CIVIL No. 78130 STATE OF CALIFORNIA

PROJECT

WARD RESIDENCE

23 VASQUEZ TRAIL, CARMEL, CA 93923

COMBO PERMIT SUBMISSION - NOT FOR CONSTRUCTION

SHEET DESCRIPTION

WOOD DETAILS

ENGR: EA	DATE: MAY 16, 2025
PM: JMR	

SHEET

S6.2

Symbols & Abbreviations

Devices & Power

Symbol	Description
	Switch - SPST
	2 Single Pole, Double Throw
	3 Threeway
	4 Fourway
	P Pilot Light
	WP Weatherproof
	OS Occupancy Sensor
	D Dimmer
	LV Low Voltage
	T Timer Switch
OS	Occupancy Sensor - Ceiling, subscript is type
	Receptacle - Simplex
	Receptacle - Duplex
	Receptacle - Duplex at special height
	GFCI Protected Receptacle - Duplex
	GFCI Protected Receptacle - Duplex at special height
	USB Device Receptacle - with 2 USB ports
	WP Weatherproof Enclosure
	IG Isolated Ground
	Receptacle - Double Duplex/Quadplex
	GFCI Protected Receptacle - Double Duplex/Quadplex
	Receptacle - Duplex - 1/2 switched, 1/2 continuous power
	Receptacle - Quadplex - 1/2 switched, 1/2 continuous power
	Receptacle – 240V
	R Range - NEMA 14-50R
	D Dryer - NEMA 14-30R
	W Welder - NEMA 14-50R
	Hard Wired Connection – 240V
	Hard Wired Connection – 120V
	Conduit Stub Up
	Receptacle - Duplex, mounted in ceiling
	GFCI Protected Receptacle - Duplex, mounted in ceiling
	Plug Mould - Multi-receptacle Assembly
	Receptacle - 240V, recessed in floor box
	GFCI Protected Receptacle - Duplex, recessed in floor box
	GFCI Protected Receptacle - Double Duplex, recessed in floor box
J	J-Box (4"X4"X2-1/8" deep, unless otherwise noted); Box indicates floor mounted; "T" indicates wall mounted
T	Thermostat/Temperature Sensor by MC Or TC, J-Box and conduit to ceiling by EC
M	Manual Motor Disconnect/Starter Switch
	Emergency Pushbutton
R	Relay
PC	Photocell; Photocell Wall Mounted
	Special Purpose Connection; Box indicates floor mounted; "T" indicates wall mounted, work as noted
	Electric Motor Connection
	Disconnect Switch
	Circuit Breaker
	Control Panel
	LCP - Lighting Control Panel
	GAAP - Generator Annunciator Panel
	Existing Panelboard - surface mounted
	Existing Panelboard - flush mounted
	Panelboard - surface mounted
	Panelboard - flush mounted
or	Electric Meter - building mounted
	Transformer - Interior
	Transformer - Exterior

Lighting

Symbol	Description
	Lay-In or Recessed Fixture, Size on Plans
	Wall Mounted Fixture, Size on Plans
	Surface Mounted Fixture, Size on Plans
	Pendant or Surface Mounted Fixture, Size on Plans
	Pendant Mounted Fixture, Size on Plans
	Shaded fixture indicates fixture is unswitched and indicates emergency power.
	Recessed Downlight Fixture
	Surface Mounted Fixture
	Wall Mounted Fixture
	Wall Wash or Directional Fixture
	Wall Sconce Fixture
	Track Fixture, See Plan for Size and Heads
	Ceiling Fan Fixture
	Ceiling Mounted, Wall Mounted Exit Light (W/ Directional Arrows)
	Square Pole Mounted Fixture, Exterior
	Round Pole Mounted Fixture, Exterior
	Post Top Fixture, Exterior
	Bollard Fixture, Exterior
	Directional Inground Fixture, Exterior

Other

#	Sheet Work Note
	Home Run to Panel
	Conduit Concealed in Ceiling or Wall
	Conduit Concealed Below Grade
LV	Low Voltage Circuit
	Fiber Optic Cable
	Cable Tray
///	Circuit, number of hash marks indicates number of conductors in cable/raceway. Ground wire is not shown but shall be included. No hash marks indicate 2 conductors plus ground.

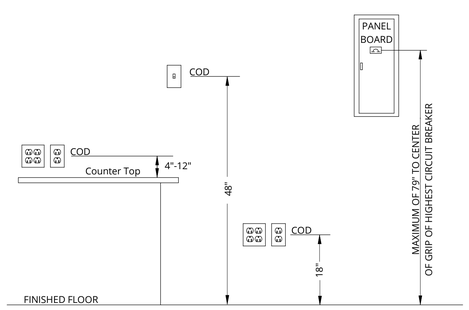
*All symbols may not be used & apply only when used on drawings

Abbreviations

Abbreviation	Description
A, AMP	Amperes
AC	Alternating Current
ACD	AC Disconnect
ATS	Automatic Transfer Switch
AFG	Above Finished Grade
AFF	Above Finished Floor
AV	Audio/Video Rack
BESS	Battery Enery Storage System
BEV	Beverage Cooler/Wine Fridge
BLG	Below Grade
BOD	Bottom of Device
C	Conduit
CCTV	Closed Circuit TV
CLG	Ceiling
COD	Center of Device
CT	Current Transformer/Current Transducer
CTP	Cooktop/Stovetop
CU	Copper
DR	Dryer
DW	Dishwasher
(E)	Existing
EC	Electrical Contractor
EF	Exhaust Fan
EVSE	Electric Vehicle Supply Equipment
FRZ	Freezer
G, GND	Ground
GC	General Contractor
GD	Garbage Disposal
GENSET	Generator Set
GFCI	Ground-Fault Circuit-Inturrupter
ICE	Ice Machine
IRC	International Residential Code
LSI	Field Adjustable Long Time, Short Time and Instantaneous
LSIG	Field Adjustable Long Time, Short Time, Instantaneous and Ground Fault
MC	Mechanical Contractor
MCB	Main Circuit Breaker
MID	Microgrid Interconnection Device
MLO	Main Lug Only
MW	Microwave
(N)	New
NEC	National Electrical Code
NL	Night Light
OH	Overhead
OVN	Oven
PH, ϕ	Phase
PTZ	Pan-Tilt-Zoom
QTY	Quantity
(R)	Relocated
REF	Refrigerator
RNG	Range
SF	Surface
SO	Speed Oven
SOC	State of Charge
SPD	Surge-Protective Device
TBB	Telecommunications Bonding Backbone
TC	Temperature Control Contractor
TMGB	Telecommunications Main Grounding Bus Bar
TTB	Telephone Terminal Board
TYP	Typical
UC	Undercounter
UG	Underground
UON	Unless Otherwise Noted
V	Volts
W/	With
WD	Warming Drawer
WP	Weatherproof (while in use)
WM	Washing Machine
WINE	Wine Cooler
WW	Wireway
XFMR	Transformer
a,b,c etc	Switch Designation
BN1L-2,4,6	Circuit Designation, Panel BN1L - Circuits 2,4,6
1/E501	Indicates Detail 1 on Sheet E501

Interior Box Mounting Heights

Refer to architectural elevations for all final device heights. The information below is to serve as a general guideline when heights are not specified elsewhere within this drawing set or the architectural drawings.



General Notes:

1. All work should be performed in a safe, efficient, professional manner.
2. For safety it is recommended the installation crew always have a minimum of two people working together.
3. The electrical contractor is responsible for installing all equipment and following all manufacturer's guidelines and the design documents.
4. The design documents specify the minimum required equipment and specifications to accomplish the project and the electrical contractor is responsible to ensure that these specifications are met or exceeded with good quality equipment and workmanship.
5. All components to be installed are to be listed by a third party testing agency (UL, ETL, etc.) and labeled accordingly.
6. Any metal shavings resulting from work shall be cleaned from enclosure interiors, tops surfaces of enclosures, roofs, and the job site in general.
7. All material shall be new and rated for UV exposure where exposed to sunlight.
8. The electrical contractor shall consider the weathering of outdoor equipment over time and eliminate the possibility of degradation of equipment due to water entry and UV exposure. Mount enclosures, pull boxes, load centers, fuse boxes or other equipment to rooftops and walls in a way which promotes water drainage. Do not add weep holes if doing so would cause reduction in the enclosures' NEMA rating. Sealing conduit with a fire retardant foam or caulk at enclosure entry point is recommended to reduce condensation and pests in enclosures. For conduit locations running through fire rated walls, fire retardant foam or caulk must be used to maintain the current fire rating of the wall and must comply with UL 1479 & UL 723 standards for through penetrations.
9. Any construction staging of concentrated loads on roof shall be minimized. Special attention shall be paid to roof loading during installation such that heavy items are not loaded in a manner that would overload the roof.
10. The electrical contractor shall provide signage for all electrical boxes, junction boxes, pull boxes, DC disconnects, conduit runs, AC disconnects, sub panels and main services.
11. Contractor to schedule a "blue box review" with owner, architect and interior designer. For this review, all junction boxes (for outlets switches and lighting) and can light housing to be set, with no wire pulled. Decorative fixture locations to be verified

Electrical Notes:

1. The electrical contractor is advised that all drawings, component manuals, especially the inverter manuals, are to be read and understood prior to installation or energizing of any equipment. The contractor is also advised to have all component switches in the off (open) position and fuses removed prior to installation of fuse-bearing components.
2. All equipment located outdoors shall be NEMA 3R outdoor rated or better.
3. In every pull box, terminal box, and at all places where conductors may not be readily identified by nameplate markings on the equipment to which they connect, identify each circuit with a plastic label or tag for number, polarity or phase.
4. The layout of conduit shown in these plans is schematic in nature. Contractor shall route and locate the conduits to suit site conditions but shall not exceed the maximum conductor lengths identified on the conductor schedule. Contractor shall coordinate all changes in conductor and conduit with the engineer.
5. Where conductor and cable routing is not shown and only destination is indicated, contractor shall determine exact routing, lengths, and wire sizing required.
6. Bends shall not damage the raceway or significantly change the internal diameter of raceways (no kinks). Comply with NEC conduit articles regarding minimum bend radius.
7. Support conductors in vertical conduits in accordance with requirements in NEC 300.19.
8. Support conduit using steel pipe straps (OAE), lay-in adjustable hangers, clevis hangers or split-hangers. Hanger spacing shall be installed per NEC requirements for the type of conduit being installed.
9. Provide pull, junction, or christy boxes where required to facilitate the installation of conductor in addition to those shown on the drawings. Bends in conduits between pull boxes shall not exceed the equivalent of four 90 degree bends.
10. Raceway expansion fittings shall be installed to allow for thermal expansion and contraction where necessary, per NEC 300.7(B). Manufacturer instructions shall be followed and all accessories shall be installed to ensure proper functioning of fittings.
11. When field cutting is required, the conduit shall be cut square and deburred.
12. Conduit sizes not specified should conform to NEC specifications including fill factor and derating for number of conductors.
13. Safety regulations (Lock out - tag out, etc.) is the full responsibility of the contractor during construction.
14. The conductor size is based on the estimated conduit routing as shown in this drawing package. Should the conduit's length increase due to relocation of source and/or routing, the conduits and the conductors may need to be resized. We recommend that subcontractor contact engineer prior to making field changes to large conductors.
15. All power conductors in conduit shall be THWN-2 XHHN-2, RHW-2, PVWIRE, or XLPE. Use bare copper for all external grounding.
16. All conduits shall be free of any obstructions and properly secured before conductor is pulled.
17. The electrical contractor shall perform initial hardware checks and conductor conductivity checks prior to terminating conductors larger than 10 AWG. Complete megger (insulation resistance) testing in all AC power conductors larger than 10 AWG. Verify and document a resistance of at least 100 MOhms on each conductor using a 1000V ramp-up test for one minute.
18. Torque: All conductors landing in screw connections must be properly tightened to the manufacturer's torque requirements. All bolted conductor terminations must be torqued to their rated value. It is the contractor's responsibility to ensure all conductors with torque requirements have been marked with a paint pen or permanent marker at the time that the torque test was done.
19. All metallic enclosures shall be grounded per NEC 250.

Codes and Standards:

All electrical work is to be installed per current applicable codes with local citations and amendments.

2022 California Building Code
2022 California Residential Code
2022 California Plumbing Code
2022 California Mechanical Code
2022 California Electrical Code*

* Based on 2020 National Electrical Code (NEC)

Branch Circuiting:

1. Convenience receptacles shall be circuited from local subpanels, with 4-7 receptacles per circuit.
2. All 120V, 15A and 20A receptacles shall be tamper resistant rated.
3. Provide arc-fault circuit-interrupter (AFCI) breakers per NEC 210.12. AFCI protection is not required for outlets located outside or in garages or bathroom areas.
4. Provide ground fault circuit interrupter (GFCI) outlets or provide GFCI protection at circuit breaker as shown and per code. GFCI breakers are only required where outlets are not readily accessible, such as behind appliances.
5. Provide weatherproof (WP) GFCI protected receptacles for all exterior receptacles.
6. Outdoor receptacles in exterior walls shall be flush mounted type. Coordinate exact type with architect.
7. Special purpose and heavy duty receptacles shall be circuited as required for the kitchen and mechanical equipment provided.
8. Provide smoke detectors as shown on the architectural RCPs and per code. Smoke detectors to be hardwired to line voltage and interconnected together.
9. Provide carbon monoxide detectors where required per the IRC.
10. All 120V, 20A circuits between 70 and 150 feet in length shall be #10AWG. All 120V, 20A circuits between 150 and 250 feet in length shall be #8AWG. Wiring for all other branch circuit ampacities and lengths shall be increased as required to comply with the voltage drop limits indicated in the NEC.

Raceways and Conductors:

1. General drywall partitions - use code type NM (Romex) copper cable for typical branch circuits. Minimum wire size shall be #12 AWG. Include an internal copper ground for all circuits.
2. General masonry walls - schedule 40 PVC conduit with code type THWN-2 or XHHW-2 conductors minimum size #12 AWG. Include an internal copper ground for all circuits. Type MC cable may be used where feasible for installation.
3. Exposed in areas subject to abuse, such as in basements and mechanical rooms - use type MC cable for wiring in EMT. THWN-2 and XHHW-2 may be used for large conductor runs between panels. EGCs to be copper.
4. In concrete and buried - schedule 40 PVC with code type THWN-2 or XHHW-2 conductors minimum size #12 AWG. Transition with taped rigid sweeps.
5. Underground, direct burial type use and similar - do not use direct burial conductors for this project. Use schedule 40 PVC with either THWN-2 or XHHW-2 conductors. EGCs to be copper.
6. Security system wiring - Teflon cable, in EMT where exposed and in schedule 40 PVC conduit in masonry walls.
7. Fire alarm system wiring - Teflon cable or as required by code, in EMT where exposed.
8. Where conduits or wireways cross expansion joints, provide approved expansion fittings, or combinations of fittings, which allow deflection in directions equal to twice the movement allowed in the structural design. Note that 18" of weatherproof flex, slack mounted, may be used as an expansion joint.

Scope of Work:

1. Electrical system will include, but not be limited to:
   - A. Underground service raceway and conductors from the utility point of service, metering cabinet(s), sockets, service disconnect and equipment, per utility company requirements
   - B. Feeders to power distribution panels as required
   - C. Convenience and special receptacles
   - D. Power connections for kitchen equipment
   - E. Feeders to pool equipment panel(s)
   - F. Power connections for elevator equipment
   - G. Generator connections and controls
   - H. Raceways for future solar PV systems
2. Wiring to the following plumbing systems will be provided:
   - A. Water heaters and circulation pumps
   - B. Booster pumps
   - C. Sump and sewage ejector pumps
   - D. Fire suppression pumps*
   - E. Water treatment systems
3. Wiring to the following mechanical systems will be provided:
   - A. HVAC indoor units
   - B. HVAC outdoor units
   - C. Dehumidifier(s) and/or humidifier(s)
   - D. Ventilation systems and exhaust fans
   - E. Pumps
   - F. Control system power
4. Wiring to lighting systems will include, but not be limited to:
   - A. Lighting panels
   - B. Lighting fixtures*
   - C. Site lighting*
   - D. Lighting controls*
   - E. Motorized window shades*
5. Supplying power to special systems will include, but not be limited to:
   - A. Telephone and data systems*
   - B. Cable television distribution systems*
   - C. Door bells*
   - D. Garage door operators*
   - E. Irrigation*
   - F. Fire alarms*
   - G. Security systems*
   - H. Specialty lighting (i.e. landscape)*
   - I. Lighting protection (if required)*
   - J. Electrical vehicle supply equipment (EVSE)*
   - K. Audio video (A/V)*

* This scope is not included in this document. Refer to applicable documents provided by other consultants.

Electrical - Sheet List

Sheet Number	Sheet Name
E000	General Notes & Legends
E100	Electrical Site Plan
E101	Single Line Diagram
E102	Electrical Service Load Calculation
E200	Power Plan - Primary Suite - Level 1
E201	Power Plan - Great Room - Basement
E202	Power Plan - Great Room - Level 1
E203	Power Plan - Bedroooms and Garage - Level 1
E204	Power Plan - Home Offices - Level 1
E205	Power Plan - Roof
E300	Electrical Panel Schedules

Positive Energy
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512.462.1000
www.positiveenergy.pro
F-17960

Permit Set

Feldman Architecture
1648 Pacific Avenue, Suite B
San Francisco, CA 94109
415.252.1441

Ward Residence
23 Vasquez Trail
Carmel, CA 93923

Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

General Notes & Legends

Scale: As indicated
Drawn By: CN
Reviewed By: TPE

E000

1 Electrical Site Plan
1/16" = 1'-0"

Site Plan General Notes	
A	All dimensions are approximate and must be field verified.
B	Conduit and pull boxes shall be installed in accordance with the following NEC articles: 342.26 for IMC, 344.26 for RMC, 352.26 for PVC, 353.26 for HDPE, 358.26 for EMT conduit, and 314.28-314.30 for pullboxes.
C	All 120V, 20A circuits between 70 and 150 feet in length shall be #10AWG. All 120V, 20A circuits between 150 and 250 feet in length shall be #8AWG. Wiring for all other branch circuit ampacities and lengths shall be increased as required to comply with the voltage drop limits indicated in the NEC.
D	Provide conduit for future roof mounted solar array. Please ensure pulling can be done without disturbing building materials. Use sweeps, accessible L-Bs and/or accessible pullboxes to make conductor routing possible in the future without cutting sheetrock.
E	Coordinate all site related work with other divisions and trades. Refer to all applicable drawings, included but not limited to Civil, Architectural, Structural, Mechanical, and Plumbing.
F	Coordinate all aspects of service entrance requirements with utility company.
G	Field verify all underground utilities prior to installation of underground conduit.

Keynotes - E100	
1	Main circuit breaker in meter/panel combo to serve as main service disconnect.

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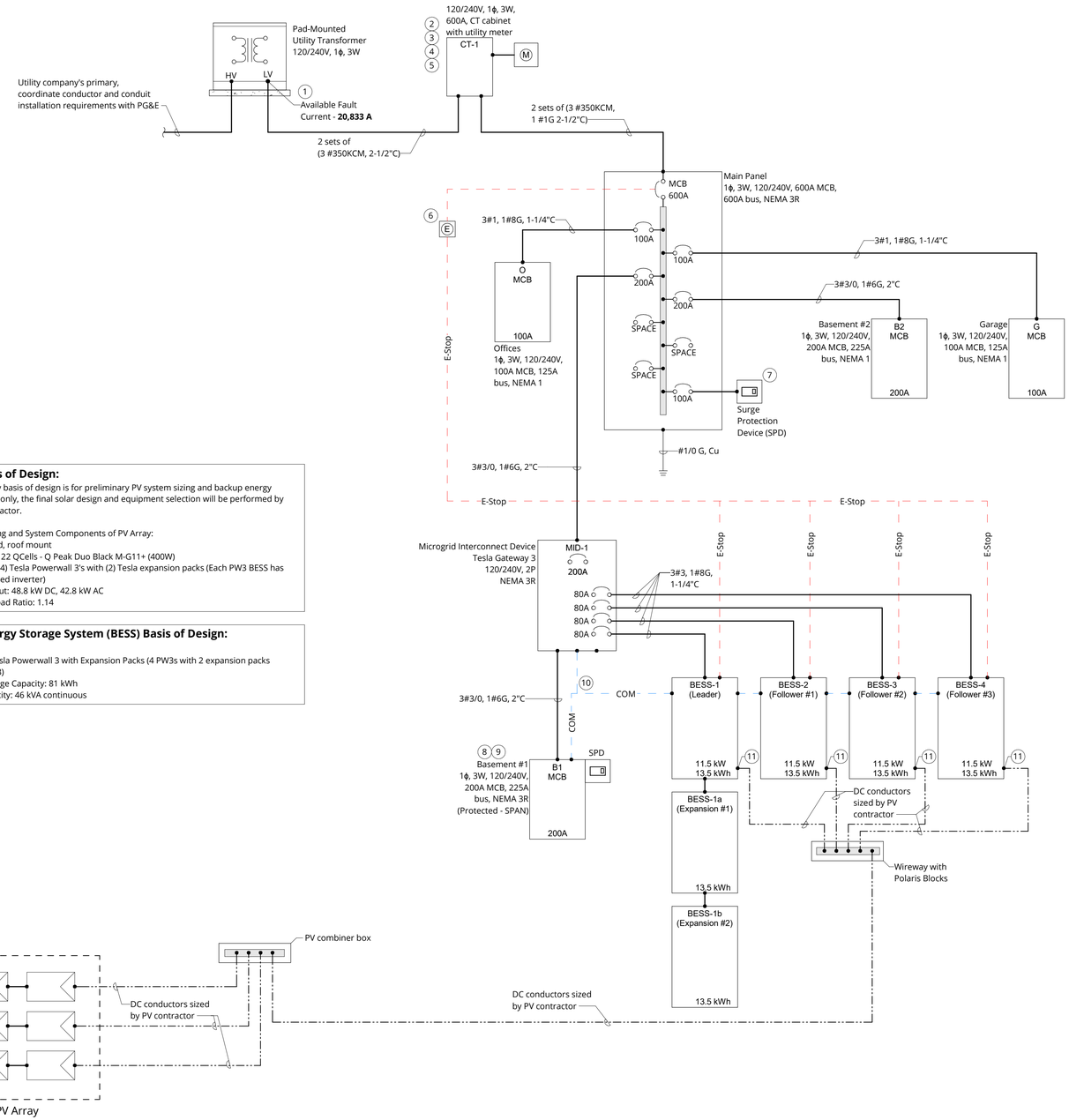
Electrical Site Plan

Scale: 1/16" = 1'-0"
Drawn By: CN
Reviewed By: TPE

E100



1 Single Line Diagram
Not to Scale

Solar Basis of Design:

The solar array basis of design is for preliminary PV system sizing and backup energy system design only, the final solar design and equipment selection will be performed by the solar contractor.

Estimated Sizing and System Components of PV Array:
- DC coupled, roof mount
- Modules: 122 QCells - Q Peak Duo Black M-G11+ (400W)
- Inverters: (4) Tesla Powerwall 3's with (2) Tesla expansion packs (Each PW3 BESS has an integrated inverter)
- Peak Output: 48.8 kW DC, 42.8 kW AC
- Inverter Load Ratio: 1.14

Battery Energy Storage System (BESS) Basis of Design:

Proposed BESS:
- Batteries: Tesla Powerwall 3 with Expansion Packs (4 PW3s with 2 expansion packs on main PW3)
- Energy Storage Capacity: 81 kWh
- Power Capacity: 46 kVA continuous

Keynotes - E101	
1	The shown maximum available fault current assumes a 75 kVA 240/120V transformer. If the existing, or newly installed, transformer is a different size, the maximum available fault current must be recalculated and may require equipment with greater short circuit current ratings.
2	Provide a meter socket that complies with local utility requirements.
3	All knockouts in the meter socket must have bond bushings. Any drilled connections must have grounding locknuts for bonding.
4	All feeder sizes shown are based on the installation of copper conductors.
5	Permanent signage must be installed that states "Parallel Generation on Site" that is adjacent to the electric meter and manual disconnect and "Manual Disconnect for Parallel Generation" that identifies the manual disconnect. Both signs must be of sufficient durability to withstand the local environment.
6	Emergency stop (E-Stop) button capable of disconnecting and shutting down power to the microgrid. Locate shutoff on exterior at the service entrance adjacent to the utility meter in an illuminated, NEMA 3R enclosure. Provide a dedicated, GFCI protected, 120 V, 20 A circuit to power the emergency disconnect. The E-Stop button shall be capable of forcing all Powerwalls to go into rapid shutdown (RSD) when pressed.
7	Surge Protection Device (SPD) on Panel 'MP' to be Current Technology SL3 or equal.
8	Panel 'B' shall be installed as a SPAN panel. The SPAN panel is capable of automatically shedding nonessential loads in a power outage scenario. Please refer to SPAN's documentation to set up the SPAN panel's off-grid mode to ensure proper management of the protected loads and BESS.
9	All SPAN panels are rated as NEMA 3R whether they are installed indoors or outdoors.
10	Provide all required communication wiring for parallel communication, battery energy storage system monitoring, generator control, limiter sensors (CTs), inverter interconnections, and emergency stop response. Additional low voltage communication wiring may be needed that is not shown.
11	Split PV strings evenly across each powerwall as recommended by Tesla. Each Tesla Powerwall 3 is limited to a maximum of 20 kW of PV input power.

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Revisions:

Single Line Diagram

Scale: Not to Scale
Drawn By: CN
Reviewed By: TPE

E101

Non-HVAC Loads

Status	% Protected	Category	Tag	Load	Manufacturer	Model	Quantity	Rated Amps	Rated Volts	Phase	Rated kVA	Protected Load (kVA)
Confirmed	25%	Lights and Plugs		Lighting & receptacle loads		3 W/sf conditioned area per NEC	1	135.1	120	1	16.2	4.1
Confirmed	0%	Kitchen Appliances		Small appliances			2	12.5	120	1	3.0	0.0
Placeholder	0%	Kitchen Appliances	CTP-1	Cooktop	Gaggenau	CX492612 - 36" 400 Series Full Surface Induction	1	26.0	240	1	6.2	0.0
Placeholder	0%	Kitchen Appliances	OVN-1, 2	Wall oven	Gaggenau	BO 480 - 30" 400 Series Oven	2	23.0	240	1	11.0	0.0
Placeholder	0%	Kitchen Appliances	MW-1	Microwave/speed oven	Gaggenau	MW420620 - 24" Drawer	1	7.9	120	1	0.9	0.0
Placeholder	100%	Kitchen Appliances	REF-1	Refrigerator	Gaggenau	RC462705 - 36" 400 Series Vario Refrigerator	1	3.0	120	1	0.4	0.4
Placeholder	0%	Kitchen Appliances	REF- 2	Refrigerator (UC)	Sub-Zero	DEU2450R - 24" Designer Series	1	1.5	120	1	0.2	0.0
Placeholder	100%	Kitchen Appliances	FZ-1	Freezer (UC)	Sub-Zero	ID-24FI - 24" Drawers with Ice Maker	1	3.5	120	1	0.4	0.4
Placeholder	0%	Kitchen Appliances	ICE-1	Ice machine (UC) - Exterior	Sub-Zero	UC-15IPO - 15"	1	1.5	120	1	0.2	0.0
Placeholder	0%	Kitchen Appliances	DW-1, 2	Dishwasher	Miele	G 7366 SCVi XXL SF AutoDos - 24"	2	11.7	120	1	2.8	0.0
Placeholder	0%	Kitchen Appliances	GD-1, 2, 3	Garbage Disposal	insinkerator	Badger 5XP - 3/4 HP	3	9.5	120	1	3.4	0.0
Placeholder	0%	Laundry Appliances	WM-1, 2	Washing machine	Miele	WXR860 WCS TDos	2	10.8	120	1	2.6	0.0
Placeholder	0%	Laundry Appliances	DR-1, 2	Electric dryer	Whirlpool	WED9620HW	2	26.0	240	1	12.5	0.0
Placeholder	50%	Water Heating	HPWH-1	Hybrid electric HP water heater	Rheem	PROPH80 T2 RH375-SO - Professional Prestige ProTerra - 80 gal	2	18.7	240	1	9.0	4.5
Placeholder	0%	Water Heating					0	0.0	240	1	0.0	0.0
Placeholder	0%	Misc Equipment		Electric floor heating		Primary bathroom - 245 sqft at 12W/sqft	1	24.5	120	1	2.9	0.0
Placeholder	0%	Misc Equipment		Sauna heater	Finlandia	Virta HL11-U1	1	43.8	240	1	10.5	0.0
Placeholder	0%	Misc Equipment		Spa/Soaking Tub	Northern Lights	Electric Heating System Hi-Performance	1	46.0	240	1	11.0	0.0
Placeholder	0%	Misc Equipment		Electric grill	Electrichef	Ruby 32" Dual Built-in Outdoor Electric Grill	1	30.0	240	1	7.2	0.0
Placeholder	0%	Misc Equipment		Lighting control panel	Lutron		2	20.0	120	1	4.8	0.0
Placeholder	0%	Misc Equipment		Shading control panel			2	10.0	120	1	2.4	0.0
Placeholder	0%	Misc Equipment		Security panel			1	10.0	120	1	1.2	0.0
Placeholder	100%	Misc Equipment		AV Rack			1	30.0	120	1	3.6	3.6
Placeholder	0%	Misc Equipment		Workshop machinery		Workshop machinery	1	50.0	240	1	12.0	0.0
Placeholder	0%	Misc Equipment		Fireplace		Spark Modern Fires Model 19E 6ft Gas	1	0.7	120	1	0.1	0.0
Placeholder	0%	Misc Equipment					0	0.0	120	1	0.0	0.0
Placeholder	0%	Pool Equipment		Pool controls (lights/controls)	Pentair	IntelliCenter Pool Control System	1	2.5	120	1	0.3	0.0
Placeholder	0%	Pool Equipment		Pool circulation pump	Pentair	IntelliFlo3 VSW 3.0 HP	1	11.2	240	1	2.7	0.0
Placeholder	0%	Pool Equipment		Pool sanitation system	Pentair	IntelliChem Water Chemistry Controller	1	3.6	120	1	0.4	0.0
Placeholder	0%	Pool Equipment		Pool heater	Pentair	UltraTemp ETi Hybrid Heater (HP/Gas)	1	34.0	240	1	8.2	0.0
Placeholder	0%	Pool Equipment		Pool blower (spa/jets)	Jandy	PSB115	1	7.9	120	1	0.9	0.0
Placeholder	0%	Pool Equipment		Pool negative edge pump	Pentair	IntelliFlo3 VSW 3.0 HP	1	11.2	240	1	2.7	0.0
Placeholder	0%	Water Systems	CP-1	DHW circulation pump	D'mand Kontrols	ACT1	4	1.0	120	1	0.5	0.0
Placeholder	100%	Water Systems		Sump Pump	Liberty Pumps	237	1	5.2	120	1	0.6	0.6
Placeholder	100%	Fire Systems		Fire pump & equipment		1.5 HP	1	8.1	240	1	1.9	1.9
										non-HVAC Subtotal (kVA):	142.9	15.5
										Amps:	595.3	64.5

Electric Vehicle Chargers

Status	% Protected	Category	Tag	Load	Manufacturer	Model	Quantity	Rated Amps	Rated Volts	Phase	Rated kVA	Protected Load (kVA)
Placeholder	0%	EV Chargers	EVSE-1, 2	EV charger	SPAN	Drive - Level 2, load managed charger***	2	48.0	240	1	23.0	0.0
										EV Subtotal (kVA):	23.0	0.0
										Amps:	96.0	0.0

HVAC Loads

Status	% Protected	Category	Tag	Load	Manufacturer	Model	Quantity	Rated Amps	Rated Volts	Phase	Rated kVA	Protected Load (kVA)
Placeholder	100%	Heat Pumps (Primary)	OU-1	Air-Air/VRF heat pump	Mitsubishi	PUZ-AK36NL	1	20	240	1	4.8	4.8
Placeholder	100%	Heat Pumps (Primary)	OU-2	Air-Air/VRF heat pump	Mitsubishi	PUZ-AK42NL	1	20	240	1	4.8	4.8
Placeholder	100%	Heat Pumps (Primary)	OU-3	Air-Air/VRF heat pump	Mitsubishi	PUZ-AK36NL	1	27.2	240	1	6.5	6.5
Placeholder	0%	Heat Pumps (Primary)	OU-4	Air-Air/VRF heat pump	Mitsubishi	PUZ-AK24NL	1	15.2	240	1	3.6	0.0
Placeholder	0%	Heat Pumps (Primary)	OU-5	Air-Air/VRF heat pump	Mitsubishi	PUZ-AK18NL	1	8.8	240	1	2.1	0.0
Placeholder	100%	Heat Pumps (Primary)	OU-6	Air-Air/VRF heat pump	Mitsubishi	PUZ-AK18NL	1	8.8	240	1	2.1	2.1
Placeholder	0%	Heat Pumps (Primary)	OU-7	Wine room condenser	Cellar Cool	DFD3500-S Condenser	1	2.16	240	1	0.5	0.0
Placeholder	0%	Heat Pumps (Primary)	IU-7	Wine room evaporator	Cellar Cool	DFD3500-S Evaporator	1	2.2	120	1	0.3	0.0
Placeholder	100%	Indoor Air Quality	DH-1	Dehumidifier	Aprilaire	E070	1	5.8	120	1	0.7	0.7
Placeholder	100%	Indoor Air Quality	RV-1	Energy recovery ventilator	Broan	B130E65RT	3	2.5	120	1	0.9	0.9
Placeholder	100%	Indoor Air Quality	RV-2	Energy recovery ventilator	Broan	B130E65RS	1	2.5	120	1	0.3	0.3
Placeholder	0%	Indoor Air Quality	MA-1	Makeup air system	Fantech	MUAS 8	1	1.6	120	1	0.2	0.0
Placeholder	0%	Indoor Air Quality	EF-1	Dryer boost fan	Fantech	DEDPV	1	0.6	120	1	0.1	0.0
Placeholder	0%	Indoor Air Quality	EF-2	Kitchen hood remote blower	Wolf	801640	1	2.4	120	1	0.3	0.0
Placeholder	0%	Electric Heat (Supplemental)	SH-1	Duct heater	Fantech	MUAH 8/6	1	25	240	1	6.0	0.0
Placeholder	0%	Electric Heat (Supplemental)					0	0	240	1	0.0	0.0
										HVAC Subtotal (kVA):	33.2	20.1
										Amps:	138.5	83.9

Main House Conditioned Floor Areas (sf): 5404

Combined Load Summary

Non-HVAC Loads:	kVA	Protected kVA
Lights and Plugs	16.2	4.1
Kitchen Appliances	28.6	0.8
Laundry Appliances	15.1	0.0
Water Heating	9.0	4.5
Misc Equipment	55.8	3.6
Pool Equipment	15.2	0.0
Water Systems	1.1	0.6
Fire Systems	1.9	1.9
Sub-total	142.9	15.5

EV Loads:	kVA	Protected kVA
EV Chargers	23.0	0.0
Sub-total	23.0	0.0

HVAC Loads	kVA	Protected kVA
Heat Pumps (Primary)	24.8	18.2
Indoor Air Quality	2.4	1.9
Electric Heat (Supplemental)	6.0	0.0
Sub-Total	33.2	20.1

Load Analyis

Service Size Analysis:

*Non-HVAC (Demand Applied) (kVA)	63.2
EV Chargers (kVA)	23.0
**HVAC (Demand Applied) (kVA)	31.1
Maximum Power Demand (kVA)	117.3
Maximum Current Demand (A)	488.8

*****Service Size (A) ==> 600**

Protected Load Analysis:

*Non-HVAC (Demand Applied) (kVA)	12.2
EV Chargers (kVA)	0.0
HVAC Protected (kVA)	20.1
Maximum Protected Power Demand (kVA)	32.3
Maximum Current Demand (A)	134.7

*****Protected Load (kW) ==> 32.3**

Notes:

*NEC 220.82(B) using 100% of first 10kVA with 40% of the remainder

**NEC 220.82(C) using 100% Heat Pumps + 65% supplemental electric heat

***NEC 750.30 using an energy management system (EMS) to ensure loads do not exceed backup equipment ratings

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Carmel, CA 93923

Issue Dates:

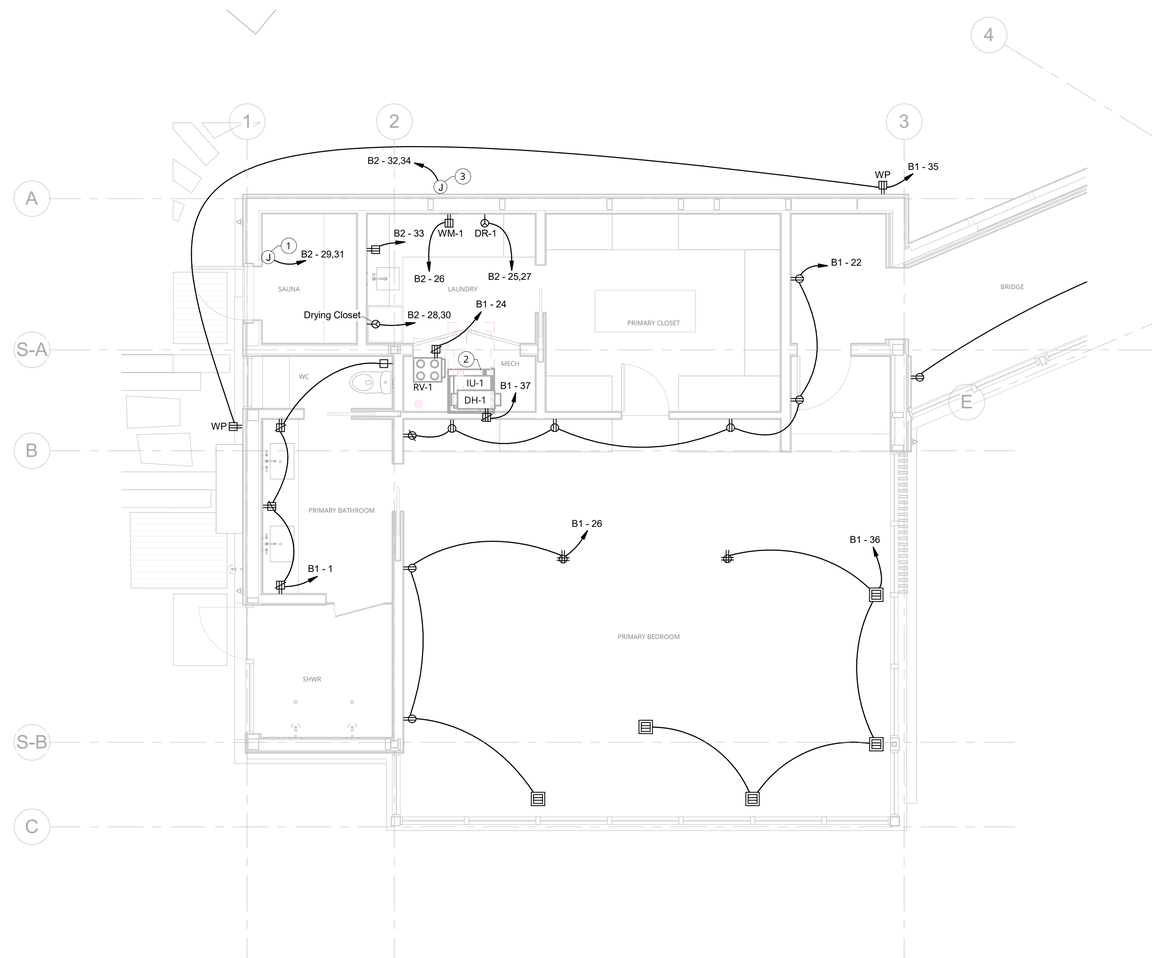
SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Electrical Service Load Calculation

Scale:
Drawn By: CN
Reviewed By: TPE

E102



1 Power Plan - Level 1 - Primary Suite
1/4" = 1'-0"

General Notes	
A	Contractor shall not install any 15 amp circuits unless specifically noted. The minimum size of a typical 120 volt circuit shall be 20 amp.
B	Any point on a wall 2'-0" or larger in length shall be within 6'-0" of a 120 volt power receptacle, except in hallways and bathrooms.
C	Any point on a kitchen countertop (except on islands and peninsulas) shall be within 2'-0" of a 120 volt power receptacle.
D	All receptacles within 6'-0" of a sink, lavatory, wash area, etc. shall be GFCI protected.
E	Contractor shall provide a typed directory in each panelboard.
F	The electrical contractor shall install U.L. approved sealants and fire retardants for all openings related to the electrical installation.
G	Install 3/4" minimum size conduits for floor receptacles and floor data/communication outlets.
H	All 120V, 20A circuits between 70 and 150 feet in length shall be #10AWG. All 120V, 20A circuits between 150 and 250 feet in length shall be #8AWG. Wiring for all other branch circuit ampacities and lengths shall be increased as required to comply with the voltage drop limits indicated in the NEC.

Keynotes - E200	
1	The sauna heater will be supplied by a lockable breaker in Panel 'B2', coordinate heater location with Architect.
2	IU powered by outdoor unit.
3	Junction box for hot tub heater, coordinate final location with Architect.

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Issue Dates:

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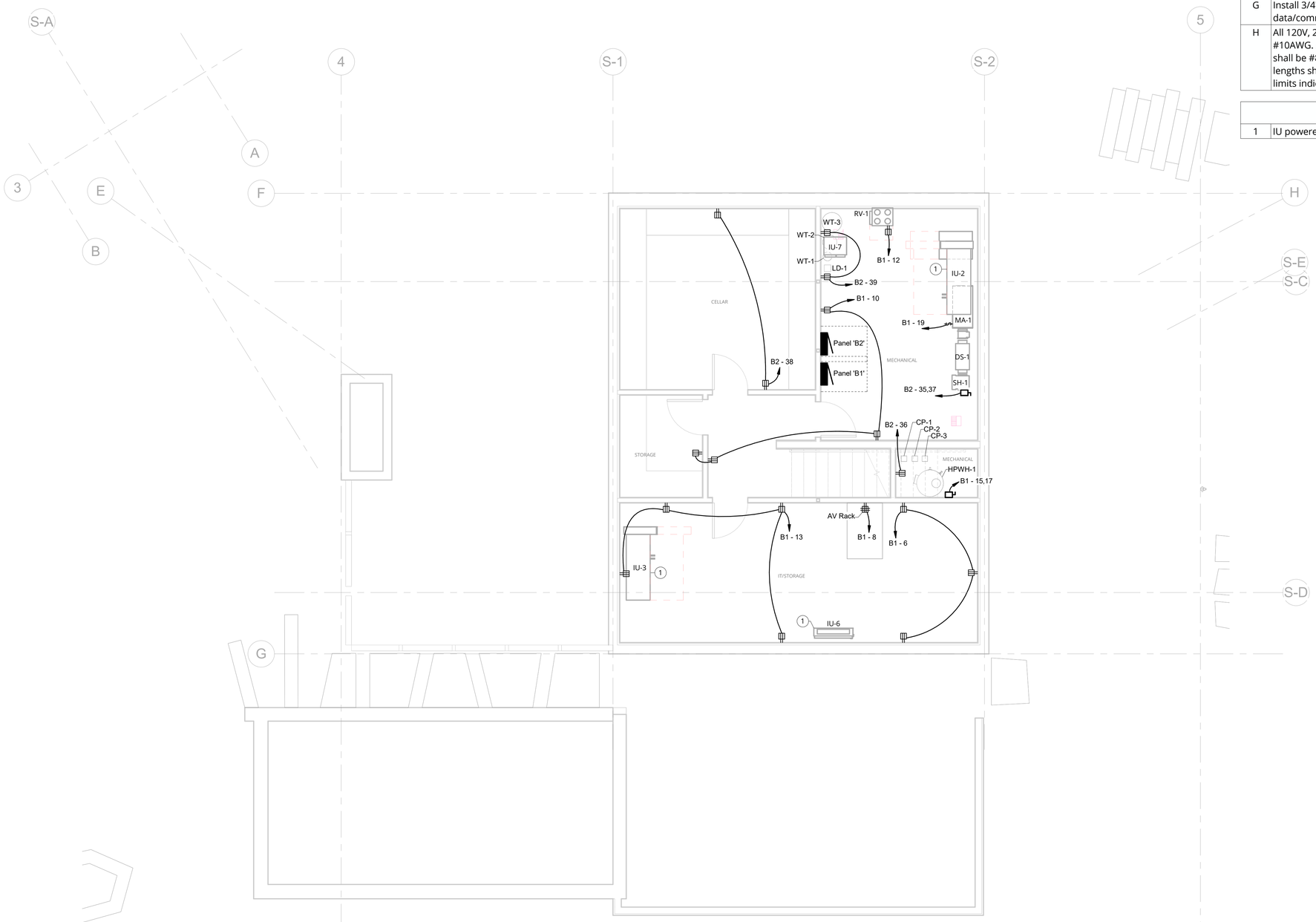
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Power Plan - Primary Suite - Level 1

Scale: 1/4" = 1'-0"
Drawn By: CN
Reviewed By: TPE

E200



1 Power Plan - Level 0 - Great Room
1/4" = 1'-0"

General Notes	
A	Contractor shall not install any 15 amp circuits unless specifically noted. The minimum size of a typical 120 volt circuit shall be 20 amp.
B	Any point on a wall 2'-0" or larger in length shall be within 6'-0" of a 120 volt power receptacle, except in hallways and bathrooms.
C	Any point on a kitchen countertop (except on islands and peninsulas) shall be within 2'-0" of a 120 volt power receptacle.
D	All receptacles within 6'-0" of a sink, lavatory, wash area, etc. shall be GFCI protected.
E	Contractor shall provide a typed directory in each panelboard.
F	The electrical contractor shall install U.L. approved sealants and fire retardants for all openings related to the electrical installation.
G	Install 3/4" minimum size conduits for floor receptacles and floor data/communication outlets.
H	All 120V, 20A circuits between 70 and 150 feet in length shall be #10AWG. All 120V, 20A circuits between 150 and 250 feet in length shall be #8AWG. Wiring for all other branch circuit ampacities and lengths shall be increased as required to comply with the voltage drop limits indicated in the NEC.

Keynotes - E201	
1	IU powered by outdoor unit.

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

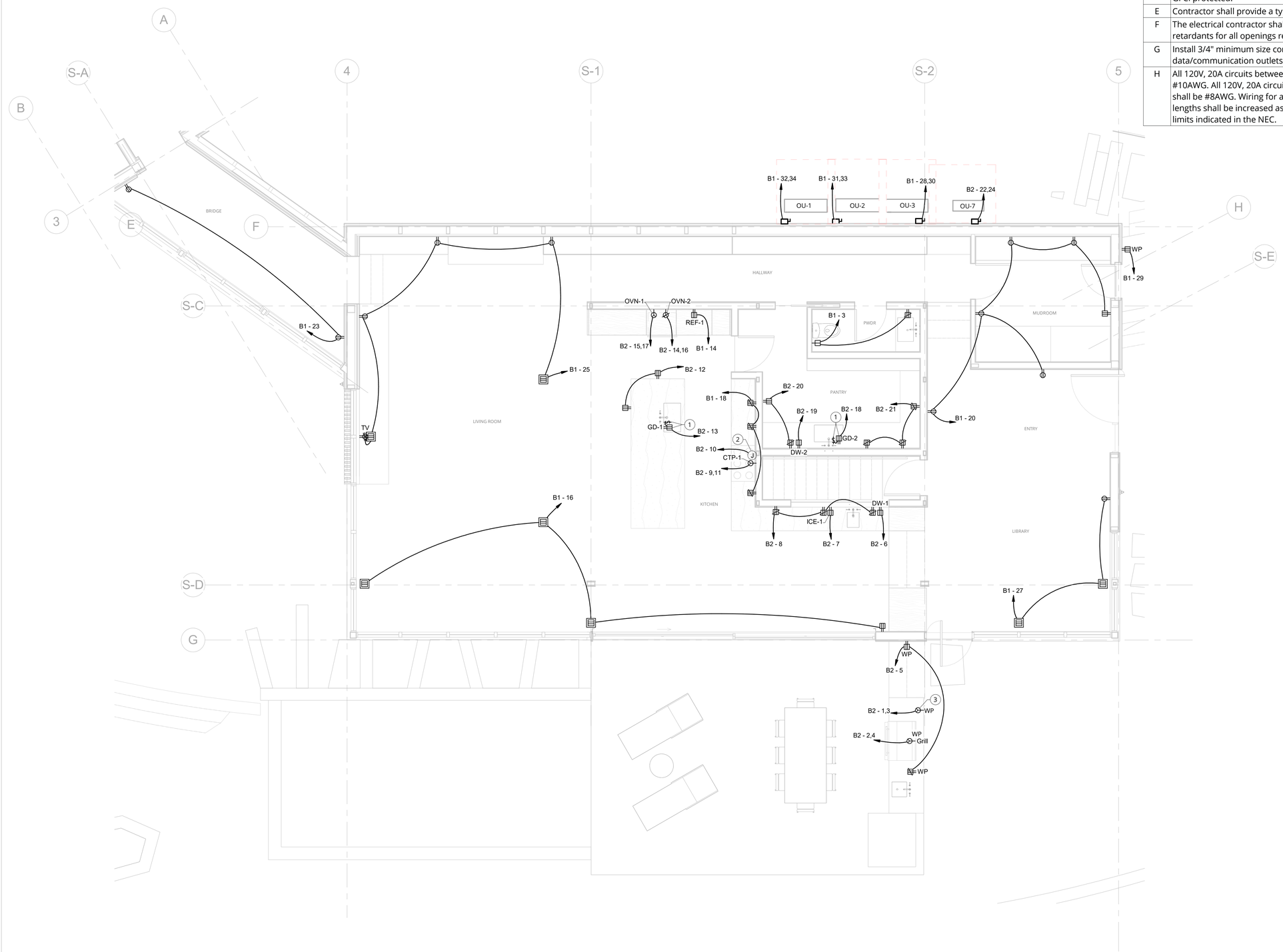
Power Plan - Great Room - Basement

Scale: 1/4" = 1'-0"
Drawn By: CN
Reviewed By: TPE

E201

Keynotes - E202	
1	Switch and receptacle for garbage disposal to be located in cabinet under sink, coordinate final location with Architect.
2	Junction box for vent hood, coordinate final location with Architect.
3	50A/240V receptacle, with lockable breaker, for temporary event load center to be hidden in outdoor kitchen casework, coordinate final location with Architect.

General Notes	
A	Contractor shall not install any 15 amp circuits unless specifically noted. The minimum size of a typical 120 volt circuit shall be 20 amp.
B	Any point on a wall 2'-0" or larger in length shall be within 6'-0" of a 120 volt power receptacle, except in hallways and bathrooms.
C	Any point on a kitchen countertop (except on islands and peninsulas) shall be within 2'-0" of a 120 volt power receptacle.
D	All receptacles within 6'-0" of a sink, lavatory, wash area, etc. shall be GFCI protected.
E	Contractor shall provide a typed directory in each panelboard.
F	The electrical contractor shall install U.L. approved sealants and fire retardants for all openings related to the electrical installation.
G	Install 3/4" minimum size conduits for floor receptacles and floor data/communication outlets.
H	All 120V, 20A circuits between 70 and 150 feet in length shall be #10AWG. All 120V, 20A circuits between 150 and 250 feet in length shall be #8AWG. Wiring for all other branch circuit ampacities and lengths shall be increased as required to comply with the voltage drop limits indicated in the NEC.



1 Power Plan - Level 1 - Great Room
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

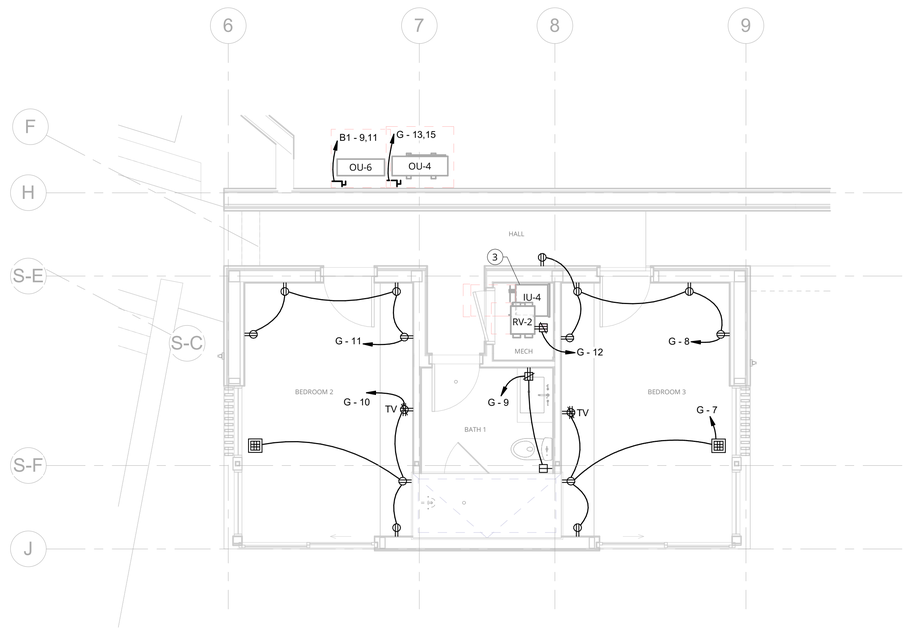
Power Plan - Great Room - Level 1

Scale: 1/4" = 1'-0"
Drawn By: CN
Reviewed By: TPE

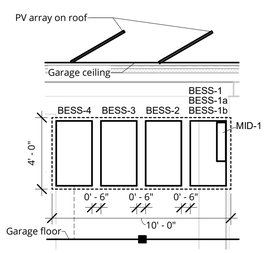
E202

General Notes	
A	Contractor shall not install any 15 amp circuits unless specifically noted. The minimum size of a typical 120 volt circuit shall be 20 amp.
B	Any point on a wall 2'-0" or larger in length shall be within 6'-0" of a 120 volt power receptacle, except in hallways and bathrooms.
C	Any point on a kitchen countertop (except on islands and peninsulas) shall be within 2'-0" of a 120 volt power receptacle.
D	All receptacles within 6'-0" of a sink, lavatory, wash area, etc. shall be GFCI protected.
E	Contractor shall provide a typed directory in each panelboard.
F	The electrical contractor shall install U.L. approved sealants and fire retardants for all openings related to the electrical installation.
G	Install 3/4" minimum size conduits for floor receptacles and floor data/communication outlets.
H	All 120V, 20A circuits between 70 and 150 feet in length shall be #10AWG. All 120V, 20A circuits between 150 and 250 feet in length shall be #8AWG. Wiring for all other branch circuit ampacities and lengths shall be increased as required to comply with the voltage drop limits indicated in the NEC.

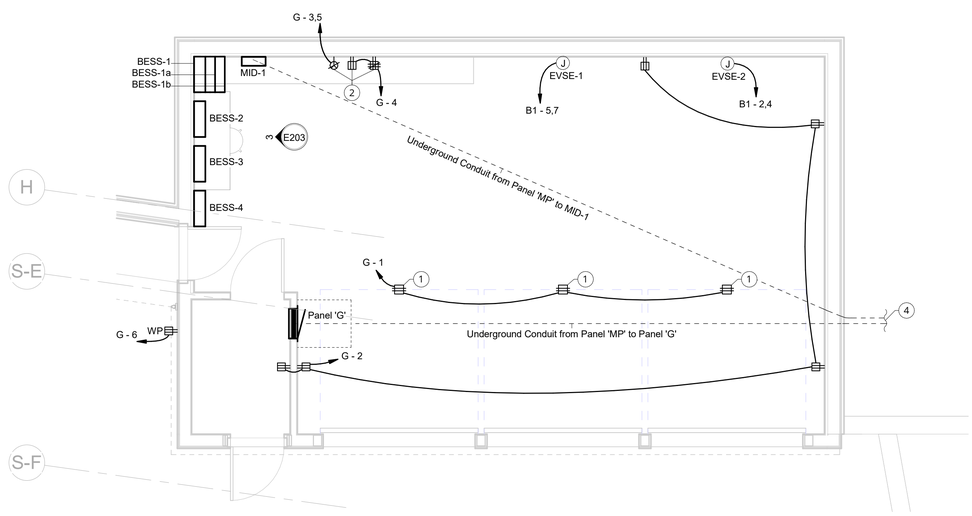
Keynotes - E203	
1	Ceiling receptacle for garage door opener, coordinate final location with Architect.
2	Receptacles for workshop equipment.
3	IU powered by outdoor unit.
4	Underground conduits continue on to Panel 'MP'.



2 Power Plan - Level 1 - Bedrooms
1/4" = 1'-0"



3 Battery Energy Storage System
1/4" = 1'-0"



1 Power Plan - Level 1 - Garage
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

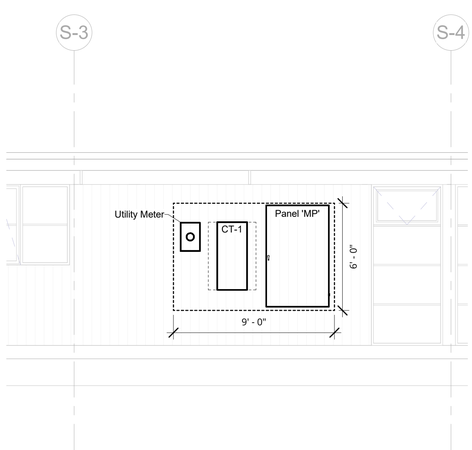
Power Plan - Bedrooms and Garage - Level 1

Scale: 1/4" = 1'-0"
Drawn By: CN
Reviewed By: TPE

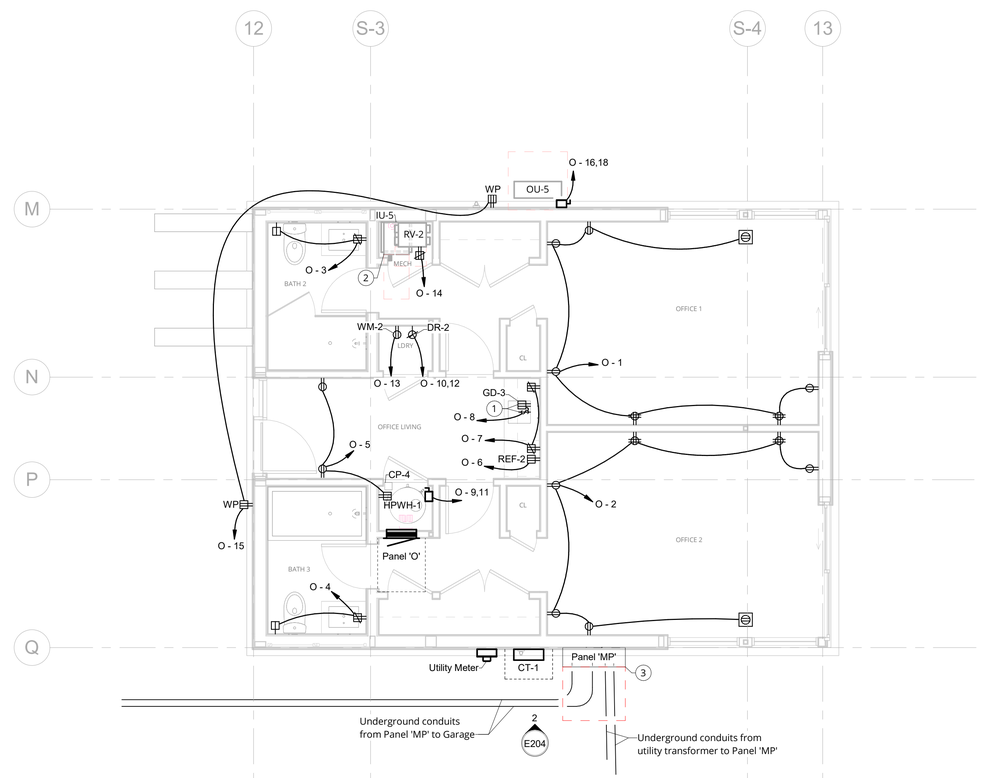
E203

General Notes	
A	Contractor shall not install any 15 amp circuits unless specifically noted. The minimum size of a typical 120 volt circuit shall be 20 amp.
B	Any point on a wall 2'-0" or larger in length shall be within 6'-0" of a 120 volt power receptacle, except in hallways and bathrooms.
C	Any point on a kitchen countertop (except on islands and peninsulas) shall be within 2'-0" of a 120 volt power receptacle.
D	All receptacles within 6'-0" of a sink, lavatory, wash area, etc. shall be GFCI protected.
E	Contractor shall provide a typed directory in each panelboard.
F	The electrical contractor shall install U.L. approved sealants and fire retardants for all openings related to the electrical installation.
G	Install 3/4" minimum size conduits for floor receptacles and floor data/communication outlets.
H	All 120V, 20A circuits between 70 and 150 feet in length shall be #10AWG. All 120V, 20A circuits between 150 and 250 feet in length shall be #8AWG. Wiring for all other branch circuit ampacities and lengths shall be increased as required to comply with the voltage drop limits indicated in the NEC.

Keynotes - E204	
1	Switch and receptacle for garbage disposal to be located in cabinet under sink, coordinate final location with Architect.
2	Powered by outdoor unit.
3	Main circuit breaker in panel to serve as main service disconnect.



2 Service Entrance
1/4" = 1'-0"



1 Power Plan - Level 1 - Home Offices
1/4" = 1'-0"

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Issue Dates:

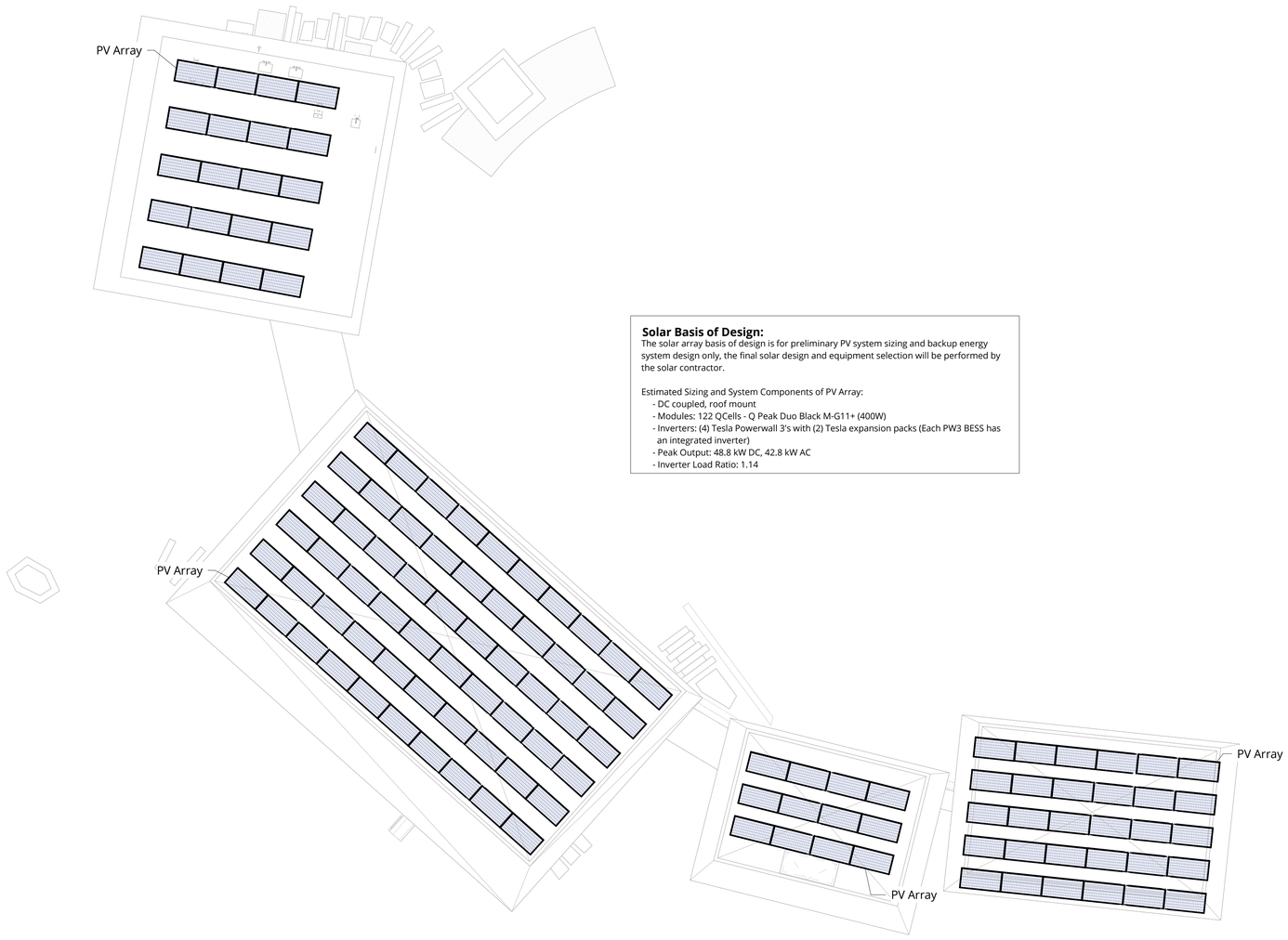
SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Power Plan - Home Offices - Level 1

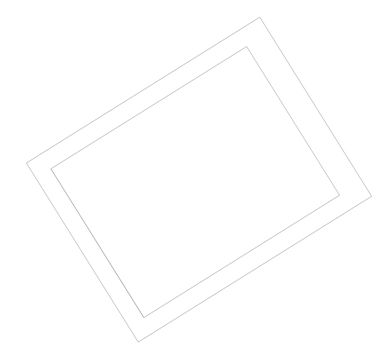
Scale: 1/4" = 1'-0"
Drawn By: CN
Reviewed By: TPE

E204



Solar Basis of Design:
The solar array basis of design is for preliminary PV system sizing and backup energy system design only, the final solar design and equipment selection will be performed by the solar contractor.

Estimated Sizing and System Components of PV Array:
- DC coupled, roof mount
- Modules: 122 QCells - Q Peak Duo Black M-G11+ (400W)
- Inverters: (4) Tesla Powerwall 3's with (2) Tesla expansion packs (Each PW3 BESS has an integrated inverter)
- Peak Output: 48.8 kW DC, 42.8 kW AC
- Inverter Load Ratio: 1.14



1 Power Plan - Roof
1" = 10'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Power Plan - Roof

Scale: 1" = 10'-0"
Drawn By: CN
Reviewed By: TPE

E205

Distribution Panel MP

Location:	Home Offices	**Voltage:**	120/240 V	**Type of Main:**	MCB
Mounting Type:	Surface	**Phase(s):**	1	**OCPD Rating:**	600
Enclosure Type:	NEMA 3R	**Wires:**	3	**Bus Rating:**	600
Supply From:	CT-1/Utility Meter	**Feed-Through Lugs:**	No	**AIC Rating:**	22 kA Series Rated

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	Panel 'O'	2	100	100	19116 VA	
2	Panel 'G'	2	100	100	21888 VA	
3	MID-1/Panel 'B1'	2	200	200	58656 VA	
4	Panel 'B2'	2	200	200	81454 VA	
5						
6						
7						
8						
9						
10						
11						
12	Surge-Protective Device*	2	100	100	0 VA	
				Total Conn. Load:	181114 VA	
				Total Amps:	754.6	

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HVAC	26386 VA	100.00%	26386 VA		
Electric Vehicle Chargers	23040 VA	100.00%	23040 VA	**Total Conn. Load:**	181114 VA
Non-HVAC	125688 VA	44.77%	56275 VA	**Total Est. Demand:**	109602 VA
HVAC (Supplemental)	6000 VA	65.00%	3900 VA	**Total Conn.:**	754.6
				Total Est. Demand:	456.7

Notes:
MDP Basis of Design product line for dimensioning purposes is Square D I-Line.
*Surge-Protective Device (SPD) to be Current Technology SL3 or equivalent.

Panel: G

Location:	GARAGE 128	**Voltage:**	120/240 V	**Type of Main:**	MCB
Mounting Type:	Recessed	**Phase(s):**	1	**OCPD Rating:**	100
Enclosure Type:	NEMA 1	**Wires:**	3	**Bus Rating:**	125
Supply From:	MP	**Feed-Through Lugs:**	No	**AIC Rating:**	22 kA Series Rated

LOAD NAME	NT	CKT NO	CKT BKR	P	WIRE SIZE H-N-G	A		B		WIRE SIZE H-N-G	P	CKT BKR	CKT NO	NT	LOAD NAME
Recepts. - Garage Doors (Ceiling)		1	20	1	1-#12, 1-#12, 1-#12	540	900			1-#12, 1-#12, 1-#12	1	20	2		Recepts. - Garage
240V Recept. - Garage		3	50	2	2-#6, 1-#6, 1-#10			6000	540	1-#12, 1-#12, 1-#12	1	20	4		Recepts. - Garage (Workshop)
		5				6000	180			1-#12, 1-#12, 1-#12	1	20	6		Recept. - Garage (Exterior)
Recepts. Bedroom 3		7	20	1	1-#12, 1-#12, 1-#12			900	900	1-#12, 1-#12, 1-#12	1	20	8		Recepts. - Bedroom 3/Hall
Recepts. - Bath 1		9	20	1	1-#12, 1-#12, 1-#12	360	900			1-#12, 1-#12, 1-#12	1	20	10		Recepts. - Bedroom 2
Recepts. Bedroom 2		11	20	1	1-#12, 1-#12, 1-#12			720	300	1-#12, 1-#12, 1-#12	1	20	12		RV-2 - Mech. Closet
OU-4		13	25	2	2-#10, 1-#10, 1-#10	1824							14		
		15						1824					16		
		17											18		
		19											20		
		21											22		
		23											24		
		25											26		
		27											28		
		29											30		
		31											32		
						10704		11184		**TOTAL CONNECTED PHASE VA**					
						89.2		93.2		**TOTAL CONNECTED PHASE AMPS**					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED...	PANEL TOTALS	
HVAC	3648 VA	100.00%	3648 VA	**TOTAL CONNECTED LOAD:**	21888
Non-HVAC	18240 VA	72.89%	13296 VA	**TOTAL CONNECTED AMPS:**	91.2
				TOTAL EST. DEMAND:	16944
				TOTAL EST. DEMAND AMPS:	70.6

GENERAL NOTES:

SCHEDULE NOTES (NT):

Panel: O

Location:	Office 2	**Voltage:**	120/240 V	**Type of Main:**	MCB
Mounting Type:	Recessed	**Phase(s):**	1	**OCPD Rating:**	100
Enclosure Type:	NEMA 1	**Wires:**	3	**Bus Rating:**	125
Supply From:	MP	**Feed-Through Lugs:**	No	**AIC Rating:**	22 kA Series Rated

LOAD NAME	NT	CKT NO	CKT BKR	P	WIRE SIZE H-N-G	A		B		WIRE SIZE H-N-G	P	CKT BKR	CKT NO	NT	LOAD NAME
Recepts. - Office 1		1	20	1	1-#12, 1-#12, 1-#12	1260	1260			1-#12, 1-#12, 1-#12	1	20	2		Recepts. - Office 2
Recepts. - Bath 2		3	20	1	1-#12, 1-#12, 1-#12			360	360	1-#12, 1-#12, 1-#12	1	20	4		Recepts. - Bath 3
Recepts. - Office Living/CP-4		5	20	1	1-#12, 1-#12, 1-#12	480	180			1-#12, 1-#12, 1-#12	1	20	6		REF-2 - Office Living
Recepts. - Office Living (A.C.)		7	20	1	1-#12, 1-#12, 1-#12			360	180	1-#12, 1-#12, 1-#12	1	20	8		GD-3 - Office Living
HPWH-1 - Office Living Closet		9	20	2	2-#12, 1-#12, 1-#12	2244	6240			2-#12, 1-#12, 1-#12	2	20	10		DR-2 - Office LDRY
		11						2244	0				12		
WM-2 - Office LDRY		13	20	1	1-#12, 1-#12, 1-#12	1296	180			1-#12, 1-#12, 1-#12	1	20	14		RV-2 - Office Mech.
Recepts. - Office (Exterior)		15	20	1	1-#12, 1-#12, 1-#12			360	1056	2-#10, 1-#10, 1-#10	2	25	16		OU-5 - Office (Exterior)
		17					1056						18		
		19											20		
		21											22		
		23											24		
		25											26		
		27											28		
		29											30		
		31											32		
						14196		4920		**TOTAL CONNECTED PHASE VA**					
						118.3		41		**TOTAL CONNECTED PHASE AMPS**					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED...	PANEL TOTALS	
HVAC	2292 VA	100.00%	2292 VA	**TOTAL CONNECTED LOAD:**	19116
Non-HVAC	16824 VA	75.66%	12730 VA	**TOTAL CONNECTED AMPS:**	79.7
				TOTAL EST. DEMAND:	15021.6
				TOTAL EST. DEMAND AMPS:	62.6

GENERAL NOTES:

SCHEDULE NOTES (NT):

Panel: B1

Location:	MECHANICAL 136	**Voltage:**	120/240 V	**Type of Main:**	MCB
Mounting Type:	Surface	**Phase(s):**	1	**OCPD Rating:**	200
Enclosure Type:	NEMA 1	**Wires:**	3	**Bus Rating:**	225
Supply From:	MP	**Feed-Through Lugs:**	Yes	**AIC Rating:**	22 kA Series Rated

LOAD NAME	NT	CKT NO	CKT BKR	P	WIRE SIZE H-N-G	A		B		WIRE SIZE H-N-G	P	CKT BKR	CKT NO	NT	LOAD NAME
*Recepts. - Primary Bathroom		1	20	1	1-#12, 1-#12, 1-#12	720	5760			2-#4, 1-#4, 1-#10	2	60	2		***EVSE-2 - Garage
*Recepts. - Great Room Powder		3	20	1	1-#12, 1-#12, 1-#12			360	5760				4		
***EVSE-1 - Garage		5	60	2	2-#4, 1-#4, 1-#10	5760	540			1-#12, 1-#12, 1-#12	1	20	6		Recepts. - IT/Storage
		7						5760	180	1-#12, 1-#12, 1-#12	1	20	8		AV Rack - IT/Storage
OU-6		9	25	2	2-#10, 1-#10, 1-#10	1056	720			1-#12, 1-#12, 1-#12	1	20	10		Recepts. - Storage/Mech.
		11						1056	300	1-#12, 1-#12, 1-#12	1	20	12		RV-1 - Mech.
Recepts. - IT/Storage		13	20	1	1-#12, 1-#12, 1-#12	720	600			1-#12, 1-#12, 1-#12	1	20	14		REF-1 - Kitchen
HPWH-1 - Mech.		15	20	2	2-#12, 1-#12, 1-#12			2244	720	1-#12, 1-#12, 1-#12	1	20	16		Recepts. - Living Room
		17				2244	540			1-#12, 1-#12, 1-#12	1	20	18		Recepts. - Kitchen
MA-1 - Mech.		19	20	1	1-#12, 1-#12, 1-#12			192	1080	1-#12, 1-#12, 1-#12	1	20	20		Recepts. - Entry/Mudroom
		21					1080			1-#12, 1-#12, 1-#12	1	20	22		Recepts. - Primary Bedroom
Recepts. - Bridge		23	20	1	1-#12, 1-#12, 1-#12			360	300	1-#12, 1-#12, 1-#12	1	20	24		RV-1 - Primary Suite Mech.
Recepts. - Living Room		25	20	1	1-#12, 1-#12, 1-#12	1080	720			1-#12, 1-#12, 1-#12	1	20	26		Recepts. - Primary Suite
Recepts. - Library		27	20	1	1-#12, 1-#12, 1-#12			540	3264	2-#6, 1-#6, 1-#10	2	50	28		OU-3 - Great Room (Exterior)
Recept. - Great Room (Exterior)		29	20	1	1-#12, 1-#12, 1-#12	180	3264						30		
OU-2 - Great Room (Exterior)		31	25	2	2-#10, 1-#10, 1-#10			2400	2400	2-#10, 1-#10, 1-#10	2	25	32		OU-1 - Great Room (Exterior)
		33				2400	2400						34		
Recepts. - Primary Suite (Exterior)		35	20	1	1-#12, 1-#12, 1-#12			360	900	1-#12, 1-#12, 1-#12	1	20	36		Recepts. - Primary Suite
DH-1 - Primary Suite Mech.		37	20	1	1-#12, 1-#12, 1-#12	696							38		
		39											40		
						30480		28176		**TOTAL CONNECTED PHASE VA**					
						254		234.8		**TOTAL CONNECTED PHASE AMPS**					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED...	PANEL TOTALS	
HVAC	19428 VA	100.00%	19428 VA	**TOTAL CONNECTED LOAD:**	58656
Electric Vehicle Chargers	23040 VA	100.00%	23040 VA	**TOTAL CONNECTED AMPS:**	244.4
Non-HVAC	16188 VA	77.06%	12475 VA		
				TOTAL EST. DEMAND:	54943.2
				TOTAL EST. DEMAND AMPS:	228.9

GENERAL NOTES:
* To conserve breaker space, circuits 1 and 3 shall be an SPD/breaker combo; Siemens QSA2020SPD or equal. These circuits will not be AFCI protected and shall be used to serve spaces that do not require AFCI protection.
**Panel to be a 48 Pole SPAN with main circuit breaker (40 load breaker spaces)
*** EVSE-1, 2 will be load managed using SPAN PowerUp

SCHEDULE NOTES (NT):

Panel: B2

Location:	MECHANICAL 136	**Voltage:**	120/240 V	**Type of Main:**	MCB
Mounting Type:	Surface	**Phase(s):**	1	**OCPD Rating:**	200
Enclosure Type:	NEMA 1	**Wires:**	3	**Bus Rating:**	225
Supply From:	MP	**Feed-Through Lugs:**	No	**AIC Rating:**	22 kA Series Rated

LOAD NAME	NT	CKT NO	CKT BKR	P	WIRE SIZE H-N-G	A		B		WIRE SIZE H-N-G	P	CKT BKR	CKT NO	NT	LOAD NAME
240V Recept. - Party Panel (Exterior)		1	50	2	2-#6, 1-#6, 1-#10	6000	7200			2-#6, 1-#6, 1-#10	2	50	2		Grill - Pavilion (Exterior)
		3						6000	0				4		
Recepts. - Pavilion (Exterior)		5	20	1	1-#12, 1-#12, 1-#12	360	1404			1-#12, 1-#12, 1-#12	1	20	6		DW-1 - Wet Bar
ICE-1 - Wet Bar		7	20	1	1-#12, 1-#12, 1-#12			180	540	1-#12, 1-#12, 1-#12	1	20	8		Recepts. - Wet Bar
CTP-1 - Kitchen		9	30	2	2-#10, 1-#10, 1-#10	3120	500			1-#12, 1-#12, 1-#12	1	20	10		Vent Hood - Kitchen
		11						3120	360	1-#12, 1-#12, 1-#12	1	20	12		Recepts. - Kitchen Island
GD-1 - Kitchen		13	20	1	1-#12, 1-#12, 1-#12	1140	2760			2-#10, 1-#10, 1-#10	2	30	14		OVN-2 - Kitchen
OVN-1 - Kitchen		15	30	2	2-#10, 1-#10, 1-#10			2760	2760				16		
		17				2760	1140			1-#12, 1-#12, 1-#12	1	20	18		GD-2 - Pantry
DW-2 - Pantry		19	20	1	1-#12, 1-#12, 1-#12			1404	360	1-#12, 1-#12, 1-#12	1	20	20		Recepts. - Pantry
Recepts. - Pantry		21	20	1	1-#12, 1-#12, 1-#12	540	259			2-#12, 1-#12, 1-#12	2	20	22		OU-7 - Great Room (Exterior)
		23							259				24		
DR-1 - Laundry Room		25	30	2	2-#8, 1-#8, 1-#8	6240	1296			1-#10, 1-#10, 1-#10	1	20	26		WM-1 - Laundry Room
		27						0	180	2-#10, 1-#10, 1-#10	2	30	28		Drying Closet - Laundry Room
Sauna Heater		29	50	2	2-#6, 1-#6, 1-#10	5256	0						30		
		31						5256	5520	2-#6, 1-#6, 1-#10	2	50	32		Hot Tub Heater
Recept. - Laundry Room		33	20	1	1-#12, 1-#12, 1-#12	180	5520						34		
SH-1 - Mech.		35	30	2	2-#10, 1-#10, 1-#10			3000	360	1-#12, 1-#12, 1-#12	1	20	36		CP-1, 2, 3 - Mech.
		37				3000	360			1-#12, 1-#12, 1-#12	1	20	38		Recepts. - Cellar
WT-1, 2, 3 + LD-1 - Mech.		39	20	1	1-#12, 1-#12, 1-#12			360					40		
						49035.2		32419.2		**TOTAL CONNECTED PHASE VA**					
						408.6		270.2		**TOTAL CONNECTED PHASE AMPS**					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED...	PANEL TOTALS	
HVAC	1018 VA	100.00%	1018 VA	**TOTAL CONNECTED LOAD:**	81454.4
Non-HVAC	74436 VA	48.06%	35774 VA	**TOTAL CONNECTED AMPS:**	339.4
HVAC (Supplemental)	6000 VA	65.00%	3900 VA		
				TOTAL EST. DEMAND:	40692.8
				TOTAL EST. DEMAND AMPS:	169.6

GENERAL NOTES:

SCHEDULE NOTES (NT):

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F-17960

Permit Set

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415.252.1441

Ward Residence
23 Vasquez Trail
Carmel, CA 93923

Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Electrical Panel Schedules

Scale:
Drawn By: CN
Reviewed By: TPE

E300

INSTALLER QUALIFICATIONS:

It is expected that the installing contractor have sufficient requirements to support successful implementation of this design. The requirements include but are not limited to:
1. Required training and certification(s), including manufacturer-specific training; installing contractor shall provide project team with certificate of completion of manufacturer training.
2. Education qualifications.
3. Licensing and registration.
4. Insurance.
5. Commensurate prior work experience; except under guidance of manufacturer's authorized representatives.

INSTALLATION:

It is the responsibility of the installing contractor to confirm the suitability of the design. Follow all applicable code requirements or this design, whichever is stricter.
Assemble all ducts in the general locations shown. Conform to all structural and finish locations of the building. Prior to fabricating any ductwork, check physical conditions at the job site and notify designer of any necessary or desired alterations.
Follow all manufacturer installation instructions for mechanical equipment and controllers.
All duct, fitting, and plenum box dimensions indicated are interior, clear dimensions. Any lining added to duct network components will require an increase in sheet metal size to maintain inside clear dimensions indicated.
Allow a minimum of 1.5" to each side for duct insulation. (i.e. an indicated 8" round duct shall have a minimum of 11" of space available.)
During construction, all supply, return and exhaust duct openings shall be covered and maintained to prevent entry of construction dust and debris. All systems are to remain off with all openings covered and sealed during construction.
DO NOT operate any permanently installed heating, cooling, dehumidification, filtration, purification and air distribution systems during construction.
DO USE portable or temporary job site air conditioning equipment and dehumidification equipment for job site space conditioning.
Follow ANSI/ACCA Standard 5 "HVAC Quality Installation Specification", as applicable.

DUCT CONSTRUCTION STANDARDS:

Sheet metal and linings shall comply with the latest edition of SMACNA HVAC Duct Construction Standards - Metal and Flexible. Low pressure ductwork is defined as ductwork subjected to velocities of 2500 fpm or less and operating pressure of 2 i.w.g. or less, positive or negative.
Flexible duct installation shall comply with the latest edition of ADC Flexible Duct Performance and Installation Standards.
All longitudinal and transverse joints, seams and connections in metallic and nonmetallic ducts shall be constructed and securely fastened and sealed appropriately with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems or tapes, as specified in SMACNA HVAC Duct Construction Standards - Metal and Flexible and NAIMA Fibrous Glass Duct Construction Standards.
Duct connections to flanges of air distribution system equipment shall be sealed and mechanically fastened. Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and shall be marked 181B-C. Crimp joints for round metallic ducts shall have a contact lap of not less than 1 inch (25.4mm) and shall be mechanically fastened by means of not less than three (3) sheet-metal screw or rivets equally spaced around the joint.
Closure systems used to seal flexible air ducts and flexible air connectors shall comply with UL181B and shall be marked "181B-FX" for pressure-sensitive tape or "181B-M" for mastic.
Closure systems used to seal metal ductwork shall be installed in accordance with the manufacturer's instructions. Round metallic ducts shall be mechanically fastened by means of at least three (3) sheet metal screws or rivets spaced equally around joint. Unlisted duct tape shall not be permitted as a sealant on any duct.
Exceptions:
1. Spray polyurethane foam shall be permitted to be applied without additional joint seals.
2. Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.
3. Continuously welded and locking-type longitudinal joints and seams in ducts operating at static pressures less than 2 inches of water column (500 Pa) pressure classification shall not require additional closure systems.
Mastics used to seal ducts shall be applied a minimum thickness of 1/16" or 60 mil.
Seal all boots and plenums for grilles, registers or diffusers to the interior air barrier material (typically sheetrock). Use an approved mastic or elastomeric caulk.
Flexible duct installation shall comply with the latest edition of ADC Flexible Duct Performance and Installation Standards.
The requirements include but are not limited to:
1. Be completed without kinks or sharp bends.
2. Incorporate properly supported metal elbows for any bend greater than 60 degrees.
3. Incorporate properly supported metal coupling for any necessary splice joints.
4. Not have excessive coiled or looped sections (except allowing for noise isolation)
5. Not be installed in cavities that are smaller than the outer duct diameter, and
6. Be supported at intervals recommended by the manufacturer but at a distance not to exceed 5 feet.
7. Be supported by minimum 1.5" wide straps with maximum allowable sag of 1/4" per foot between supports.
Metal duct to flexible duct transitions shall be sealed with approved mastic and mechanically fastened with a cable-tie or other approved clamping device. Mastic shall be applied to the metal, then pressure liner of the flexible duct shall be installed over mastic, then mechanical fasteners shall be installed.
Install dampers at all start collar connections from supply plenum to flexible ducting.

DUCT INSULATION STANDARDS:

At a minimum, provide 1.5" (minimum R-5) external fiberglass blanket insulation with foil scrim kraft or all service jacket vapor barrier on these duct networks:
1. All IU / AHU supply ductwork
2. Makeup air ductwork between the building entry and supply air heater
3. ERV or HRV ductwork intake and exhaust between the building entry/exit and the ERV or HRV
4. Exhaust ducts between the backdraft damper or motorized damper and building exit.

Provide 3" (minimum R-8) external fiberglass blanket insulation with foil scrim kraft or all service jacket vapor barrier on these duct networks:
5. All ductwork that is outside of the building's thermal enclosure.

Additional duct insulation can be called out within this document set or at the discretion of the owner, architect, engineer, or other member of the project team.

ACOUSTIC CONSTRUCTION STANDARDS:

1. Provide weight-appropriate spring or neoprene vibration isolators for all suspended equipment with compressors or fans.
2. Provide weight-appropriate vibration isolation pads or mounts under all floor- or base-mounted equipment with compressors or fans.
3. Provide flexible duct connectors at all equipment-to-duct connections at both supply and return.
4. Provide 1" closed cell elastomeric foam acoustic duct lining for all ducted returns where the closest return air device in an occupied space is less than 10 feet from the equipment inlet. Foam lining shall be continuous from the equipment inlet to 10' from the equipment.
5. Provide 1" closed cell elastomeric foam acoustic duct lining and lined secondary equipment enclosure for any equipment built into millwork or located in areas not separated from the occupied space by wall, floor, or ceiling assemblies.

CONDENSATE DRAIN CONSTRUCTION STANDARDS:

Condensate drains shall be sized to the manufacturer's recommended size or larger, but not less than 3/4" internal diameter. Internal diameter shall not decrease in size from the drain pan connection to the place of condensate disposal. Joints and connections shall be made in accordance with the applicable provisions of Chapter 7 of the International Plumbing Code relative to the material type.
Condensate drains shall terminate at an approved location, be supported regularly and properly according to material type, and be sloped a minimum of 1/4" per foot run of run for the entire length of pipe.
Condensate drain lines shall be configured to permit the clearing of blockages and performance of maintenance without requiring the drain line to be cut.
Condensate drains shall be insulated with a minimum of 1/2" thick pipe insulation. Insulation seams shall be taped and secured to ensure durability.
TRAPS: Condensate drains shall be trapped as required by the equipment or appliance manufacturer.
Ductless mini-split equipment that produces condensate shall be provided with an inline check valve located in the drain line, or a trap.
Condensate pumps located in uninhabitable spaces, such as attics and crawlspaces, shall be connected to the appliance or equipment served such that when the pump fails, the appliance or equipment will be prevented from operating. Pumps shall be installed in accordance with the manufacturer's instructions.
Auxiliary and secondary drain systems are required where damage to any building components could occur as a result of overflow from the equipment primary condensate removal system. One of the following shall be provided for each system that creates condensate:
1. An auxiliary drain pan with a separate drain shall be provided and the coils on which condensation will occur. The auxiliary drain pan shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The pan shall have a minimum depth of 1-1/2 inches and shall not be less than 3 inches larger than the unit, or the coil dimensions in width and length and shall be constructed of corrosion-resistant material. Galvanized sheet steel pans shall have a minimum thickness of not less than 0.0236 inches (0.610mm) (No.24 gage). Nonmetallic pans shall have a minimum thickness of not less than 0.00625 inch (1.6mm)
2. A separate overflow drain line shall be connected to the drain pan provided with the equipment. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection.
3. An auxiliary drain pan without a separate drain line shall be provided under the coils on which condensate will occur. Such pan shall be equipped with a water-level detection device conforming to UL 508 that will shut off the equipment served prior to overflow of the pan. The auxiliary drain pan shall be constructed in accordance with Item 1 of this section.
4. A water-level detection device conforming to UL 508 shall be provided that will shut off the equipment served in the event that the primary drain is blocked. The device shall be installed in the primary drain line, the overflow drain line, or in the equipment-supplied drain pan, located at a point higher than the primary drain line connection and below overflow rim of such pan.
Water-level monitoring devices: On down-flow units and all other coils that do not have a secondary drain pan or provisions to install a secondary or auxiliary drain pan, a water-level monitoring device shall be installed inside the primary drain pan. This device shall shut off the equipment served in the event that the primary drain becomes restricted. Devices installed in the drain lines shall not be permitted.
Appliance, equipment and insulation in pans: Where appliances, equipment or insulation are subject to water damage when auxiliary drain pans fill, that portion of the appliance, equipment and insulation shall be installed above the rim of the pan. Supports located inside of the pan to support the appliance or equipment shall be water resistant and approved.

PRE-SHEETROCK TESTING:

Pre-sheetrock duct tightness testing, a.k.a. duct leakage testing, is required for all ductwork and other air distribution components that will not be accessible after sheetrock installation.
All register boots shall be taped or otherwise sealed during the test.
Total duct leakage shall be less than or equal to 4 cfm (113.3 L/min) per 100 square feet (9.29m2) of conditioned floor area when tested at a pressure differential of 0.1 i.w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure.

THERMOSTATS AND TEMPERATURE SENSORS

Our plans do not locate thermostats. That's not an oversight. Locating and selecting these devices appropriately involves understanding competing design requirements that are typically not available during our design phase.

Deferring to the installing mechanical contractor, architect, interior design team has worked well. We also want to be supportive of the contractor's efforts by offering guidance on locating sensors.

1. Good temperature sensor locations should:
   - Be within the zone they control and not be influenced directly by supply air devices
   - Be in a representative location of the zone they serve, i.e. in the middle of a zone or near its return grille, or otherwise in an area with good air circulation
   - Be on an interior wall and out of direct sunlight
   - Be located between 42" and 60" above finished floor
   - Be away from any internal heat sources (e.g. back of a refrigerator, above light fixtures or stereo equipment, or near larger computers)

2. Alternatively, temperature sensors can be located in return air ducts and thermostats/controllers can be mounted remotely. This requires air handlers to circulate air continuously for proper operation.

3. Finally, if desired, we can review thermostat and temperature sensor locations during the rough-in walk-through.

SYSTEM COMMISSIONING & START-UP:

Prior to unit start-up, all surfaces in the conditioned space should be made clean, verify that opportunities for dust and construction debris to enter the duct system is minimal, verify that air filters are installed. Verify that condensate drain lines and auxiliary drain pan drain lines are clear and functional.
Mechanical contractor is required to perform manufacturer's start-up procedures and system commissioning, including all documentation.
Builder or general contractor is responsible to provide time in the construction schedule to allow for proper equipment start-up.
Follow ANSI/ACCA Standard 9 "HVAC Quality Installation Verification Process", as applicable.
Commissioning and start-up must be completed according to manufacturer's requirements for extended warranty coverage.
Contact the distributor for information on available extended warranties and for manufacturer-specific warranty applications and processes.
Indoor air handlers (excluding kitchen makeup air units, if applicable) are intended to operate at design fan flow rates constantly, 24/7.

POST-CONSTRUCTION PERFORMANCE TESTING:

Diagnostic testing shall be performed by a qualified individual with either the RESNET Certified Home Energy Rater or Building Performance Institute (BPI) Building Analyst certification, or equivalent.
Total duct leakage shall be less than or equal to 4 cfm (113.3 L/min) per 100 square feet (9.29 m2) of conditioned floor area when tested at a pressure differential of 0.1 i.w.g. (25PA) across the entire system, including the manufacturer's air handler enclosure. All register boots shall be taped or otherwise sealed during the test.
Air-flow testing and balancing shall be performed by the installer to confirm actual delivered air-flow at each register is within (+/-) 20% of design airflow. Registers under 35 cfm design air-flow are exempt. All measurements are to be confirmed by the qualified third party inspector.
Static pressure shall be measured and verified. Testing locations must be clearly marked and identified. Static pressure measurement result shall be indicated in i.w.g. units and written near the test hole on the return side.
Confirm that these performance testing requirements satisfy applicable local codes and beyond-code program requirements, as applicable.

MECHANICAL DESIGN EXCEPTIONS

Round or rectangular ductwork is often interchangeable. Confirm suitability of change with Positive Energy.
This design has taken into account the suitability and performance capabilities of the selected manufacturers' equipment. Please consult with Positive Energy prior to substituting alternate manufacturers' equipment or altering duct designs / connections.
It is acceptable to modify duct and/or diffuser locations and routing as long as no more than 3 linear feet of duct nor additional fittings are added.

Mechanical Component Nomenclature

IU-2B — For systems with multiple IUs paired to a common OU, this indicates the IU version

QU: Outdoor Unit
IU: Indoor Unit
EF: Exhaust Fan
SF: Supply Fan
DH: Dehumidifier
HU: Humidifier
MA: Make Up Air
RV: Energy/Heat Recovery Ventilator
FC: Filter Chassis
BB: Branch Box
SH: Supplemental Heater
DS: Duct Silencer
RP: Radiant Panel

Number indicates version
For IUs, this matches their paired OU

Grille, Register & Diffuser Nomenclature

SBF1 - in x in

R: Return
S: Supply
E: Exhaust
I: Intake

B: Bar
S: Slot
C: CVD
G: Grille
V: Vent
L: Louver
N: Nozzle

F: Floor
W: Wall (Interior)
C: Ceiling
M: Millwork/Cabinetry
T: Toekick
O: Overhang (Exterior)
R: Roof
E: Exterior Wall
D: Duct

Version
Size

Duct Legend

- Supply Ducting
- Return Ducting
- Exhaust Ducting
- Fresh Air Ducting
- Flues

Damper Key

Mark	Description	Symbol
BD	Backdraft Damper	BD
MD	Motorized Damper	MD
VD	Volume Damper	VD

Mechanical Sheet List

Sheet Number	Sheet Name
M000	General Notes & Legends
M001	Calculations & Basis of Design
M100	Mechanical Zoning
M200	Mechanical Plan - Primary Suite - Subslab
M201	Mechanical Plan - Primary Suite - Level 1
M202	Mechanical Plan - Great Room - Basement
M203	Mechanical Plan - Great Room - Level 1
M204	Mechanical Plan - Bedrooms
M205	Mechanical Plan - Home Offices
M206	Mechanical Roof Plan
M300	Sections & 3D Views
M400	VRF Diagrams
M500	Details & Clearances
M600	Controls & Wiring

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Permit Set

Feldman Architecture
1648 Pacific Avenue, Suite B
San Francisco, CA 94109
415.252.1441

Ward Residence
23 Vasquez Trail
Carmel, CA 93923

Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

General Notes & Legends

Scale: As indicated
Drawn By: ELC
Reviewed By: ELC

M000

Thermal Comfort Components Description

Mark	Description	Quantity	Manufacturer	Model	Dimensions			Electrical Requirements			SEER2 Rating	HSPF2 Rating	EER2 Rating	Controller	Notes
					Width	Length	Height	MCA	Voltage	MOCP					
IU-1	Multi-Position Air Handler	1	Mitsubishi Electric	PVA-AA42NL	25"	21 5/8"	59 1/2"	5.6	240					MHK2 + kumo cloud wireless interface	
IU-2	Multi-Position Air Handler	1	Mitsubishi Electric	PVA-AA42NL	25"	21 5/8"	59 1/2"	5.6	240					MHK2 + kumo cloud wireless interface	
IU-3	Multi-Position Air Handler	1	Mitsubishi Electric	PVA-AA36NL	25"	21 5/8"	59 1/2"	5.5	240					MHK2 + kumo cloud wireless interface	
IU-4	Multi-Position Air Handler	1	Mitsubishi Electric	PVA-AA24NL	21"	21 5/8"	54 1/4"	4.1	240					MHK2 + kumo cloud wireless interface	
IU-5	Multi-Position Air Handler	1	Mitsubishi Electric	PVA-AA18NL	17"	21 5/8"	50 1/4"	3	240					MHK2 + kumo cloud wireless interface	
IU-6	Wall Mounted	1	Mitsubishi Electric	PKA-AL18NL	35 3/8"	9 7/8"	11 5/8"	1	240	15				MHK2 + kumo cloud wireless interface	
IU-7	Wine Room Evaporator	1	CellarCool	FD3500-S	20 1/2"	16 1/8"	15 1/2"	1	120	15				MHK2 + kumo cloud wireless interface	
OU-1	Air-Air/VRF Heat Pump	1	Mitsubishi Electric	PUZ-AK42NL	43"	13"	52 3/4"	25	240	31	19.1	9.4	11.1	-	
OU-2	Air-Air/VRF Heat Pump	1	Mitsubishi Electric	PUZ-AK42NL	43"	13"	52 3/4"	25	240	31	19.1	9.4	11.1	-	
OU-3	Air-Air/VRF Heat Pump	1	Mitsubishi Electric	PUZ-AK36NL	41 3/8"	13"	52 3/4"	25	240	31	19.5	9.2	12.1	-	
OU-4	VRF Heat Pump	1	Mitsubishi Electric	PUZ-AH24NL	37 3/8"	13"	37 1/8"	19	240	26	19.2	8.9	12	-	
OU-5	Air-Air/VRF Heat Pump	1	Mitsubishi Electric	PUZ-AK18NL	31 7/8"	11 1/4"	24 7/8"	11	240	28	18.6	8.6	11.7	-	
OU-6	Air-Air/VRF Heat Pump	1	Mitsubishi Electric	PUZ-AK18NL	31 7/8"	11 1/4"	24 7/8"	11	240	28	18.6	8.6	11.7	-	
OU-7	Wine Room Condenser	1	CellarCool	FD3500-S Condenser	10 3/4"	31 1/8"	21 1/8"	2.7	240	15				-	
SH-1	Duct heater	1	Fantech	MUAH 8/6	12"	13"	12"	25	240	30				Fantech MUAC	Part of Fantech MUAS 750 kit

Indoor Air Quality Components Description

Mark	Description	Quantity	Manufacturer	Model	Dimensions			Electrical Requirements			Controller	Notes
					Width	Length	Height	Voltage	Amperage	Wattage		
DH-1	Dehumidifier	1	AprilAire	E070	12 1/2"	25"	12 1/2"	120	5.8	696	Integral	
FC-1	Filter chassis with MERV 16 filter	1	Aprilaire	2216	27 3/8"	22"	6 3/4"				-	
FC-2	Filter chassis with MERV 16 filter	3	Aprilaire	2516	30 1/8"	31"	6 3/4"				-	
FC-3	Filter chassis with MERV 13 filter	1	Honeywell	F100F2036	20 1/4"	20 1/2"	6 3/4"					
FC-4	Filter chassis	1	Camfil	GlidePack MultiTrack 25	30"	25"	27"				-	Provide w/ 4" 30/30 D9 and CityCarb I 242412 filters
MA-1	Makeup air system	1	Fantech	MUAS 8	18"	50"	20"				Fantech MUAC	
RV-1	Energy recovery ventilator	2	Broan	B130E65RT	18 3/4"	16 1/8"	19 1/8"	120	2.5	110	Integral	Provide with MERV 13 filter
RV-2	Energy recovery ventilator	2	Broan	B130E65RS	18 3/4"	16 1/8"	19 1/8"	120	2.5	110	Integral	Provide with MERV 13 filter

Basis of Design - Primary, Great Room, Bedrooms and Offices

Weather Station Location for Design Conditions: Local and Satellite Weather Data
Title 24 Climate Zone:3
Outdoor Design Temperature (Summer DB) (°F): 93
Outdoor Design Temperature (Winter DB) (°F): 35
Indoor Design Temperature (Summer DB/WB / Winter DB) (°F): 72.0/60.0 / 72.0*
Building Volume (CF): 52368
Building Square Footage: 5404
Number of Bedrooms: 3
Design Airtightness Rating (ACH50): 3
Design Blower Door Maximum (CFM50): 2618
Ventilation, Pressurization Strategy: Continuous, Balanced
Minimum Ventilation Rate - 2021 IRC Table M1505.4.3(1) (CFM): 90
Minimum Ventilation Rate - ASHRAE 62.2-2016 (CFM): 193
Design Ventilation Rate (CFM): 260
Below Grade Wall Assembly Description: Uninsulated concrete walls
Above Grade Wall Assembly Description: 8" concrete walls + R-6 CI and Wood walls with R-25 in 2x6 stud cavity
Floor Assembly Description: Slab on grade with 2" of polyiso
Roof Assembly Description: Bat insulation in 2x6 framing + 2.5" of tapered polyiso
Average Window Assembly U-value/SHGC: 0.30 / 0.30(Placeholder value)
Average Skylight Assembly U-value/SHGC: 0.30 / 0.40 (Placeholder value)
* Primary Bedroom Summer Interior Design Temperature is 65.0 (°F)

Basis of Design - Wine Room

Weather Station Location for Design Conditions: Local and Satellite Weather Data
Title 24 Climate Zone:3
Outdoor Design Temperature (Summer DB) (°F): 93
Outdoor Design Temperature (Winter DB) (°F): 35
Indoor Design Temperature (Summer DB / Winter DB) (°F): 55.0 / 55.0
Building Volume (CF): 1059
Building Square Footage: 242
Design Airtightness Rating (ACH50): 1
Design Blower Door Maximum (CFM50): 17
Below Grade Walll Assembly Description: Concrete Walls with 1.5" rigid insulation
Interior Wall Assembly Description: R-21 insulation in 2x6 stud cavity
Floor Assembly Description: Slab on grade with 2" of polyiso
Ceiling Assembly Description: R-20 in ceiling joists

Basis of Design - AV

Weather Station Location for Design Conditions: Local and Satellite Weather Data
Outdoor Design Temperature (Summer DB) (°F): 93
Interior Design Temperature (DB/WB) (°F): 72.0/60.0
Building Volume (CF): 2913
Building Square Footage: 333
Design Airtightness Rating (ACH50): 3
Design Blower Door Maximum (CFM50): 145
Anticipated Heat Load From AV Equipment (Btu/hr)/(W): 9000/2639
Cooling Strategy: Dedicated Unit: IU-6

Room Loads and Air Distribution Requirements

	Area	Sensible...	Latent...	Net Gain	Sensible...	Air Flow	Load/Area	Air flow/Area
	(sf)	(Btu/hr)	(Btu/hr)	(Btu/hr)	(Btu/hr)	(CFM)	(Btu/hr/sf)	(cfm/sf)
Building	5979	110494	6858	117352	72501	6355	18.48	1.06
System 1 Primary Suite IU-1	1203	22714	2097	24812	14500	1485	18.88	1.23
Ventilation		735	1345	2080	971	60		
Misc. Return		0	-672	-672				
1-Primary Bedroom	656	14836	786	15622	7779	1002	22.62	1.53
2-Primary Bathroom	164	2126	242	2368	2252	144	12.96	0.88
3-Primary WC	32	438	57	495	398	30	13.69	0.94
4-Sauna	58	1698	110	1808	1134	115	29.28	1.98
5-Primary Laundry	106	1278	126	1404	789	86	12.06	0.81
6-Primary Closet	187	1603	103	1706	1177	108	8.57	0.58
System 2 Kitchen & Library IU-2	2130	24833	1886	26718	21849	1485	11.66	0.70
Ventilation		643	970	1613	1133	70		
Misc. Return		0	-485	-485				
8-Mechanical	281	486	0	486	1774	30	1.73	0.11
9-Storage	60	63	0	63	401	4	1.05	0.07
11-Lower Level Stairs	93	101	0	101	13	6	1.09	0.06
12-Entry	158	2273	59	2332	1797	140	14.39	0.89
13-Mudroom	147	1758	157	1915	2112	108	11.96	0.73
14-Living Powder	38	79	30	109	41	5	2.08	0.13
15-Pantry	144	292	0	292	155	18	2.03	0.13
16-Hallway	361	4494	348	4842	4952	276	12.45	0.76
19-Kitchen	530	8817	571	9388	4573	541	16.64	1.02
20-Library	318	5825	236	6061	4898	358	18.32	1.13
System 3 Living IU-3	825	26097	602	26698	12399	1125	31.63	1.36
Ventilation		276	416	691	486	30		
Misc. Return		0	-208	-208				
17-Bridge	245	11242	180	11422	4564	490	45.89	2.00
18-Living Room	580	14579	214	14793	7349	635	25.14	1.09
System 4 Bedrooms IU-4	450	14509	988	15497	9154	875	32.24	1.94
Ventilation		459	693	1152	809	50		
Misc. Return		0	-346	-346				
21-Office 1	179	5423	282	5705	3567	338	30.30	1.89
22-Office Bath 1	81	3203	73	3276	1133	199	39.54	2.46
23-Office Mech	13	588	14	602	595	37	45.23	2.85
24-Office 2	177	4835	272	5107	3050	301	27.32	1.70
System 5 Offices IU-5	796	12144	1245	13389	10332	735	15.26	0.92
Ventilation		459	693	1152	809	50		
Misc. Return		0	-346	-346				
25-Bedrooms Living	116	1489	78	1567	841	94	12.84	0.81
26-Bath 3	61	734	97	831	1070	46	12.03	0.75
27-Bedroom 2 Closet	79	290	28	318	566	18	3.67	0.23
28-Bedroom 2	200	4351	285	4636	2879	274	21.76	1.37
29-Bedroom 1	200	3554	285	3839	2540	224	17.77	1.12
30-Bedroom 1 Closet	78	285	28	313	545	18	3.65	0.23
31-Bath 2	62	981	97	1078	1082	62	15.82	1.00
System 6 IT/AV IU-6	333	9286	0	9286	2538	450	27.89	1.35
10-IT/Storage	333	9286	0	9286	2538	450	27.89	1.35
System 7 Wine Cellar IU-7	242	911	41	952	1729	200	3.76	0.83
7-Wine Cellar	242	911	41	952	1729	200	3.76	0.83

Figures of Merit

Equipment							Sensible Cooling:						Net Cooling:			Heating:					
OU Mark	IU Mark	OU Model	IU Model	Area Served	IU CFM	OU Connected Capacity	ODT (°F)	IDT (°F)	Capacity (Btu/hr)	Load (Btu/hr)	Cap/Load	w/ Lat-Sen Conversion (Btu/hr)	Capacity (Btu/hr)	Load (Btu/hr)	Cap/Load	ODT (°F, WB)	IDT (°F)	Capacity (Btu/hr)	Load (Btu/hr)	Cap/Load	Heat Strips
OU-1	IU-1	PUZ-AK42NL	PVA-AA42NL	Primary Suite	1485	100%	93	65.0/60.0	22,429	22,714	99%	29284.9	36,141	24,812	146%	32.8	72	32,975	14,500	227%	n/a
OU-2	IU-2	PUZ-AK42NL	PVA-AA42NL	Kitchen & Library	1485	100%	93	72.0/60.0	34,054	24,833	137%	N/A	36,141	26,718	135%	32.8	72	32,975	21,849	151%	n/a
OU-3	IU-3	PUZ-AK36NL	PVA-AA36NL	Living	1125	100%	93	72.0/60.0	26,615	26,097	102%	N/A	29,257	26,698	110%	32.8	72	27,241	12,399	220%	n/a
OU-4	IU-4	PUZ-AH24NL	PVA-AA24NL	Offices	875	100%	93	72.0/60.0	19,493	14,509	134%	N/A	19,966	15,497	129%	32.8	72	19,071	9,154	208%	n/a
OU-5	IU-5	PUZ-AK18NL	PVA-AA18NL	Bedrooms	735	100%	93	72.0/60.0	14,918	12,144	123%	N/A	14,918	13,389	111%	32.8	72	13,905	10,332	135%	n/a
OU-6	IU-6	PUZ-AK18NL	PKA-AL18NL	IT/AV	450	100%	93	72.0/60.0	10,538	9,286	113%	N/A	14,918	9,286	161%	32.8	72	15,991	2,538	630%	n/a

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

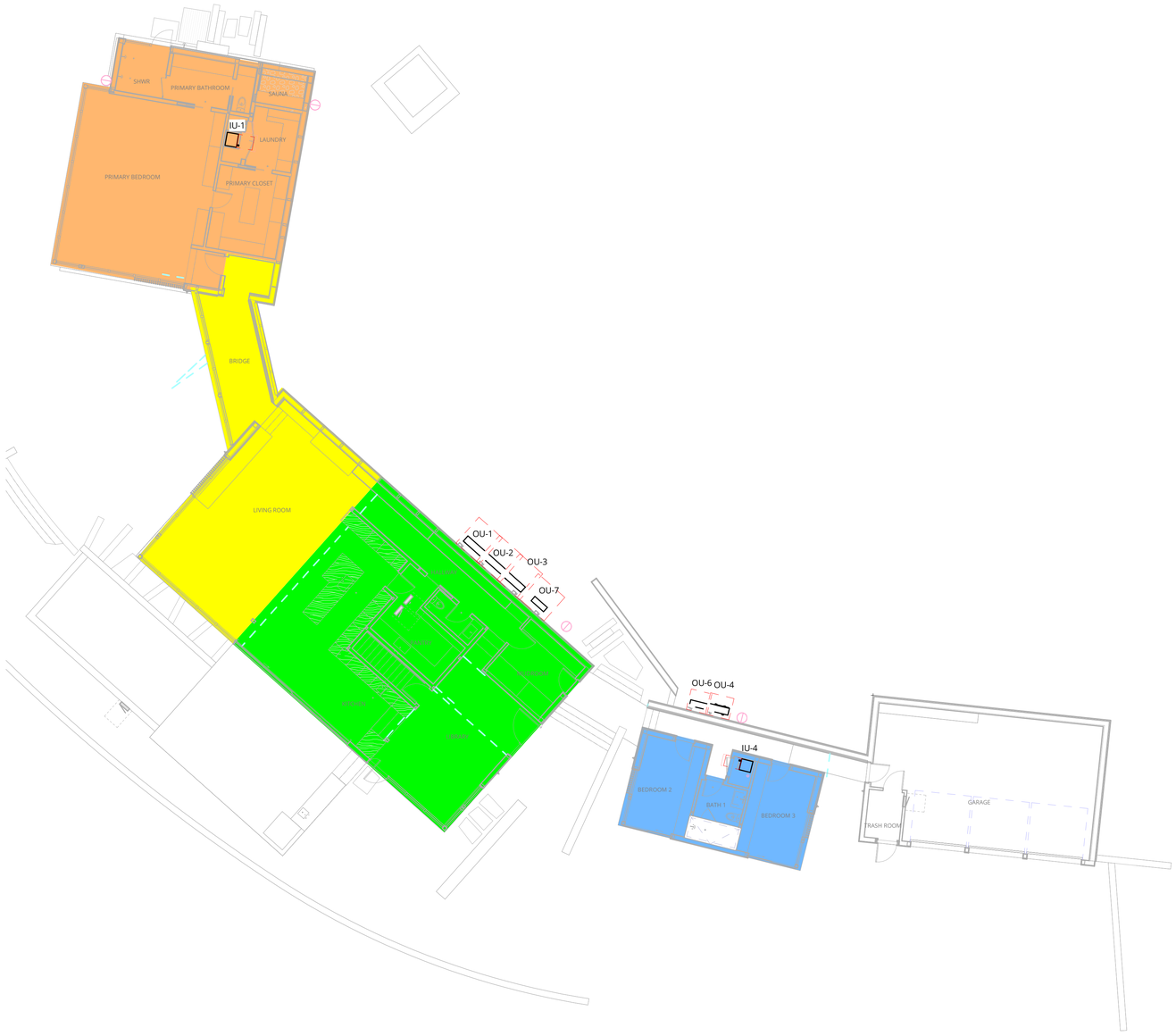
Calculations & Basis of Design

Scale:
Drawn By: ELC
Reviewed By: ELC

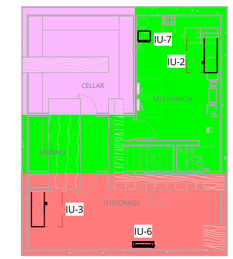
M001

Zoning Legend

- System IU-1: Primary Suite
- System IU-2: Kitchen & Library
- System IU-3: Living
- System IU-4: Bedrooms
- System IU-5: Offices
- System IU-6: IT/AV
- System IU-7: Wine Room



1 Mechanical Zoning Plan
1" = 10'-0"



2 Mechanical Zoning Plan - Great Room - Basement
1" = 10'-0"

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DD	XX/XX/XXXX

Revisions:

Mechanical Zoning

Scale: As indicated
Drawn By: ELC
Reviewed By: ELC

M100

Thermal Comfort Components

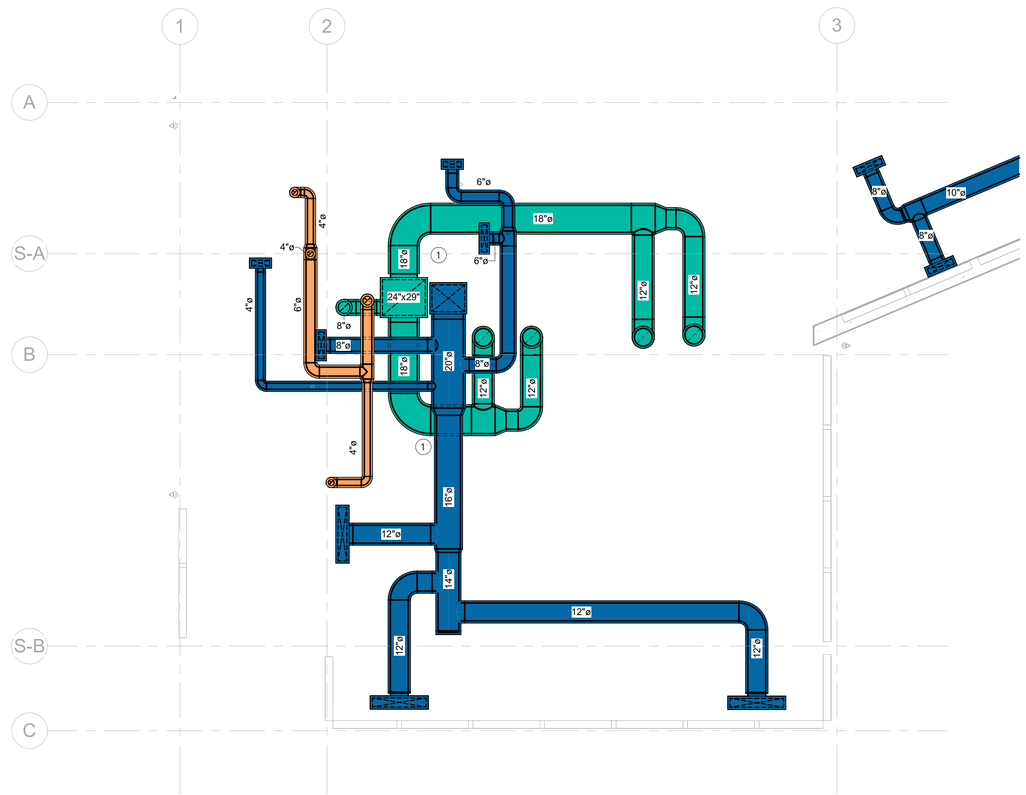
Mark	Description	Manufacturer	Model	Controller	Notes
IU-1	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA42NL	MHK2 + kumo cloud wireless interface	
IU-2	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA42NL	MHK2 + kumo cloud wireless interface	
IU-3	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA36NL	MHK2 + kumo cloud wireless interface	
IU-4	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA24NL	MHK2 + kumo cloud wireless interface	
IU-5	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA18NL	MHK2 + kumo cloud wireless interface	
IU-6	Wall Mounted	Mitsubishi Electric	PKA-AL18NL	MHK2 + kumo cloud wireless interface	
IU-7	Wine Room Evaporator	CellarCool	FD3500-S	MHK2 + kumo cloud wireless interface	
OU-1	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK42NL	-	
OU-2	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK42NL	-	
OU-3	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK36NL	-	
OU-4	VRF Heat Pump	Mitsubishi Electric	PUZ-AH24NL	-	
OU-5	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK18NL	-	
OU-6	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK18NL	-	
OU-7	Wine Room Condenser	CellarCool	FD3500-S Condenser	-	
SH-1	Duct heater	Fantech	MUAH 8/6	Fantech MUAC	Part of Fantech MUAS 750 kit

Indoor Air Quality Components

Mark	Description	Manufacturer	Model	Controller	Notes
DH-1	Dehumidifier	AprilAire	E070	Integral	
FC-1	Filter chassis with MERV 16 filter	Aprilaire	2216	-	
FC-2	Filter chassis with MERV 16 filter	Aprilaire	2516	-	
FC-3	Filter chassis with MERV 13 filter	Honeywell	F100F2036		
FC-4	Filter chassis	Camfil	GlidePack MultiTrack 25	-	Provide w/ 4" 30/30 D9 and CityCarb I 242412 filters
MA-1	Makeup air system	Fantech	MUAS 8	Fantech MUAC	
RV-1	Energy recovery ventilator	Broan	B130E65RT	Integral	Provide with MERV 13 filter
RV-2	Energy recovery ventilator	Broan	B130E65RS	Integral	Provide with MERV 13 filter

Mechanical General Notes	
A	Prior to commencement of construction, it is strongly recommended that the general contractor and the HVAC installer coordinate framing and duct installation sequencing to facilitate assembly of air distribution components.
B	Ducts to be sealed with mastic at pressure liner and insulation layer. Minimum thickness is 1/16". Recommended thickness is 1/8".
C	Flexible duct shall not exceed 5 feet in length unless otherwise noted.
D	Balancing dampers are required at each runout (for supply air and ventilation air). Dampers shall be low-air leakage type.
E	Manual balancing dampers shall be provided for accessible ductwork. Cable operated balancing dampers shall be provided for inaccessible ductwork.
F	Provide motorized damper on dehumidifier supply ducts when connected to air handler supply ducts.

Keynotes - M200	
1	Underground ductwork



1 Mechanical Plan - Primary Suite - SubSlab
1/4" = 1'-0"

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DD	XX/XX/XXXX

Revisions:

Mechanical Plan - Primary Suite - Subslab

Scale: 1/4" = 1'-0"
Drawn By: ELC
Reviewed By: ELC

M200

Thermal Comfort Components

Mark	Description	Manufacturer	Model	Controller	Notes
IU-1	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA42NL	MHK2 + kumo cloud wireless interface	
IU-2	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA42NL	MHK2 + kumo cloud wireless interface	
IU-3	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA36NL	MHK2 + kumo cloud wireless interface	
IU-4	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA24NL	MHK2 + kumo cloud wireless interface	
IU-5	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA18NL	MHK2 + kumo cloud wireless interface	
IU-6	Wall Mounted	Mitsubishi Electric	PKA-AL18NL	MHK2 + kumo cloud wireless interface	
IU-7	Wine Room Evaporator	CellarCool	FD3500-S	MHK2 + kumo cloud wireless interface	
OU-1	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK42NL	-	
OU-2	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK42NL	-	
OU-3	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK36NL	-	
OU-4	VRF Heat Pump	Mitsubishi Electric	PUZ-AH24NL	-	
OU-5	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK18NL	-	
OU-6	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK18NL	-	
OU-7	Wine Room Condenser	CellarCool	FD3500-S Condenser	-	
SH-1	Duct heater	Fantech	MUAH 8/6	Fantech MUAC	Part of Fantech MUAS 750 kit

Indoor Air Quality Components

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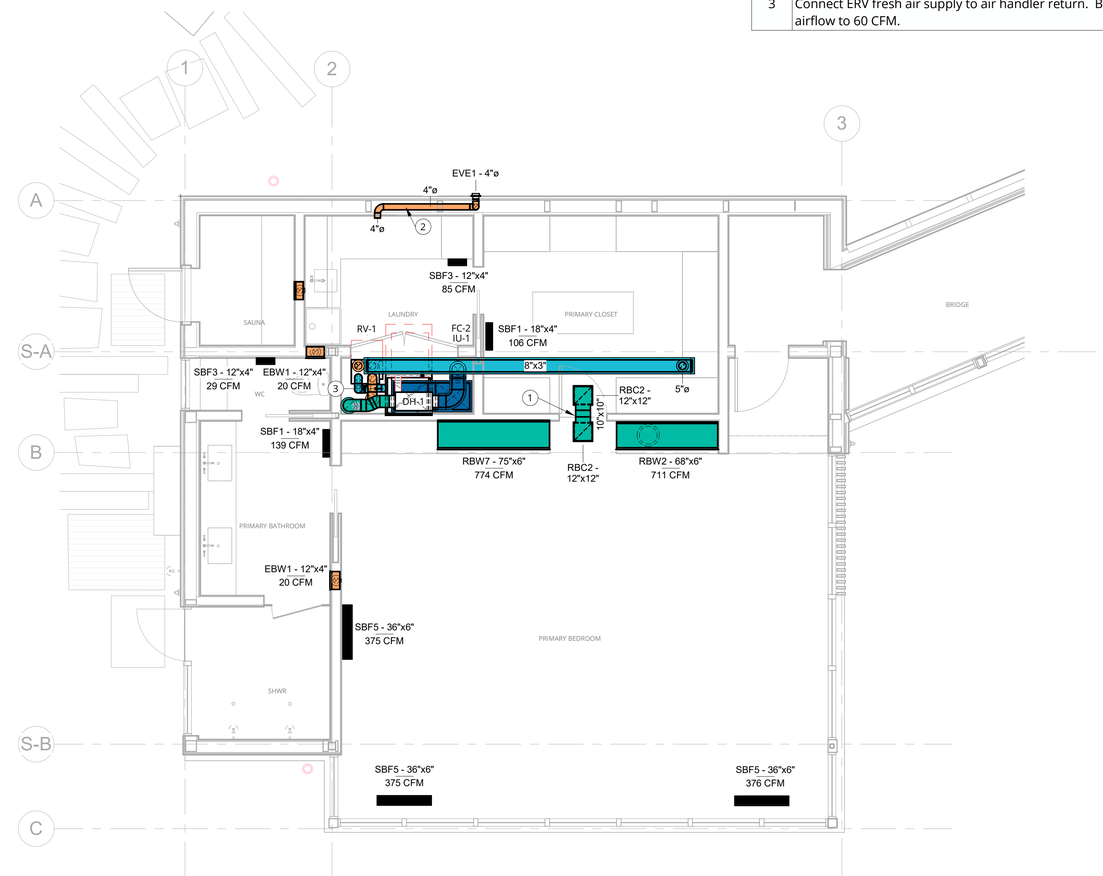
FC-1	Filter chassis with MERV 16 filter	Aprilaire	2216	-	
FC-2	Filter chassis with MERV 16 filter	Aprilaire	2516	-	
FC-3	Filter chassis with MERV 13 filter	Honeywell	F100F2036		
FC-4	Filter chassis	Camfil	GlidePack MultiTrack 25	-	Provide w/ 4" 30/30 D9 and CityCarb I 242412 filters
MA-1	Makeup air system	Fantech	MUAS 8	Fantech MUAC	
RV-1	Energy recovery ventilator	Broan	B130E65RT	Integral	Provide with MERV 13 filter
RV-2	Energy recovery ventilator	Broan	B130E65RS	Integral	Provide with MERV 13 filter

Grille, Register, and Diffuser Schedule - By Sheet

Mark	Quantity	Manufacturer	Model	Size	Notes
EBW1	2	Price Industries	LBPH15A	12"x4"	
EVE1	1	In-O-Vate	DryerWallVent	4"ø	DWV4W
RBC2	2	Price Industries	LBPH15A	12"x12"	
RBW2	1	Price Industries	LBPH15A	68"x6"	
RBW7	1	Price Industries	LBPH15A	75"x6"	
SBF1	2	Price Industries	LBPH15A	18"x4"	
SBF3	2	Price Industries	LBPH15A	12"x4"	
SBF5	3	Price Industries	LBPH15A	36"x6"	

Mechanical General Notes	
A	Prior to commencement of construction, it is strongly recommended that the general contractor and the HVAC installer coordinate framing and duct installation sequencing to facilitate assembly of air distribution components.
B	Ducts to be sealed with mastic at pressure liner and insulation layer. Minimum thickness is 1/16". Recommended thickness is 1/8".
C	Flexible duct shall not exceed 5 feet in length unless otherwise noted.
D	Balancing dampers are required at each runout (for supply air and ventilation air). Dampers shall be low-air leakage type.
E	Manual balancing dampers shall be provided for accessible ductwork. Cable operated balancing dampers shall be provided for inaccessible ductwork.
F	Provide motorized damper on dehumidifier supply ducts when connected to air handler supply ducts.

Keynotes - M201	
1	Jumper duct
2	Dryer exhaust duct
3	Connect ERV fresh air supply to air handler return. Balance airflow to 60 CFM.



1 Mechanical Plan - Primary Suite - Level 1
1/4" = 1'-0"

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Revisions:

Mechanical Plan - Primary Suite - Level 1

Scale: 1/4" = 1'-0"
Drawn By: ELC
Reviewed By: ELC

M201

Thermal Comfort Components

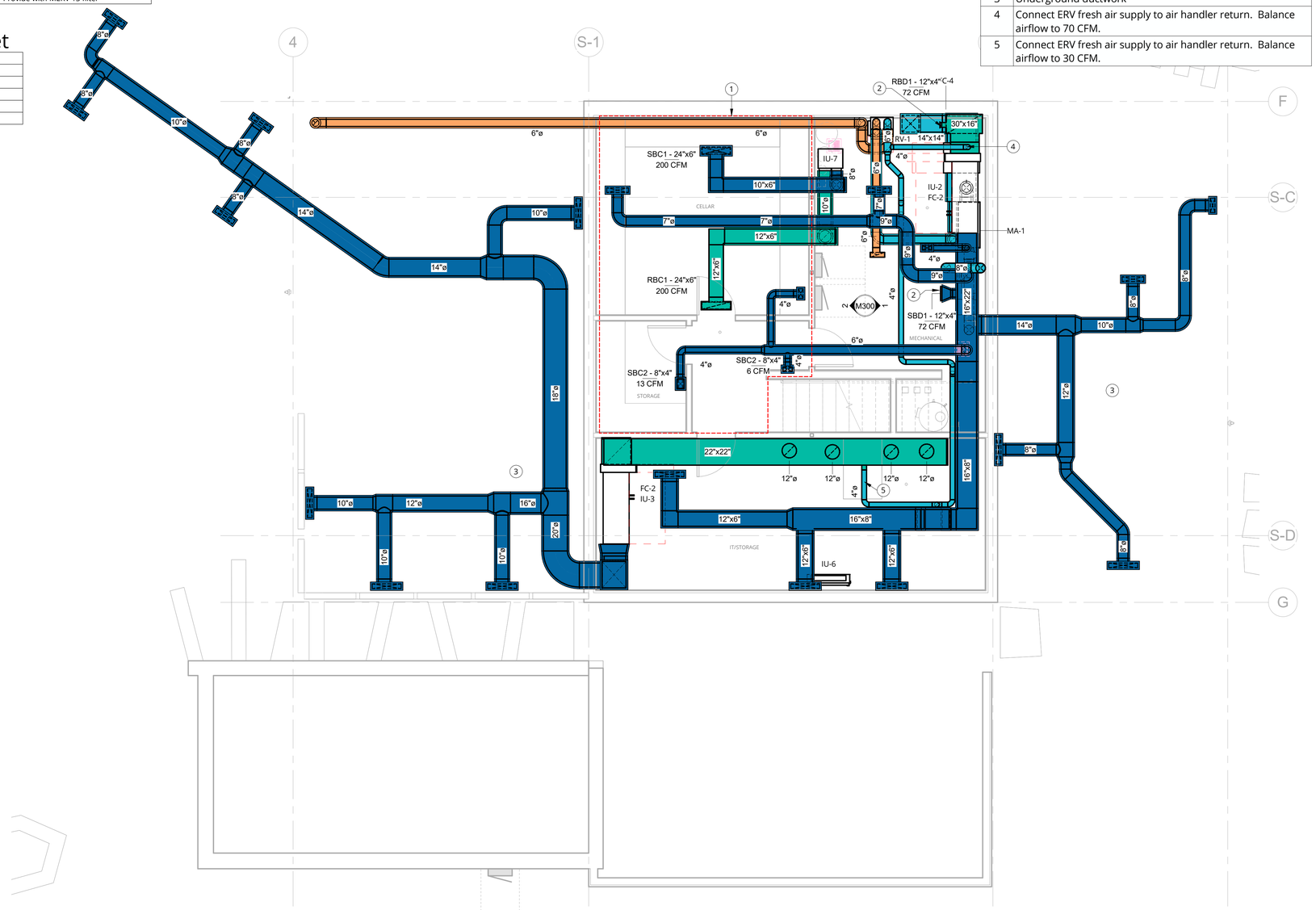
Mark	Description	Manufacturer	Model	Controller	Notes
IU-1	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA42NL	MHK2 + kumo cloud wireless interface	
IU-2	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA42NL	MHK2 + kumo cloud wireless interface	
IU-3	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA36NL	MHK2 + kumo cloud wireless interface	
IU-4	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA24NL	MHK2 + kumo cloud wireless interface	
IU-5	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA18NL	MHK2 + kumo cloud wireless interface	
IU-6	Wall Mounted	Mitsubishi Electric	PKA-AL18NL	MHK2 + kumo cloud wireless interface	
IU-7	Wine Room Evaporator	CellarCool	FD3500-S	MHK2 + kumo cloud wireless interface	
OU-1	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK42NL	-	
OU-2	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK42NL	-	
OU-3	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK36NL	-	
OU-4	VRF Heat Pump	Mitsubishi Electric	PUZ-AH24NL	-	
OU-5	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK18NL	-	
OU-6	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK18NL	-	
OU-7	Wine Room Condenser	CellarCool	FD3500-S Condenser	-	
SH-1	Duct heater	Fantech	MUAH 8/6	Fantech MUAC	Part of Fantech MUAS 750 kit

Indoor Air Quality Components

Mark	Description	Manufacturer	Model	Controller	Notes
DH-1	Dehumidifier	AprilAire	E070	Integral	
FC-1	Filter chassis with MERV 16 filter	Aprilaire	2216	-	
FC-2	Filter chassis with MERV 16 filter	Aprilaire	2516	-	
FC-3	Filter chassis with MERV 13 filter	Honeywell	F100F2036		
FC-4	Filter chassis	Camfil	GlidePack MultiTrack 25	-	Provide w/ 4" 30/30 D9 and CityCarb I 242412 filters
MA-1	Makeup air system	Fantech	MUAS 8	Fantech MUAC	
RV-1	Energy recovery ventilator	Broan	B130E65RT	Integral	Provide with MERV 13 filter
RV-2	Energy recovery ventilator	Broan	B130E65RS	Integral	Provide with MERV 13 filter

Grille, Register, and Diffuser Schedule - By Sheet

Mark	Quantity	Manufacturer	Model	Size	Notes
RBC1	1	Price Industries	LBPH15A	24"x6"	
RBD1	1	Price Industries	LBPH15A	12"x4"	
SBC1	1	Price Industries	LBPH15A	24"x6"	
SBC2	2	Price Industries	LBPH15A	8"x4"	
SBD1	1	Price Industries	LBPH15A	12"x4"	



1 Mechanical Plan - Great Room - Basement
1/4" = 1'-0"

Mechanical General Notes	
A	Prior to commencement of construction, it is strongly recommended that the general contractor and the HVAC installer coordinate framing and duct installation sequencing to facilitate assembly of air distribution components.
B	Ducts to be sealed with mastic at pressure liner and insulation layer. Minimum thickness is 1/16". Recommended thickness is 1/8".
C	Flexible duct shall not exceed 5 feet in length unless otherwise noted.
D	Balancing dampers are required at each runout (for supply air and ventilation air). Dampers shall be low-air leakage type.
E	Manual balancing dampers shall be provided for accessible ductwork. Cable operated balancing dampers shall be provided for inaccessible ductwork.
F	Provide motorized damper on dehumidifier supply ducts when connected to air handler supply ducts.

Keynotes - M202	
1	Red dashed line indicates proposed 10" clear dropped ceiling to allow for ductwork.
2	Serves mechanical room
3	Underground ductwork
4	Connect ERV fresh air supply to air handler return. Balance airflow to 70 CFM.
5	Connect ERV fresh air supply to air handler return. Balance airflow to 30 CFM.

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Ward Residence
23 Vasquez Trail
Carmel, CA 93923

Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Mechanical Plan - Great Room - Basement

Scale: 1/4" = 1'-0"
Drawn By: ELC
Reviewed By: ELC

M202

Thermal Comfort Components

Mark	Description	Manufacturer	Model	Controller	Notes
IU-1	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA42NL	MHK2 + kumo cloud wireless interface	
IU-2	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA42NL	MHK2 + kumo cloud wireless interface	
IU-3	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA36NL	MHK2 + kumo cloud wireless interface	
IU-4	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA24NL	MHK2 + kumo cloud wireless interface	
IU-5	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA18NL	MHK2 + kumo cloud wireless interface	
IU-6	Wall Mounted	Mitsubishi Electric	PKA-AL18NL	MHK2 + kumo cloud wireless interface	
IU-7	Wine Room Evaporator	CellarCool	FD3500-S	MHK2 + kumo cloud wireless interface	
OU-1	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK42NL	-	
OU-2	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK42NL	-	
OU-3	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK36NL	-	
OU-4	VRF Heat Pump	Mitsubishi Electric	PUZ-AH24NL	-	
OU-5	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK18NL	-	
OU-6	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK18NL	-	
OU-7	Wine Room Condenser	CellarCool	FD3500-S Condenser	-	
SH-1	Duct heater	Fantech	MUAH 8/6	Fantech MUAC	Part of Fantech MUAS 750 kit

Indoor Air Quality Components

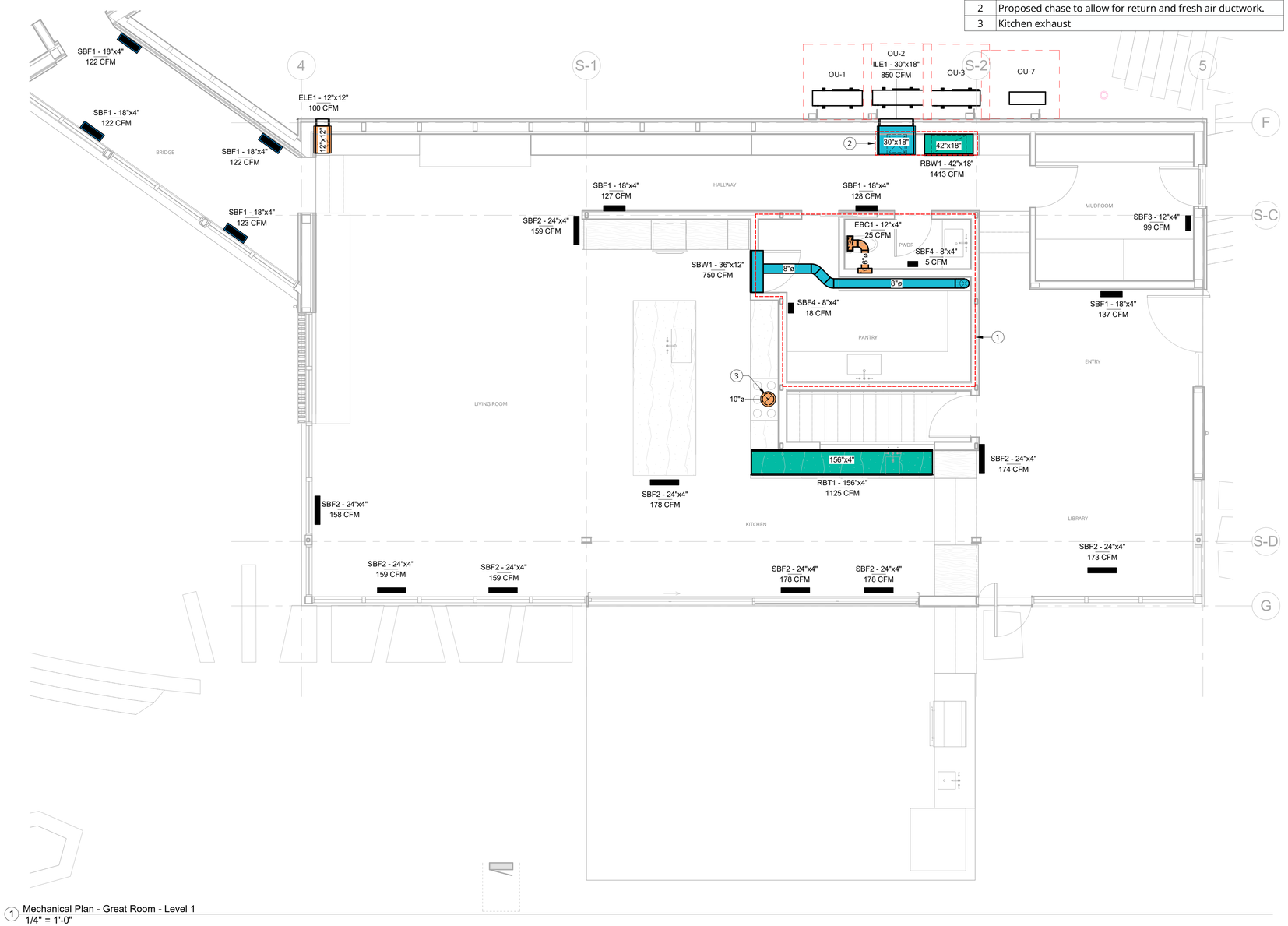
Mark	Description	Manufacturer	Model	Controller	Notes
DH-1	Dehumidifier	AprilAire	E070	Integral	
FC-1	Filter chassis with MERV 16 filter	Aprilaire	2216	-	
FC-2	Filter chassis with MERV 16 filter	Aprilaire	2516	-	
FC-3	Filter chassis with MERV 13 filter	Honeywell	F100F2036		
FC-4	Filter chassis	Camfil	GlidePack MultiTrack 25	-	Provide w/ 4" 30/30 D9 and CityCarb I 242412 filters
MA-1	Makeup air system	Fantech	MUAS 8	Fantech MUAC	
RV-1	Energy recovery ventilator	Broan	B130E65RT	Integral	Provide with MERV 13 filter
RV-2	Energy recovery ventilator	Broan	B130E65RS	Integral	Provide with MERV 13 filter

Grille, Register, and Diffuser Schedule - By Sheet

Mark	Quantity	Manufacturer	Model	Size	Notes
EBC1	1	Price Industries	LBPH15A	12"x4"	
ELE1	1	Greenheck Fan Corp.	ESD-635	12"x12"	
ILE1	1	Greenheck Fan Corp.	ESD-635	30"x18"	
RBT1	1	Price Industries	LBPH15B	156"x4"	
RBW1	1	Price Industries	LBPH15A	42"x18"	
SBF1	7	Price Industries	LBPH15A	18"x4"	
SBF2	9	Price Industries	LBPH15A	24"x4"	
SBF3	1	Price Industries	LBPH15A	12"x4"	
SBF4	2	Price Industries	LBPH15A	8"x4"	
SBW1	1	Price Industries	LBPH15A	36"x12"	

Mechanical General Notes	
A	Prior to commencement of construction, it is strongly recommended that the general contractor and the HVAC installer coordinate framing and duct installation sequencing to facilitate assembly of air distribution components.
B	Ducts to be sealed with mastic at pressure liner and insulation layer. Minimum thickness is 1/16". Recommended thickness is 1/8".
C	Flexible duct shall not exceed 5 feet in length unless otherwise noted.
D	Balancing dampers are required at each runout (for supply air and ventilation air). Dampers shall be low-air leakage type.
E	Manual balancing dampers shall be provided for accessible ductwork. Cable operated balancing dampers shall be provided for inaccessible ductwork.
F	Provide motorized damper on dehumidifier supply ducts when connected to air handler supply ducts.

Keynotes - M203	
1	Red dashed line indicates proposed 10" clear dropped ceiling to allow for ductwork.
2	Proposed chase to allow for return and fresh air ductwork.
3	Kitchen exhaust



1 Mechanical Plan - Great Room - Level 1
1/4" = 1'-0"

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Carmel, CA 93923

Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Mechanical Plan - Great Room - Level 1

Scale: 1/4" = 1'-0"
Drawn By: ELC
Reviewed By: ELC

M203

Thermal Comfort Components

Mark	Description	Manufacturer	Model	Controller	Notes
IU-1	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA42NL	MHK2 + kumo cloud wireless interface	
IU-2	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA42NL	MHK2 + kumo cloud wireless interface	
IU-3	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA36NL	MHK2 + kumo cloud wireless interface	
IU-4	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA24NL	MHK2 + kumo cloud wireless interface	
IU-5	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA18NL	MHK2 + kumo cloud wireless interface	
IU-6	Wall Mounted	Mitsubishi Electric	PKA-AL18NL	MHK2 + kumo cloud wireless interface	
IU-7	Wine Room Evaporator	CellarCool	FD3500-S	MHK2 + kumo cloud wireless interface	
OU-1	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK42NL	-	
OU-2	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK42NL	-	
OU-3	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK36NL	-	
OU-4	VRF Heat Pump	Mitsubishi Electric	PUZ-AH24NL	-	
OU-5	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK18NL	-	
OU-6	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK18NL	-	
OU-7	Wine Room Condenser	CellarCool	FD3500-S Condenser	-	
SH-1	Duct heater	Fantech	MUAH 8/6	Fantech MUAC	Part of Fantech MUAS 750 kit

Indoor Air Quality Components

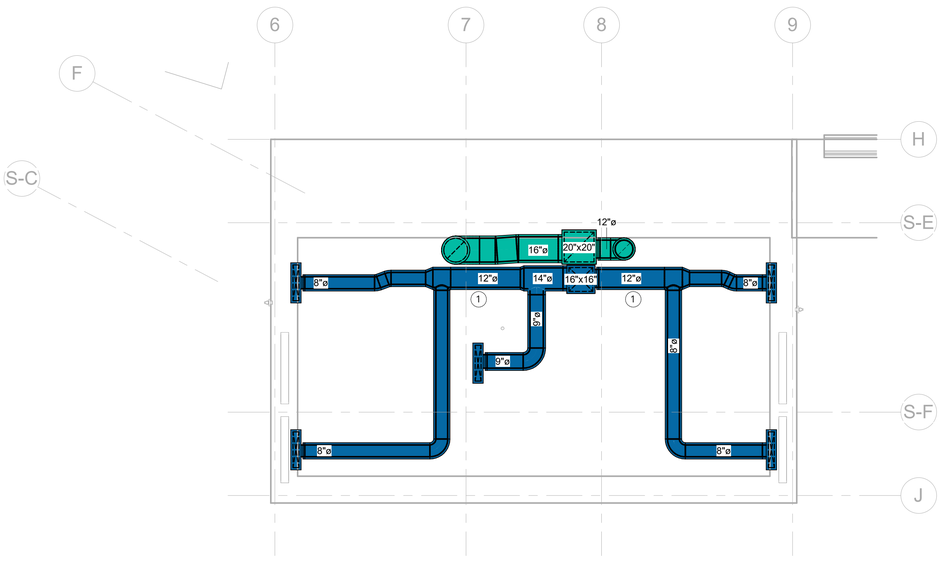
Mark	Description	Manufacturer	Model	Controller	Notes
DH-1	Dehumidifier	AprilAire	E070	Integral	
FC-1	Filter chassis with MERV 16 filter	Aprilaire	2216	-	
FC-2	Filter chassis with MERV 16 filter	Aprilaire	2516	-	
FC-3	Filter chassis with MERV 13 filter	Honeywell	F100F2036		
FC-4	Filter chassis	Camfil	GlidePack MultiTrack 25	-	Provide w/ 4" 30/30 D9 and CityCarb I 242412 filters
MA-1	Makeup air system	Fantech	MUAS 8	Fantech MUAC	
RV-1	Energy recovery ventilator	Broan	B130E65RT	Integral	Provide with MERV 13 filter
RV-2	Energy recovery ventilator	Broan	B130E65RS	Integral	Provide with MERV 13 filter

Grille, Register, and Diffuser Schedule - By Sheet

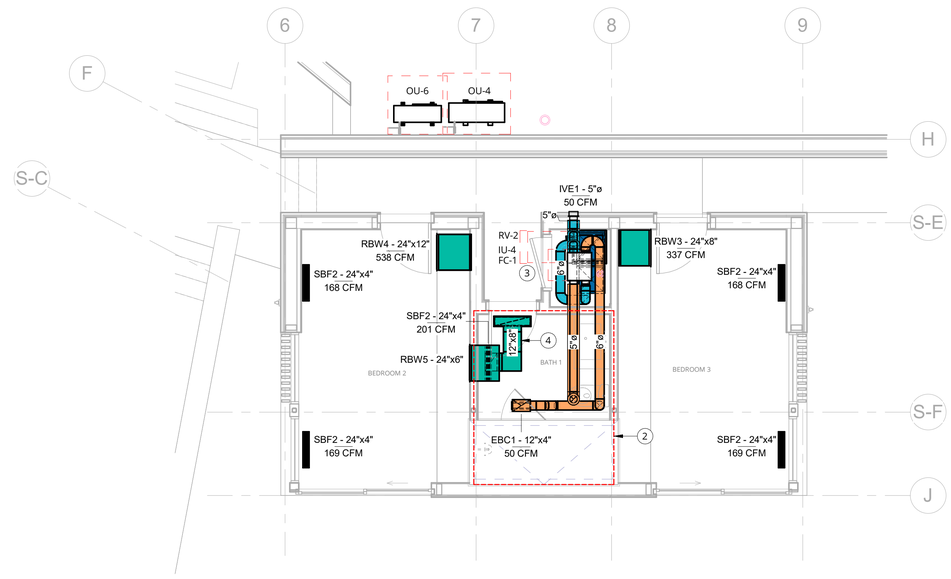
Mark	Quantity	Manufacturer	Model	Size	Notes
EBC1	1	Price Industries	LBPH15A	12"x4"	
IVE1	1	Luxury Metals	5" Stainless wall vent	5"ø	
RBC1	1	Price Industries	LBPH15A	24"x6"	
RBW3	1	Price Industries	LBPH15A	24"x8"	
RBW4	1	Price Industries	LBPH15A	24"x12"	
RBW5	1	Price Industries	LBPH15A	24"x6"	
SBF2	5	Price Industries	LBPH15A	24"x4"	

Mechanical General Notes	
A	Prior to commencement of construction, it is strongly recommended that the general contractor and the HVAC installer coordinate framing and duct installation sequencing to facilitate assembly of air distribution components.
B	Ducts to be sealed with mastic at pressure liner and insulation layer. Minimum thickness is 1/16". Recommended thickness is 1/8".
C	Flexible duct shall not exceed 5 feet in length unless otherwise noted.
D	Balancing dampers are required at each runout (for supply air and ventilation air). Dampers shall be low-air leakage type.
E	Manual balancing dampers shall be provided for accessible ductwork. Cable operated balancing dampers shall be provided for inaccessible ductwork.
F	Provide motorized damper on dehumidifier supply ducts when connected to air handler supply ducts.

Keynotes - M204	
1	Underground ductwork
2	Red dashed line indicates proposed 10" clear dropped ceiling to allow for ductwork.
3	Connect ERV fresh air supply to air handler return. Balance airflow to 50 CFM.
4	Jumper duct



2 Mechanical Plan - Bedrooms - SubSlab
1/4" = 1'-0"



1 Mechanical Plan - Bedrooms - Level 1
1/4" = 1'-0"

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Carmel, CA 93923

Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Mechanical Plan - Bedrooms

Scale: 1/4" = 1'-0"
Drawn By: ELC
Reviewed By: ELC

M204

Thermal Comfort Components

Mark	Description	Manufacturer	Model	Controller	Notes
IU-1	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA42NL	MHK2 + kumo cloud wireless interface	
IU-2	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA42NL	MHK2 + kumo cloud wireless interface	
IU-3	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA36NL	MHK2 + kumo cloud wireless interface	
IU-4	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA24NL	MHK2 + kumo cloud wireless interface	
IU-5	Multi-Position Air Handler	Mitsubishi Electric	PVA-AA18NL	MHK2 + kumo cloud wireless interface	
IU-6	Wall Mounted	Mitsubishi Electric	PKA-AL18NL	MHK2 + kumo cloud wireless interface	
IU-7	Wine Room Evaporator	CellarCool	FD3500-S	MHK2 + kumo cloud wireless interface	
OU-1	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK42NL	-	
OU-2	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK42NL	-	
OU-3	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK36NL	-	
OU-4	VRF Heat Pump	Mitsubishi Electric	PUZ-AH24NL	-	
OU-5	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK18NL	-	
OU-6	Air-Air/VRF Heat Pump	Mitsubishi Electric	PUZ-AK18NL	-	
OU-7	Wine Room Condenser	CellarCool	FD3500-S Condenser	-	
SH-1	Duct heater	Fantech	MUAH 8/6	Fantech MUAC	Part of Fantech MUAS 750 kit

Indoor Air Quality Components

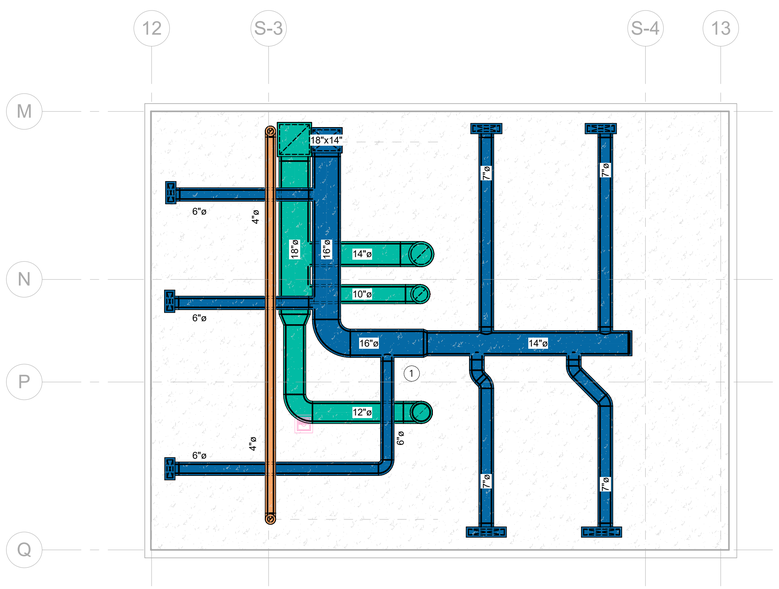
Mark	Description	Manufacturer	Model	Controller	Notes
DH-1	Dehumidifier	AprilAire	E070	Integral	
FC-1	Filter chassis with MERV 16 filter	Aprilaire	2216	-	
FC-2	Filter chassis with MERV 16 filter	Aprilaire	2516	-	
FC-3	Filter chassis with MERV 13 filter	Honeywell	F100F2036		
FC-4	Filter chassis	Camfil	GlidePack MultiTrack 25	-	Provide w/ 4" 30/30 D9 and CityCarb I 242412 filters
MA-1	Makeup air system	Fantech	MUAS 8	Fantech MUAC	
RV-1	Energy recovery ventilator	Broan	B130E65RT	Integral	Provide with MERV 13 filter
RV-2	Energy recovery ventilator	Broan	B130E65RS	Integral	Provide with MERV 13 filter

Grille, Register, and Diffuser Schedule - By Sheet

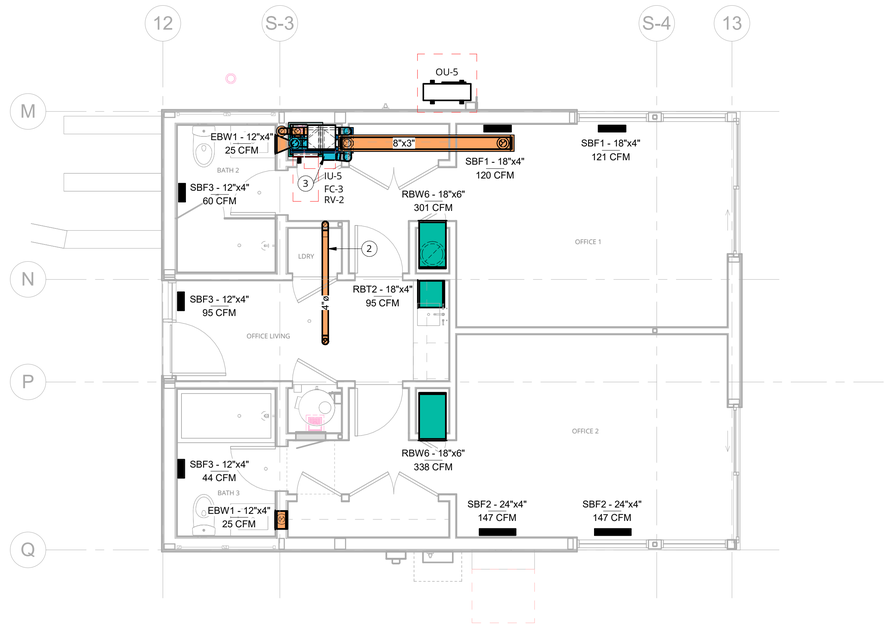
Mark	Quantity	Manufacturer	Model	Size	Notes
EBW1	2	Price Industries	LBPH15A	12"x4"	
RBT2	1	Price Industries	LBPH15A	18"x4"	
RBW6	2	Price Industries	LBPH15A	18"x6"	
SBF1	2	Price Industries	LBPH15A	18"x4"	
SBF2	2	Price Industries	LBPH15A	24"x4"	
SBF3	3	Price Industries	LBPH15A	12"x4"	

Mechanical General Notes	
A	Prior to commencement of construction, it is strongly recommended that the general contractor and the HVAC installer coordinate framing and duct installation sequencing to facilitate assembly of air distribution components.
B	Ducts to be sealed with mastic at pressure liner and insulation layer. Minimum thickness is 1/16". Recommended thickness is 1/8".
C	Flexible duct shall not exceed 5 feet in length unless otherwise noted.
D	Balancing dampers are required at each runout (for supply air and ventilation air). Dampers shall be low-air leakage type.
E	Manual balancing dampers shall be provided for accessible ductwork. Cable operated balancing dampers shall be provided for inaccessible ductwork.
F	Provide motorized damper on dehumidifier supply ducts when connected to air handler supply ducts.

Keynotes - M205	
1	Underground ductwork
2	Dryer exhaust duct
3	Connect ERV fresh air supply to air handler return. Balance airflow to 50 CFM.



2 Mechanical Plan - Home Offices - SubSlab
1/4" = 1'-0"



1 Mechanical Plan - Home Offices - Level 1
1/4" = 1'-0"

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Carmel, CA 93923

Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

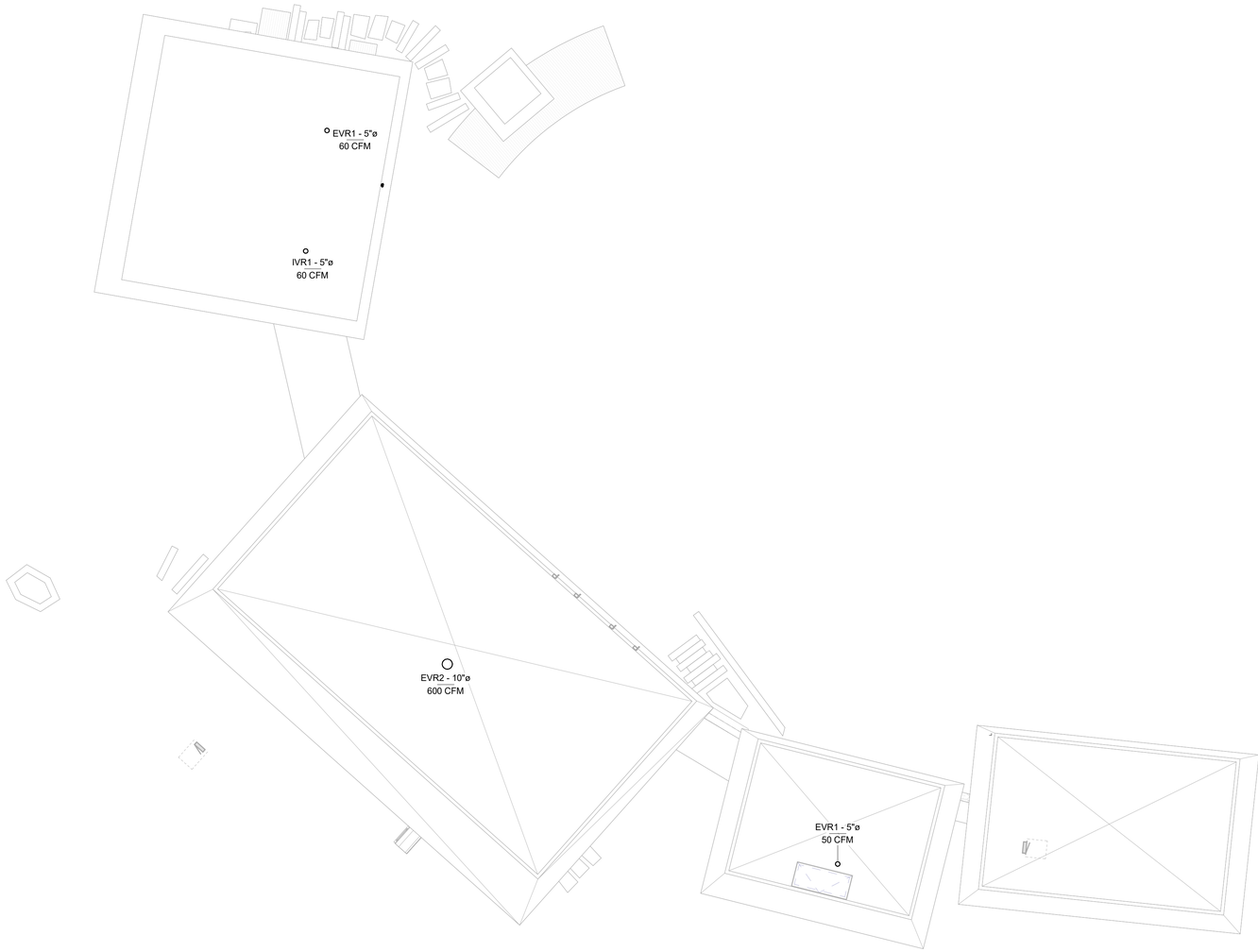
Mechanical Plan - Home Offices

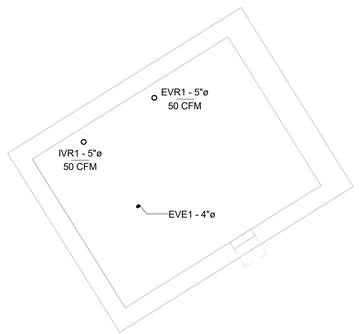
Scale: 1/4" = 1'-0"
Drawn By: ELC
Reviewed By: ELC

M205

Grille, Register, and Diffuser Schedule - By Sheet

Mark	Quantity	Manufacturer	Model	Size	Notes
EVE1	2	In-O-Vate	DryerWallVent	4"ø	DWV4W
EVR1	3	Luxury Metals	Aero Foil Vent Cap 5	5"ø	
EVR2	1	Luxury Metals	Aero Foil Vent Cap 10	10"ø	
IVR1	2	Luxury Metals	Aero Foil Vent Cap 5	5"ø	





1 Mechanical Plan - Roof
1" = 10'-0"

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Issue Dates:

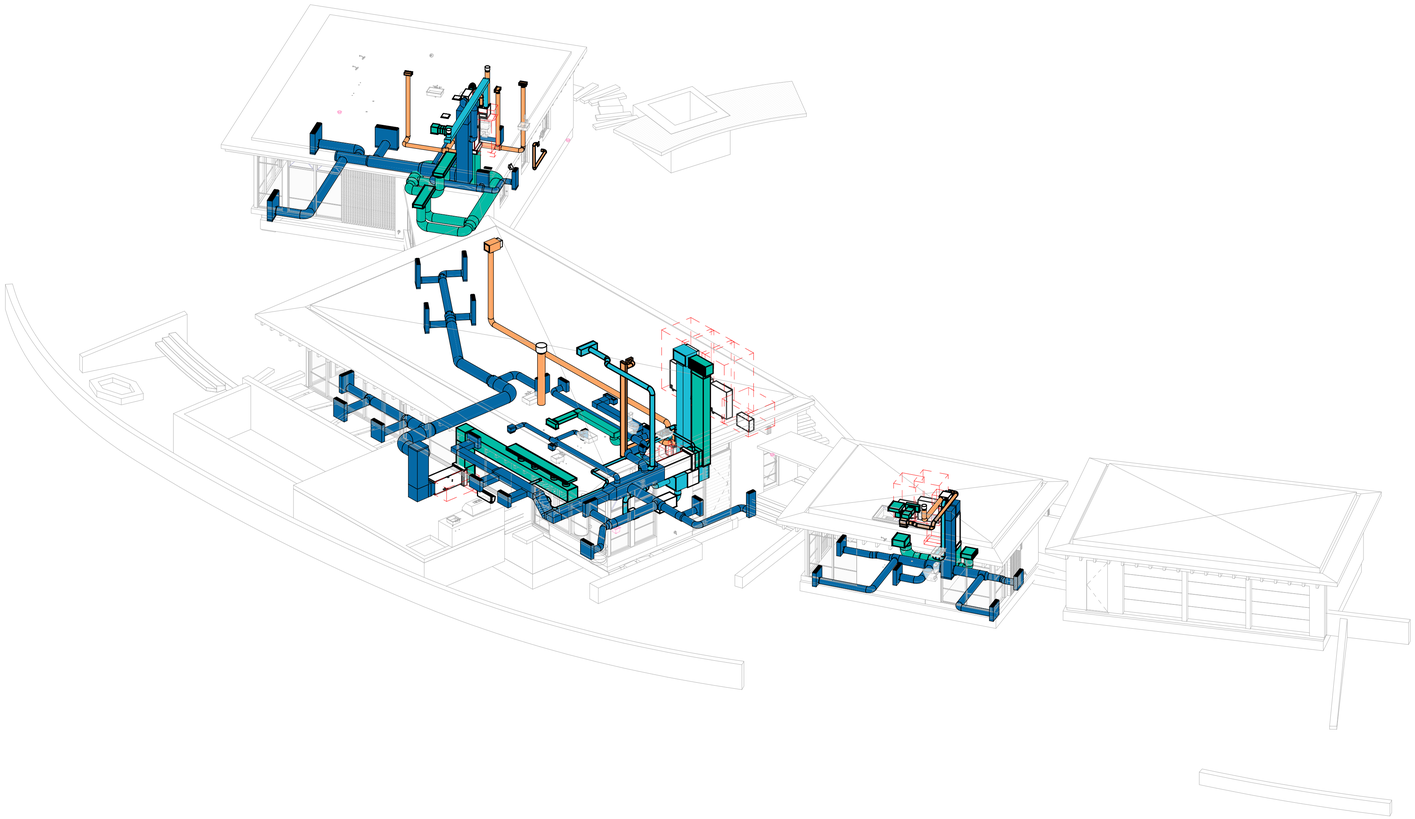
SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

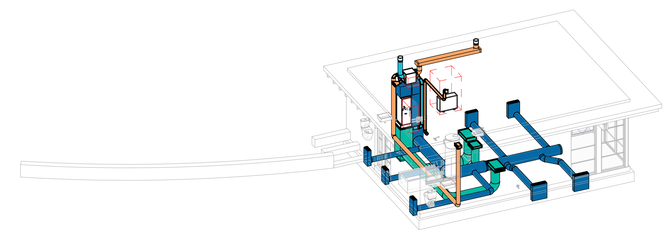
Mechanical Roof Plan

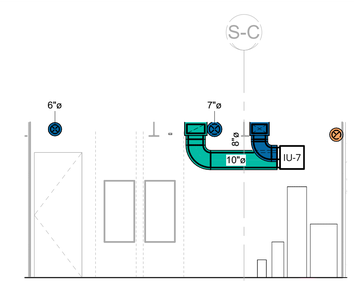
Scale: 1" = 10'-0"
Drawn By: ELC
Reviewed By: ELC

M206

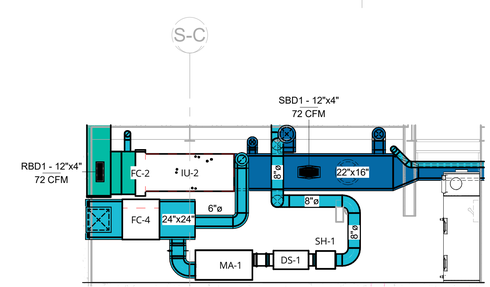


3 Mechanical 3D View





2 Mechanical Elevation - Great Room Mechanical - Plan West
1/4" = 1'-0"



1 Mechanical Elevation - Great Room Mechanical - Plan East
1/4" = 1'-0"

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Carmel, CA 93923

Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Sections & 3D Views

Scale: 1/4" = 1'-0"
Drawn By: ELC
Reviewed By: ELC

M300

Quick Results

Connection Summary
Indoor Units: 1 / 1 to 1
Capacity: 42 / 21 to 42 (100.0%)
* Connectable capacity is not actual capacity.
Total Pipe Length: 53.0/165.0 feet

Refrigerant
System Refrigerant: **R454B**
Additional Field-Charge: **0.00 lb**
Total System Charge: **9.92 lb**
Min. Applied Floor Area: **149.7 ft²**
Max System Charge: **16.09 lb**

Correction Factors

	Cooling	Heating
Outdoor Temperature:	0.90	0.74
Piping Length:	0.95	0.98
Defrosting:	-	1.00
User Derate:	1.00	1.00
Outdoor Altitude:	1.00	1.00
	0.86	**0.72**

Conditions

Cooling		Heating	
Indoor Dry Bulb	72.0 °F	Indoor Dry Bulb	72.0 °F
Indoor Wet Bulb	60.0 °F		
Indoor Humidity	49.9 %	Outdoor Dry Bulb	35.0 °F
		Outdoor Wet Bulb	32.8 °F
Outdoor Dry Bulb	93.0 °F	Outdoor Humidity	80.2 %

System 1 — PUZ-AK42NL 1.0 ft
3/8 / 5/8 — 50.0ft (3) — PVA-AA42NL — 5.0 ft / 5.0 ft
N/A / 1 / Primary Suite
36,141 BTU/h (22,429 BTU/h) — 32,975 BTU/h
Est. Cooling Discharge Air Temp: 51.1 °
Est. Heating Discharge Air Temp: 92.7 °

Quick Results

Connection Summary
Indoor Units: 1 / 1 to 1
Capacity: 42 / 21 to 42 (100.0%)
* Connectable capacity is not actual capacity.
Total Pipe Length: 54.9/165.0 feet

Refrigerant
System Refrigerant: **R454B**
Additional Field-Charge: **0.00 lb**
Total System Charge: **9.92 lb**
Min. Applied Floor Area: **149.7 ft²**
Max System Charge: **16.09 lb**

Correction Factors

	Cooling	Heating
Outdoor Temperature:	0.90	0.74
Piping Length:	0.95	0.98
Defrosting:	-	1.00
User Derate:	1.00	1.00
Outdoor Altitude:	1.00	1.00
	0.86	**0.72**

Conditions

Cooling		Heating	
Indoor Dry Bulb	72.0 °F	Indoor Dry Bulb	72.0 °F
Indoor Wet Bulb	60.0 °F		
Indoor Humidity	49.9 %	Outdoor Dry Bulb	35.0 °F
		Outdoor Wet Bulb	32.8 °F
Outdoor Dry Bulb	93.0 °F	Outdoor Humidity	80.2 %

System 2 — PUZ-AK42NL 1.0 ft
3/8 / 5/8 — 50.0ft (5) — PVA-AA42NL — 5.0 ft / 1.0 ft
N/A / 2 / Kitchen & Library
36,141 BTU/h (34,054 BTU/h) — 32,975 BTU/h
Est. Cooling Discharge Air Temp: 50.7 °
Est. Heating Discharge Air Temp: 92.7 °

Quick Results

Connection Summary
Indoor Units: 1 / 1 to 1
Capacity: 36 / 18 to 36 (100.0%)
* Connectable capacity is not actual capacity.
Total Pipe Length: 54.9/165.0 feet

Refrigerant
System Refrigerant: **R454B**
Additional Field-Charge: **0.00 lb**
Total System Charge: **9.92 lb**
Min. Applied Floor Area: **149.7 ft²**
Max System Charge: **11.99 lb**

Correction Factors

	Cooling	Heating
Outdoor Temperature:	0.90	0.74
Piping Length:	0.95	0.98
Defrosting:	-	1.00
User Derate:	1.00	1.00
Outdoor Altitude:	1.00	1.00
	0.86	**0.72**

Conditions

Cooling		Heating	
Indoor Dry Bulb	72.0 °F	Indoor Dry Bulb	72.0 °F
Indoor Wet Bulb	60.0 °F		
Indoor Humidity	49.9 %	Outdoor Dry Bulb	35.0 °F
		Outdoor Wet Bulb	32.8 °F
Outdoor Dry Bulb	93.0 °F	Outdoor Humidity	80.2 %

System 3 — PUZ-AK36NL 1.0 ft
3/8 / 5/8 — 50.0ft (5) — PVA-AA36NL — 5.0 ft / 1.0 ft
N/A / 3 / Living
29,257 BTU/h (26,615 BTU/h) — 27,240 BTU/h
Est. Cooling Discharge Air Temp: 50.0 °
Est. Heating Discharge Air Temp: 94.5 °

Quick Results

Connection Summary
Indoor Units: 1 / 1 to 1
Capacity: 24 / 12 to 24 (100.0%)
* Connectable capacity is not actual capacity.
Total Pipe Length: 78.0/165.0 feet

Refrigerant
System Refrigerant: **R454B**
Additional Field-Charge: **0.00 lb**
Total System Charge: **7.72 lb**
Min. Applied Floor Area: **116.3 ft²**
Max System Charge: **7.72 lb**

Correction Factors

	Cooling	Heating
Outdoor Temperature:	0.90	0.74
Piping Length:	0.92	0.94
Defrosting:	-	1.00
User Derate:	1.00	1.00
Outdoor Altitude:	1.00	1.00
	0.83	**0.69**

Conditions

Cooling		Heating	
Indoor Dry Bulb	72.0 °F	Indoor Dry Bulb	72.0 °F
Indoor Wet Bulb	60.0 °F		
Indoor Humidity	49.9 %	Outdoor Dry Bulb	35.0 °F
		Outdoor Wet Bulb	32.8 °F
Outdoor Dry Bulb	93.0 °F	Outdoor Humidity	80.2 %

System 4 — PUZ-AH24NL 1.0 ft
3/8 / 5/8 — 75.0ft (3) — PVA-AA24NL — 5.0 ft / 5.0 ft
N/A / 4 / Offices
19,966 BTU/h (19,493 BTU/h) — 19,071 BTU/h
Est. Cooling Discharge Air Temp: 51.3 °
Est. Heating Discharge Air Temp: 92.3 °

Quick Results

Connection Summary
Indoor Units: 1 / 1 to 1
Capacity: 18 / 9 to 18 (100.0%)
* Connectable capacity is not actual capacity.
Total Pipe Length: 53.0/100.0 feet

Refrigerant
System Refrigerant: **R454B**
Additional Field-Charge: **0.00 lb**
Total System Charge: **4.41 lb**
Min. Applied Floor Area: **96.9 ft²**
Max System Charge: **4.41 lb**

Correction Factors

	Cooling	Heating
Outdoor Temperature:	0.90	0.74
Piping Length:	0.92	0.95
Defrosting:	-	1.00
User Derate:	1.00	1.00
Outdoor Altitude:	1.00	1.00
	0.83	**0.70**

Conditions

Cooling		Heating	
Indoor Dry Bulb	72.0 °F	Indoor Dry Bulb	72.0 °F
Indoor Wet Bulb	60.0 °F		
Indoor Humidity	49.9 %	Outdoor Dry Bulb	35.0 °F
		Outdoor Wet Bulb	32.8 °F
Outdoor Dry Bulb	93.0 °F	Outdoor Humidity	80.2 %

System 5 — PUZ-AK18NL 1.0 ft
1/4 / 1/2 — 50.0ft (3) — PVA-AA18NL — 5.0 ft / 5.0 ft
N/A / 5 / Bedrooms
14,918 BTU/h (14,918 BTU/h) — 13,905 BTU/h
Est. Cooling Discharge Air Temp: 53.1 °
Est. Heating Discharge Air Temp: 89.6 °

Quick Results

Connection Summary
Indoor Units: 1 / 1 to 1
Capacity: 18 / 9 to 18 (100.0%)
* Connectable capacity is not actual capacity.
Total Pipe Length: 54.9/100.0 feet

Refrigerant
System Refrigerant: **R454B**
Additional Field-Charge: **0.00 lb**
Total System Charge: **4.41 lb**
Min. Applied Floor Area: **79.8 ft²**
Max System Charge: **4.41 lb**

Correction Factors

	Cooling	Heating
Outdoor Temperature:	0.90	0.74
Piping Length:	0.92	0.95
Defrosting:	-	1.00
User Derate:	1.00	1.00
Outdoor Altitude:	1.00	1.00
	0.83	**0.70**

Conditions

Cooling		Heating	
Indoor Dry Bulb	72.0 °F	Indoor Dry Bulb	72.0 °F
Indoor Wet Bulb	60.0 °F		
Indoor Humidity	49.9 %	Outdoor Dry Bulb	35.0 °F
		Outdoor Wet Bulb	32.8 °F
Outdoor Dry Bulb	93.0 °F	Outdoor Humidity	80.2 %

System 6 — PUZ-AK18NL 1.0 ft
1/4 / 1/2 — 50.0ft (5) — PKA-AL18NL — 8.0 ft / 5.9 ft
N/A / 6 / IT/AV
14,918 BTU/h (10,538 BTU/h) — 15,991 BTU/h
Est. Cooling Discharge Air Temp: 50.2 °
Est. Heating Discharge Air Temp: 105.1 °

2 VRF Systems Selection Information and Refrigerant Piping Schematic
NTS

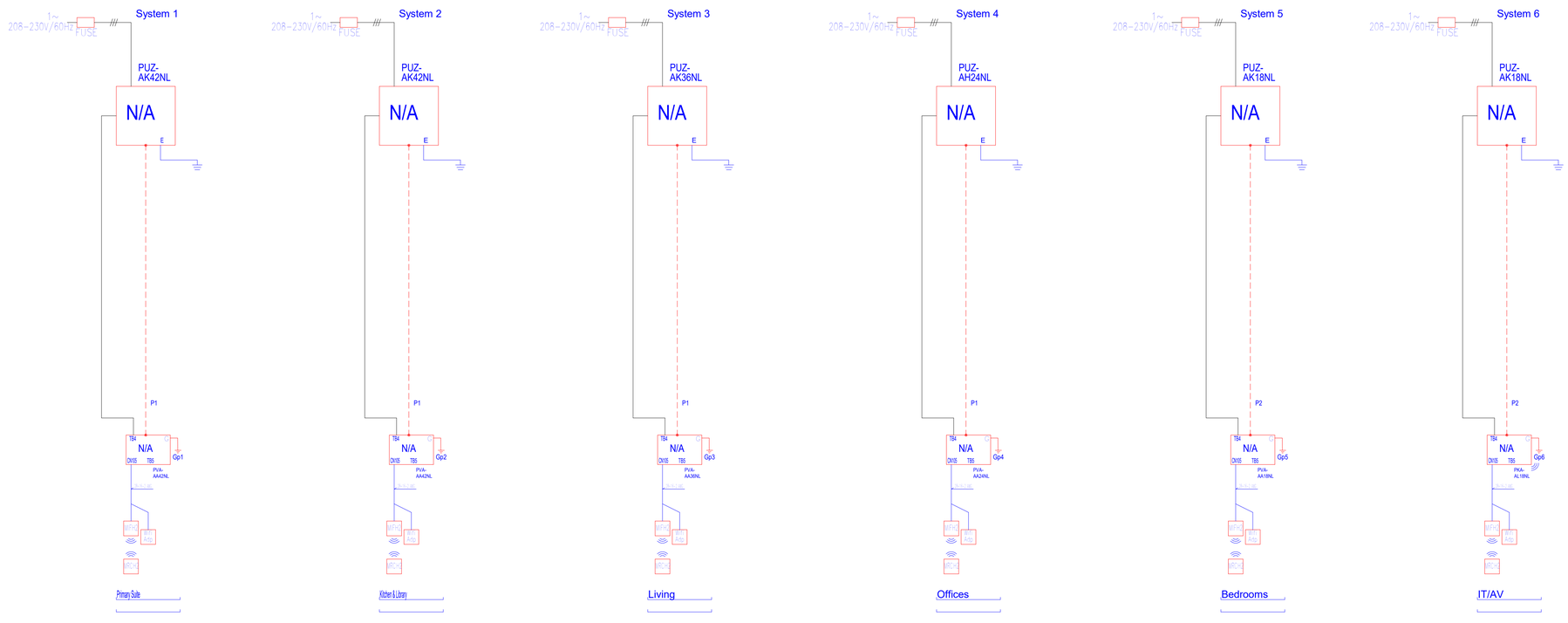
CITY MULTI
SYSTEM SCHEMATIC DWG.

This drawing is schematic in nature. Final routing of piping & wiring shall be determined by the installing contractor and/or designer of record.
Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.
1.25mm(16 AWG) : 1.25mm(16 AWG) or more.
0.75mm(20 AWG) : between 0.5mm(24 AWG) and 0.75mm(20 AWG).

DIAGRAM SYMBOL LEGEND			
DISPLAY	DESCRIPTION	CONT.NO	PAGE
—//—	POWER WIRE		
———	CONTROL WIRE		
———	REF. PIPE		

PIPING AND CONTROLS	
SYMBOL	LIQUID PIPE/GAS PIPE SIZE
P1	3/8 / 5/8
P2	1/4 / 1/2
SYMBOL	MODEL NUMBER
MFH2	MFH2-MRCH2-MHH2
WIFIADP	PACUSWH5002-WF-2

Diamond System Builder
sw: 5.9.0.18
db: 5.9.0.11
5/15/2025
11:00 AM



REMARKS
Comments:

1 VRF Systems Schematic Diagram
NTS

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Permit Set

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Ward Residence
23 Vasquez Trail
Carmel, CA 93923

Issue Dates:

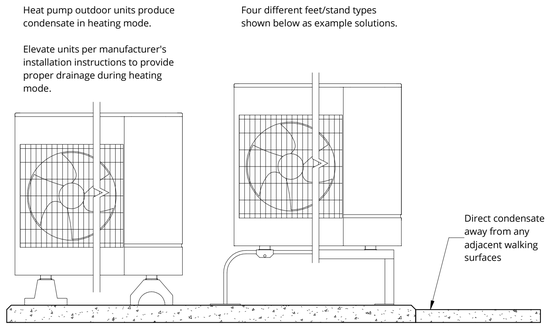
SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

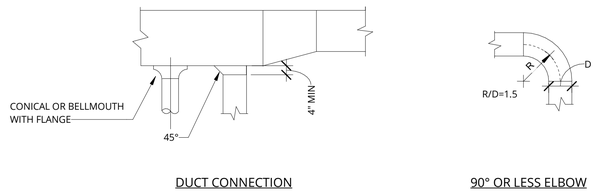
VRF Diagrams

Scale: As indicated
Drawn By: ELC
Reviewed By: ELC

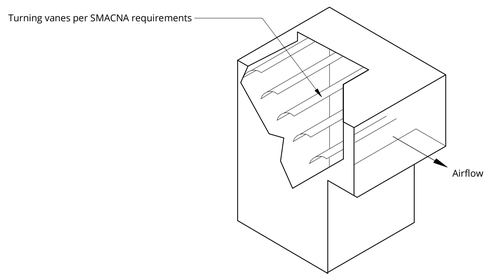
M400



4 Outdoor Unit Installation Detail
Not to Scale

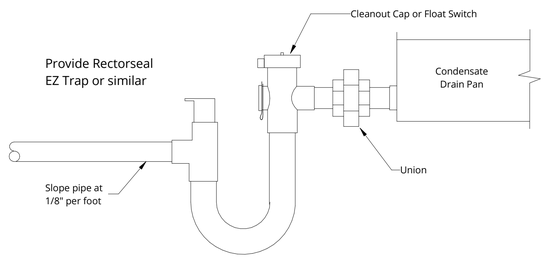


3 Low Pressure Duct Fittings
Not to Scale

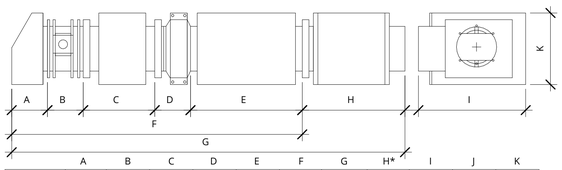


Note: Turning vanes required at all 90° rectangular elbows in supply / positive pressure ductwork.

2 Rectangular Duct Elbow w/ Turning Vanes
Not to Scale



1 Condensate Drain Detail
Not to Scale



	A	B	C	D	E	F	G	H*	I	J	K
MUAS 750	10	10	30 1/2	7 7/8	26 5/8	85	99	14	--	8	--
MUAS 1200	10	10	30 1/2	9 13/16	38 1/2	98 13/16	112 13/16	14	--	10	--
MUAS 1600	10 1/2	12	30 1/2	18 7/8	38 1/2	110 3/8	124 3/8	14	23	12	21 1/16
MUAS 2000	10 3/4	14	30 1/2	20 1/8	38 1/2	114 1/8	138 1/8	24	23 3/32	14	22 3/4

*Optional
All dimensions are in inches.

5 Fantech Make-up Air System Assembly Minimum Dimensions
Not to Scale

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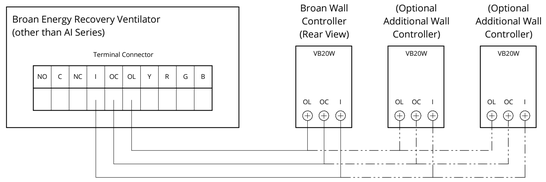
SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

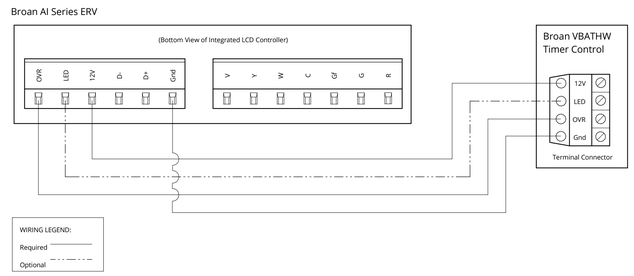
Details & Clearances

Scale: As indicated
Drawn By: ELC
Reviewed By: ELC

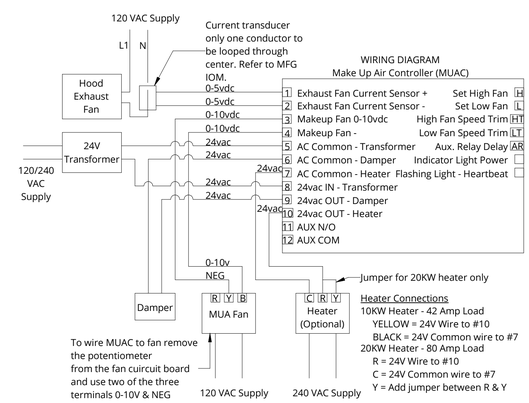
M500



3 Wiring Diagram for ERV/HRV Boost Mode - Broan Non-AI Series
NTS



2 Wiring Diagram for ERV/HRV Boost Mode - Broan AI Series
Not to Scale



1 Fantech Make-Up Air System for Range Hood Makeup
Not to Scale

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Controls & Wiring

Scale: NTS
Drawn By: ELC
Reviewed By: ELC

M600

General Plumbing Notes:

1. General notes, symbol list, and details are applicable to all plumbing sheets.
2. Contract drawings are diagrammatic only and do not give fully dimensioned locations of various elements of work or show all offsets or required fittings. Determine exact locations from field measurements. Making adjustments to field conditions is considered a part of the work required.
3. All dimensions and field conditions shall be checked and verified by the contractor at the site. All new piping, equipment, locations, sizes, scales and dimensions shall be checked and verified at the site.
4. Contractor shall layout their work from actual field measurements and actual dimensions of equipment installed. All piping and equipment of trades shall be properly coordinated and set to maintain required clearances. Contractor shall be held responsible for all locations subject to approval of architect.
5. Installing plumber must verify and approve design prior to installation.
6. When the mechanical and electrical contract documents do not give exact details to the elevation of pipe, conduit and ducts, the contractor shall physically arrange the systems to fit in the space available at the elevations intended with proper grade for the systems involved. Piping, exposed conduit and the duct systems are generally intended to be installed true and square to the building construction and located as high as possible against the structure in a neat and workmanlike manner. The contract documents do not show all required offsets, control lines, pilot lines and other location details. Work shall be concealed in all finished areas.
7. Perform work in accordance with applicable statutes, ordinances, codes and regulations of governmental authorities having jurisdiction. The more stringent of the codes shall govern. Obtain and pay for all permits and inspections.
8. No plumbing fixture, device, or piping shall be installed that will provide a cross connection or interconnection between a distributing water supply for drinking water, process water, or domestic purpose and a polluted supply such as a drainage system or soil waste pipe so as to make possible the backflow of sewage, polluted water or waste into the water supply system.
9. Transitions fittings or dissimilar pipe materials, where galvanic corrosion could occur, shall be non-conductive type complying with local and state plumbing codes.
10. Installation of all pipes shall be done with extreme care to ensure clean pipe lines free of burrs, scale, rust, shavings, weld spatter or beads, sand, dirt, grease and all other impurities or foreign matter. Open connections shall be sealed at the end of the day to keep out debris until work resumes.
11. It shall be the responsibility of this contractor to coordinate the work with that of all other trades.
12. No work shall be installed in violation of any governing codes. Any work shown on the drawings which is in violation of such codes shall be brought to the attention of the owner's representative and shall be resolved prior to the installation of the work.
13. Any penetrations of the ceiling, walls or floors shall be restored to the original fire ratings, opening cuts and ceiling shall be patched, sleeved, sealed and escutcheoned.
14. Installation shall adhere to manufacturers' recommendations.
15. Provide access panels to system components that are concealed and require periodic service.
16. All piping above grade shall be properly supported by the building structure and shall not rest on ceiling structure or components.
17. All plumbing equipment, piping, insulation, etc. installed in HVAC plenum spaces shall meet code requirements for smoke and combustibility.
18. Provide clamps, offsets, expansions joints, anchors and guides as necessary to prevent stress on piping.
19. Provide vents at high points in piping system and drain valves at low points.
20. Verify exact sizes, locations, inverts and elevations prior to running any piping. Refer to architectural drawings for exact locations of all fixtures.
21. All floor drains and floor sinks shall be trapped. These traps shall be provided with either trap primers or barrier type trap seal protection devices.
22. Refer to architectural drawings for gutter and downspouts.
23. Overflow drains will be provided for each internal roof drain. Overflow drains will be piped separately from the roof drain system and will daylight a minimum of 12" above grade.
24. 4" sanitary shall be a minimum 18" below grade.
25. All gravity piping 3" and larger shall slope at 1/8" per foot.
26. All gravity piping 2-1/2" and less shall slope at 1/4" per foot.
27. Provide shut off valves prior to all domestic water fixture connections.
28. All domestic cold, hot, and hot recirculation water piping shall be insulated, including below grade piping. Piping 1-1/4" and smaller shall be insulated with 1" thick insulation. Piping 1-1/2" and larger shall be insulated with 1-1/2" thick insulation.
29. Pipe insulation shall fit tightly to the pipe, and not be over - or under-sized for the pipe diameter.
30. Insulation shall be continuous except when passing through structural or restrictive framing members.
31. Insulation joints must be sealed both longitudinally and at ends, using manufacturer's recommended specifications.
32. Elastomeric closed cell foam insulation, such as AP Armaflex Black LapSeal, or fiberglass insulation with an all service jacket, such as Owens Corning SSL II, or comparable products shall be used.
33. Pipes shall be strapped to the structure and around the insulation in accordance with the piping manufacturer's installation requirements.
34. Piping routed through the slab shall be sleeved and protected in accordance with the piping manufacturer's installation requirements. PVC or water-tight corrugated pipe may be used, so long as it is sufficiently sized to allow for smooth passage of piping (and insulation on hot water pipes).
35. All buried hot water pipes must be insulated, and must be routed inside a water-tight conduit that is sealed continuously at all points underground and through the slab. An all-in-one water-tight protective sleeve and insulation product such as Uponor Ecoflex may be used so long as pipe diameters and flow paths remain the same.
36. Elbow fittings shall be avoided as much as possible; bend or flex pipes instead where possible. Use bend braces and structural anchors where appropriate to ensure proper transitions from fittings.
37. Expansions tank must be supported. Do not rely on piping for structural support.
38. Hot water circulation pump must be supported if using non-rigid piping.
39. Follow hot water circulation pump installation instructions; make field adjustments to pipe routing to ensure proper flow orientation.
40. Route 3/4" condensate line from cooling coil of each condensate producing air handling unit to location shown. Provide P-trap directly adjacent to unit and position as not to obstruct required access to equipment components.
41. Insulate all condensate piping with elastomeric closed cell foam insulation and seal the per manufacturer's recommendations.
42. Route condensate drain down in wall and stub out in concealed fashion and connect to lavatory tailpiece.
43. Provide secondary drain pan for each indoor unit capable of producing condensate. Route 3/4" overflow and secondary drain pan line to conspicuous location approved by Architect.
44. Slope condensate lines minimum of 1/8" per foot to approved disposal location.
45. For ductless air handlers, follow manufacturer's instructions for condensate piping. Include check valve as appropriate.
46. Changes in selection of water delivering fixtures, piping, or other specified components, must be approved by Positive Energy. It is the responsibility of the GC and owner to notify PE of such intended alterations.
47. Storm and Overflow storm piping shall be insulated with minimum 1" thick insulation.

Pipe Material Schedule

System	Symbol	Pipe	Fitting
Sanitary Sewer, Grease Waste, Vent Storm, Overflow Storm	SS, GW, V ST, OST	PVC Schedule 40, ASTM D2665	PVC, ASTM D2665, made to ASTM D3311 and to fit Schedule 40 pipe
Domestic Water (Cold, Hot, Return)	DCW, DHW, DHWR	Copper, Type L, ASTM B88	Wrough copper solder type fittings, ANSI/ASME B16.22
		PEX-A, ASTM F876 and ASTM F877	Metal insert and copper crimp rings, ASTM F1807
		PE-RT, ASTM F2769	Metal insert and copper crimp rings, ASTM F1807
Condensate	CD	Copper, Type DWV, ASTM B306	Wrought copper solder type fittings, ANSI/ASME B16.23
Natural Gas	G	Black Steel, ASTM A53, Type S, Schedule 40	Steel fittings, ASTM B16.9 or ASME B16.11

Nomenclature:

AD-1 — Number indicates version

AD	Area Drain
B	Boiler
BD	Bidet
BT	Bathtub
BFP	Backflow Preventer
BP	Booster Pump
CO	Cleanout
CP	Circulating Pump
EWH	Electric Water Heater
ET	Expansion Tank
FCO	Floor Cleanout
FD	Floor Drain
FS	Floor Sink
GD	Gas Dryer
GI	Grease Interceptor
GM	Gas Meter
GWH	Gas Water Heater
GPH	Gas Pool Heater
GP	Grinder Pump
HB	Hose Bibb
HD	Hub Drain
HPWH	Heat Pump Water Heater
HX	Heat Exchanger
LAV	Lavatory
NIC	Not In Contract
OI	Oil Interceptor
PRV	Pressure Reducing Valve
RD	Roof Drain
SK	Sink
SH	Shower
SP	Sump Pump
ST	Storage Tank
U	Urinal
WB	Wall Box
WC	Water Closet
WCO	Wall Cleanout
WH	Wall Hydrant
WM	Water Meter
WS	Water Softener
WT	Water Treatment

Pipe Abbreviations / Line Types:

DCW	Domestic Cold Water
DHW	Domestic Hot Water
DHWR	Domestic Hot Water Return
FM	Force Main
G	Natural Gas
GRW	Gray Water
GW	Grease Waste
LP	Liquid Propane
OST	Overflow Storm
RW	Reclaimed water
SCW	Softened Cold Water
SS	Sanitary Sewer
ST	Storm
TW	Domestic Tempered Hot Water
V	Vent

Plumbing Sheet List

Sheet Number	Sheet Name
P000	General Notes & Legends
P001	Calculations & Basis of Design
P002	Equipment Schedules
P100	Plumbing Site Plan
P200	Plumbing Floor Plan - Primary Suite - Subslab - DWV
P201	Plumbing Floor Plan - Primary Suite - Level 1 - DWV
P202	Plumbing Floot Plan - Primary Suite - Roof
P203	Plumbing Floor Plan - Great Room - Subslab - DWV
P204	Plumbing Floor Plan - Great Room - Basement - DWV
P205	Plumbing Floor Plan - Great Room - Level 1 - DWV
P206	Plumbing Floor Plan - Great Room - Roof
P207	Plumbing Floor Plan - Bedrooms - Subslab - DWV
P208	Plumbing Floor Plan - Bedrooms - Level 1 - DWV
P209	Plumbing Floor Plan - Bedrooms - Roof
P210	Plumbing Floor Plan - Home Offices - Subslab - DWV
P211	Plumbing Floor Plan - Home Offices - Level 1 - DWV
P212	Plumbing Floor Plan - Home Offices - Roof
P213	Plumbing Floor Plan - Primary Suite - Subslab - Domestic Supply
P214	Plumbing Floor Plan - Primary Suite - Level 1 - Domestic Supply
P215	Plumbing Floor Plan - Great Room - Basement - Domestic Supply
P216	Plumbing Floor Plan - Great Room - Level 1 - Domestic Supply
P217	Plumbing Floor Plan - Bedrooms - Subslab - Domestic Supply
P218	Plumbing Floor Plan - Bedrooms - Level 1 - Domestic Supply
P219	Plumbing Floor Plan - Home Offices - Subslab - Domestic Supply
P220	Plumbing Floor Plan - Home Offices - Level 1 - Domestic Supply
P300	Sections & Elevations
P400	Riser Diagrams - DWV
P401	Riser Digrams - Domestic Supply
P500	Details & Clearances
P501	Details & Clearances
P600	Schematics & Controls

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SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

General Notes & Legends

Scale: As indicated
Drawn By: NZ
Reviewed By: ELC

P000

Water Supply Fixture Units (WSFU)

Ward Residence			Fixture Unit (WSFU)			Subtotal (WSFU)		
Type	Minimum Fixture Branch Pipe Size	Quantity	Building Supply	Cold	Hot	Building Supply	Cold	Hot
Bathtub or Combination Bath/Shower	1/2"	1	4	3	3	4	3	3
3/4" Bathtub Fill Valve	3/4"	0	10	7.5	7.5	0	0	0
Bidet	1/2"	0	1	0.75	0.75	0	0	0
Clothes Washer	1/2"	2	4	3	3	8	6	6
Dishwasher, domestic	1/2"	0	1.5	1.125	1.125	0	0	0
Drinking Fountain or Water Cooler	1/2"	0	0.5	0.5	-	0	0	-
Lavatory	1/2"	6	1	0.75	0.75	6	4.5	4.5
Sinks	-							
Bar	1/2"	3	1	0.75	0.75	3	2.25	2.25
Kitchen, domestic w/ or w/o dishwasher	1/2"	1	1.5	1.125	1.125	1.5	1.125	1.125
Laundry	1/2"	0	1.5	1.125	1.125	0	0	0
Service or Mop Basin	1/2"	0	1.5	1.125	1.125	0	0	0
Shower, per head	1/2"	5	2	1.5	1.5	10	7.5	7.5
Urinal, flush tank	1/2"	0	2	2	-	0	0	-
Water Closet, 1.6 GPF gravity tank	1/2"	5	2.5	2.5	-	12.5	12.5	-
TOTAL (WSFU)						45	37	25
EQUIVALENT GPM PER UPC 2021 CHART A 103.1 (2)						26		
EQUIVALENT GPM PER UPC 2021 TABLE M 102.3						Q = 9.5 GPM	0	

Notes: Based on UPC 2021 Table 610.3

Drainage Fixture Units (DFU)

Ward Residence				
Type	Minimum Trap Size	Quantity	Fixture Unit (DFU)	Subtotal
Bathtub or Combination Bath/Shower	1-1/2"	1	2	2
Bidet	1-1/4"	0	1	0
Clothes Washer, domestic, standpipe	2"	2	3	6
Dishwasher, domestic	1-1/2"	0	2	0
Drinking Fountain or Water Cooler	1-1/4"	0	0.5	0
Floor Drain / Floor Sink	2"	6	2	12
Lavatory	1-1/4"	6	1	6
Lavatory, in sets	1-1/2"	0	2	0
Sinks	-			
Bar	1-1/2"	3	1	3
Kitchen, domestic w/ or w/o dishwasher	2"	1	2	2
Laundry	2"	0	2	0
Service or Mop Basin	2"	0	3	0
Shower, single head	2"	4	2	8
Multi head, each additional	2"	1	1	1
Urinal, integral trap, 1.0 GPF	2"	0	2	0
Water Closet, 1.6 GPF gravity tank	3"	5	3	15
TOTAL (DFU)				55
MINIMUM BUILDING SANITARY LINE SIZE PER UPC 2021 TABLE 703.2				4" (see note 3)

Note 1: Except for six-unit traps or water closets (PE typically sizes up to 4" if serving any water closets).

Note 2: Not to exceed five water closets or five six-unit traps (PE typically sizes up to 4" if serving any water closets).

Note 3: Based on 1/4 inch per foot (20.8 mm/m) slope. For 1/8 of an inch per foot (10.4 mm/m) slope, the maximum unit loading is 172 DFU for 4" and 342 DFU for 5"

Domestic Cold Water Building Supply

Ward Residence			Comments
(A) Maximum allowed pressure	80	PSI	Per code or local amendment
(B) Available pressure	80	PSI	Pressumed pressure to be confirmed
(C) Water Hardness	11	GR./GAL	Per municipality report
(D) Total (Supply) Fixture Unit Count	45	WSFU	
(E) Equivalent GPM Water Supply Demand	9.5	GPM	
(F) Irrigation Demand	0	GPM	Irrigation served by rain water collection system.
(G) Total Building Demand	9.5	GPM	
(H) Pressure loss due to elevation	6.5	PSI	15 ft x 0.433
(I) Pressure loss through 1" water meter (@ 10 GPM)	1	PSI	Per UPC 2021 Chart A102.2 or manufacturer
(J) Pressure loss through 1" backflow preventer (@ 10 GPM)	5	PSI	
(K) Pressure loss through X" pressure reducing valve (@ XX GPM)	0	PSI	
(L) Pressure loss through water heater	4	PSI	
(M) Pressure loss through water treatment	10	PSI	
(N) Residual pressure required at farthest fixture	20	PSI	
(O) Total pressure loss from above (items H-N)	46.5	PSI	
(P) Pressure available for friction loss (B minus O)	33.5	PSI	
(Q) Developed pipe length of run (main to last fixture)	550	FT	
(R) Equivalent length for fittings (20%)	110	FT	
(S) Total developed length	660	FT	
(T) Friction loss per 100ft of pipe	3	PSI/100 FT	
(U) Total friction loss	19.8	PSI	Is there sufficient pressure available for friction loss? YES
Building Supply Line Size =	1	IN	Pipe size based on 10 GPM (L copper or pex) @ 3 PSI/100FT CW velocity not to exceed 8 FT/S & HW not to exceed 5 FT/S

Domestic Hot Water Sizing - Tank Type

Ward Residence - Primary Suite, Great Room, Offices & Garage			
Fixture / Use	Average gallons of water per hour (GPH) per use at 140°F	# per peak hour	Gallons used during peak hour (GPH)
Bathtub	0	0	0
Clothes Washer	15	1	15
Dishwasher	5	1	5
Kitchen Sink / Food Preparation	5	0	0
Lavatory / Hand Washing	2	0	0
Shower, single head	26.25	2	52.5
TOTAL (GPH) / MINIMUM REQUIRED FOR FIRST HOUR RATING			72.5
RECOMMEND 80 GALLON HEAT PUMP WATER HEATER TO ALLOW FOR PEAK DEMAND			

Note 1: Review peak use assumptions with owner

Note 2: Confirm volume of any non-standard bathtub (e.g. free-standing, garden, jacuzzi, etc.)

Note 3: Shower usage assumes 2.5gpm flow at shower head, 70% hot water and 30% cold water, for 15 minute duration

Domestic Hot Water Sizing - Tank Type

Ward Residence - Bedrooms			
Fixture / Use	Average gallons of water per hour (GPH) per use at 140°F	# per peak hour	Gallons used during peak hour (GPH)
Bathtub	50	0	0
Clothes Washer	15	1	15
Dishwasher	5	0	0
Kitchen Sink / Food Preparation	5	1	5
Lavatory / Hand Washing	2	0	0
Shower, single head	26.25	2	52.5
TOTAL (GPH) / MINIMUM REQUIRED FOR FIRST HOUR RATING			72.5
RECOMMEND 80 GALLON HEAT PUMP WATER HEATER TO ALLOW FOR PEAK DEMAND			

Note 1: Review peak use assumptions with owner

Note 2: Confirm volume of any non-standard bathtub (e.g. free-standing, garden, jacuzzi, etc.)

Note 3: Shower usage assumes 2.5gpm flow at shower head, 70% hot water and 30% cold water, for 15 minute duration

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Calculations & Basis of Design

Scale:
Drawn By: NZ
Reviewed By: ELC

P001

Heat Pump Water Heater Schedule

Type Mark	Description	Manufacturer	Model	Refrigerant	IncomingWaterTemp	TankSetPoint	FirstHourRating	RecoveryRate	UniformEnergyFactor	Electrical						Physical Characteristics			
										Phase	Voltage	MCACalc	MOCP	ApparentPower	Drain Pan Heater	Height	Diameter	Weight	Sound Level
HPWH-1	80-Gallon Hybrid Electric Heat Pump Water Heater	Rheem	PROPH80 T2 RH375-SO	134A	64 °F	140 °F	86.9 gal	26.9 gal	4.07	1 Φ	240	18.7	30	4500 VA	0	6' - 3"	2' - 0 1/4"	0.00 lbf	49
HPWH-1	80-Gallon Hybrid Electric Heat Pump Water Heater	Rheem	PROPH80 T2 RH375-SO	134A	64 °F	140 °F	86.9 gal	26.9 gal	4.07	1 Φ	240	18.7	30	4500 VA	0	6' - 3"	2' - 0 1/4"	0.00 lbf	49

Circulation Pump Schedule

Type Mark	Count	Description	Manufacturer	Model	Pump Performance			Electrical				Physical Dimensions				Controller	Notes
					Head Range	Total Head	Design Flow Rate	Phase	Voltage	FLA	Horsepower	Length	Width	Height	Unit Weight		
CP-1	1	Circulation Pump - Domestic Hot water	ACT D'Mand Kontrols	ACT1	0-24 ft	6	12	1 Ø	120 V	1 A	0.17 hp	0' - 5"	0' - 5"	0' - 4"	8 lbs.	ACT D'Mand Kontrols HWMOS	
CP-2	1	Circulation Pump - Domestic Hot water	ACT D'Mand Kontrols	ACT1	0-24 ft	5	4	1 Ø	120 V	1 A	0.17 hp	0' - 5"	0' - 5"	0' - 4"	8 lbs.	ACT D'Mand Kontrols HWMOS	
CP-3	1	Circulation Pump - Domestic Hot water	ACT D'Mand Kontrols	ACT1	0-24 ft	16	2	1 Ø	120 V	1 A	0.17 hp	0' - 5"	0' - 5"	0' - 4"	8 lbs.	ACT D'Mand Kontrols HWMOS	
CP-4	1	Circulation Pump - Domestic Hot water	ACT D'Mand Kontrols	ACT1	0-24 ft	2	3	1 Ø	120 V	1 A	0.17 hp	0' - 5"	0' - 5"	0' - 4"	8 lbs.	ACT D'Mand Kontrols HWMOS	

Sump Pump Schedule

Type Mark	Count	Description	Manufacturer	Model	Pump Performance			Electrical				Physical Dimensions				Controller	Notes
					Head Range	Total Head	Design Flow Rate	Phase	Voltage	Amperage	Horsepower	Length	Width	Height	Unit Weight		
SP-1	1	Sump pump	Liberty Pumps	237	0-22 ft	TBD	0 GPM	1 Ø	120 V	5.2 A	1/3 hp	2' - 6"	2' - 6"	2' - 0"	TBD	VMF Switch	

Leak Detection System Schedule

Type Mark	Count	Description	Manufacturer	Model	Size	Design Flow Rate (GPM)	Max Flow Rate (GPM)	Pressure Drop at Design Flow (PSI)	Physical Dimensions			Notes
									Length	Width	Height	
LD-1	1	Smart Water Assistant + Shutoff	Phyn	Phyn Plus (2nd Gen)	1"	9.5	10.5	2	0' - 6"	0' - 6"	1' - 0"	

Water Treatment Schedule

Type Mark	Count	Description	Manufacturer	Model	Design Flow Rate (GPM)	Pressure Drop (PSI)	Physical Dimensions		Notes
							Diameter	Height	
WT-1	1	Sediment Filter 1-Micron	Confirm with local installer	Confirm with local installer	9.5	2.0	0' - 8"	2' - 0"	
WT-2	1	Water Softener	Confirm with local installer	Confirm with local installer	9.5	3.0	1' - 1"	5' - 1"	
WT-3	1	Brine Tank	Confirm with local installer	Confirm with local installer	9.5	0.0	1' - 6"	3' - 0"	

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Equipment Schedules

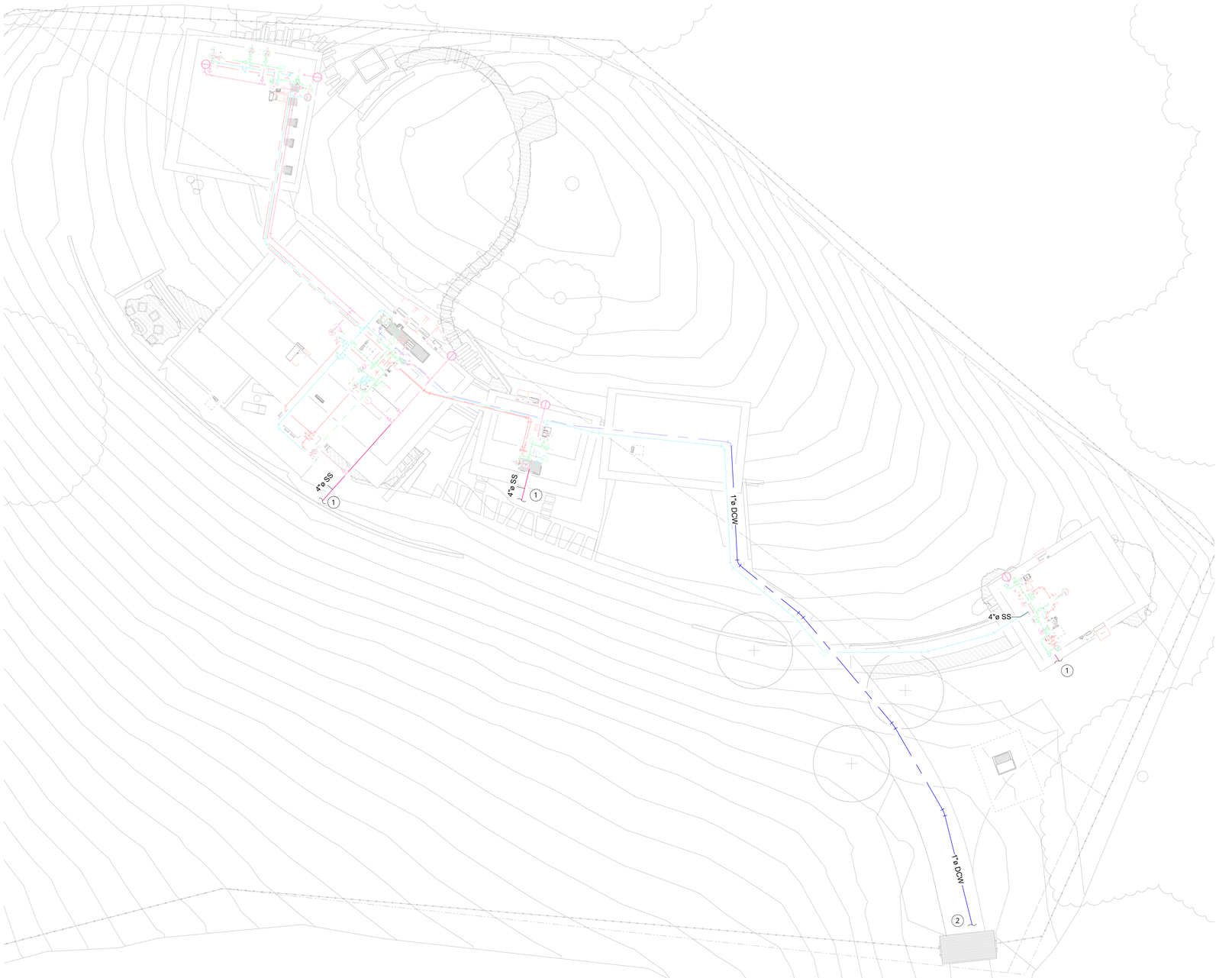
Scale:
Drawn By: NZ
Reviewed By: ELC

P002

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	

Keynotes - P100	
1	Sanitary piping to continue to septic tank.
2	Incoming domestic cold water line from municipal water.



N
TRUE NORTH

1 Plumbing Plan - Site
1/16" = 1'-0"

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DD	XX/XX/XXXX

Revisions:

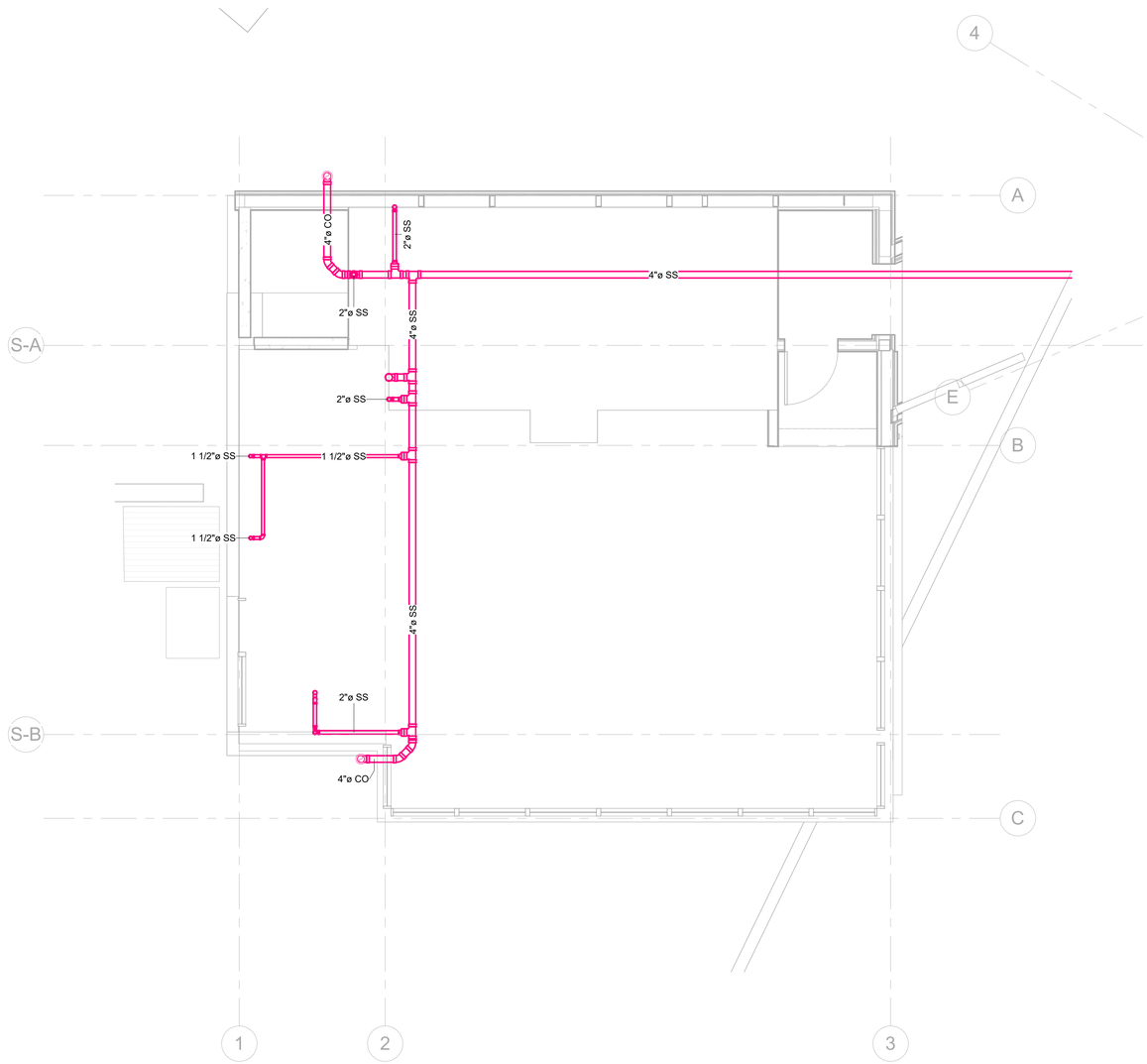
Plumbing Site Plan

Scale: 1/16" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P100

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Subslab - Primary Suite - DWV
1/4" = 1'-0"

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DD	XX/XX/XXXX

Revisions:

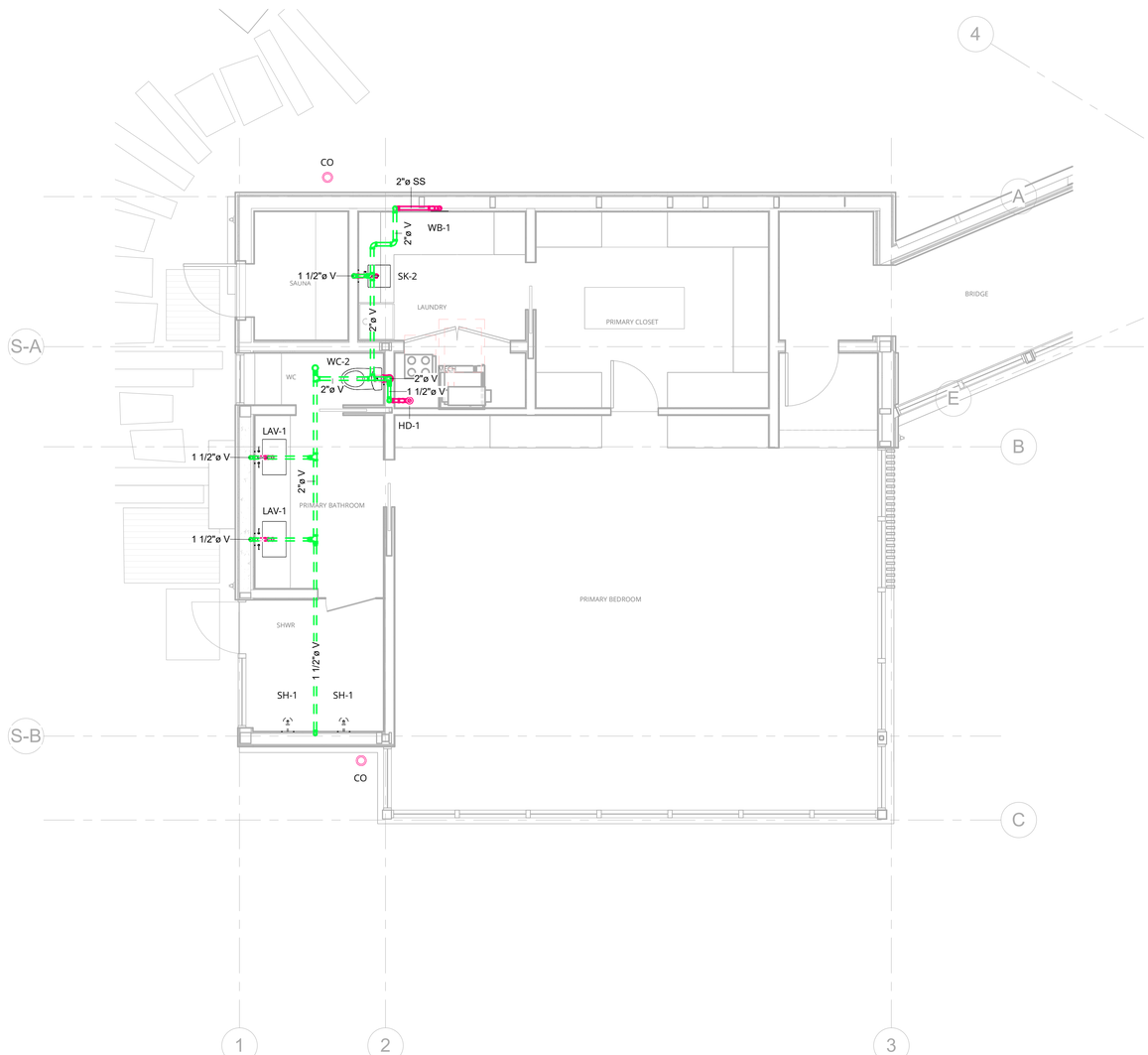
Plumbing Floor Plan - Primary Suite - Subslab - DWV

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P200

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Level 1 - Primary Suite - DWV
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

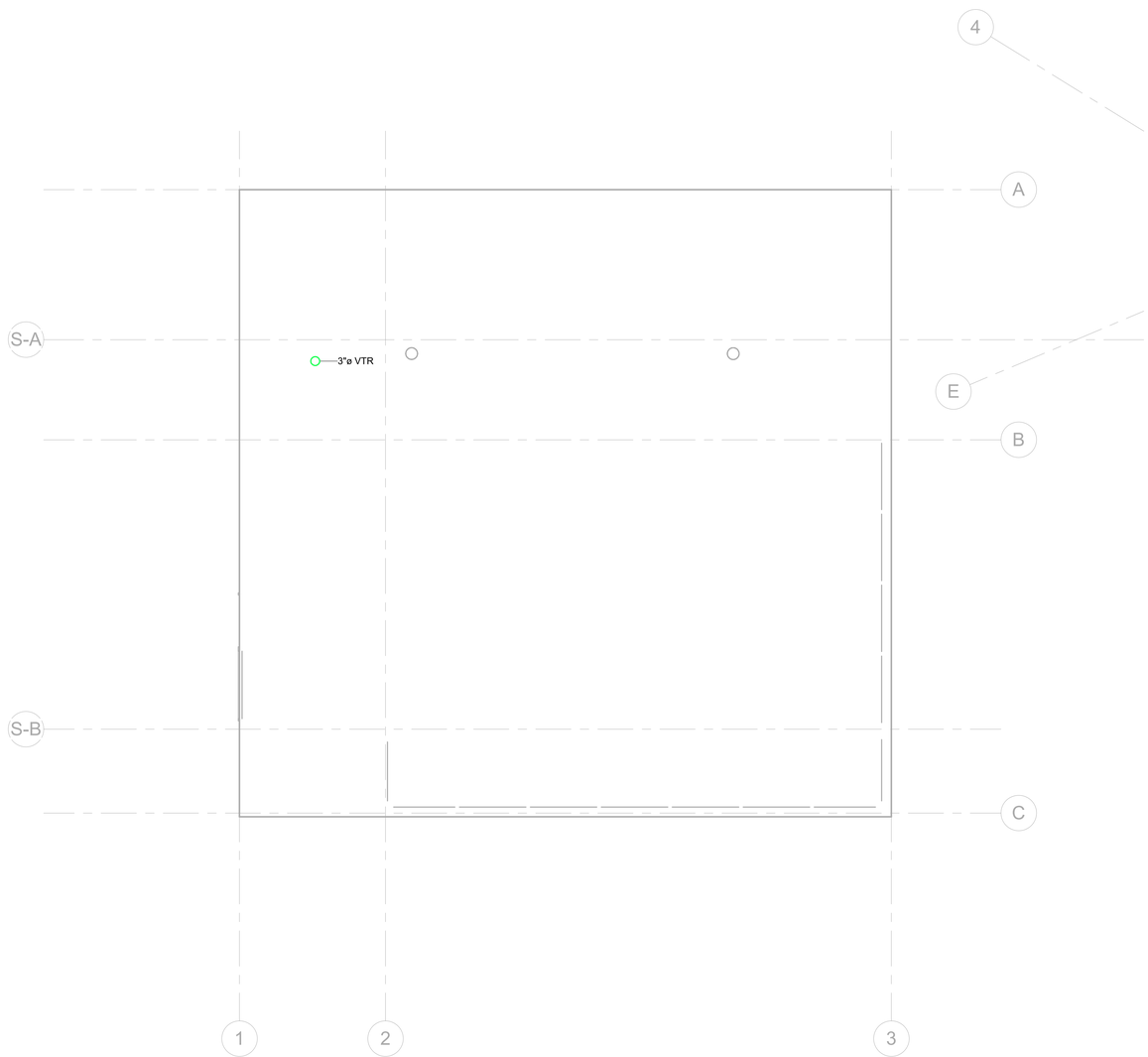
Plumbing Floor Plan - Primary Suite - Level 1 - DWV

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P201

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Roof - Primary Suite
1/4" = 1'-0"

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Issue Dates:

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Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

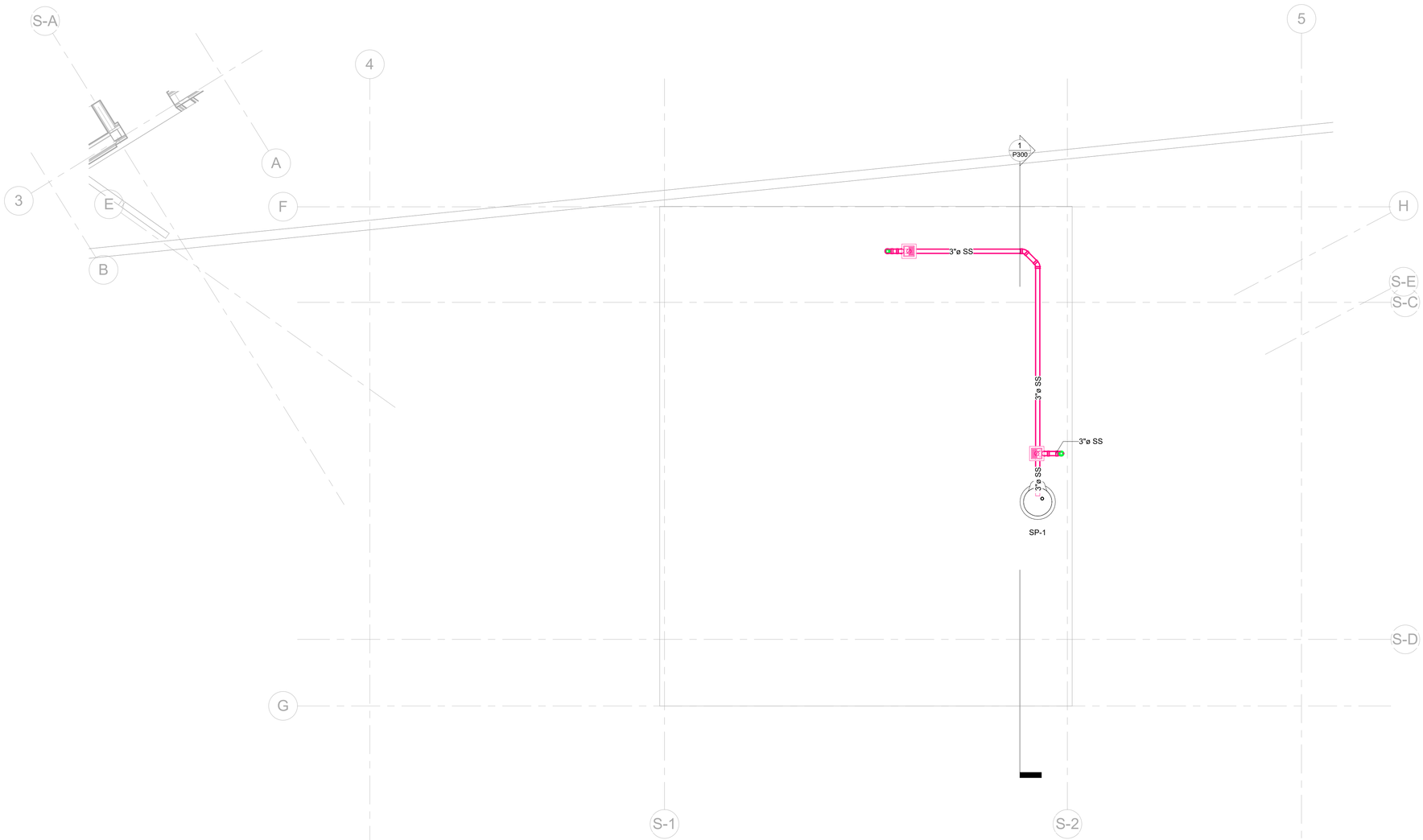
Plumbing Floot Plan - Primary Suite - Roof

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P202

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Subslab - Great Room - DWV
1/4" = 1'-0"

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Issue Dates:

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Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

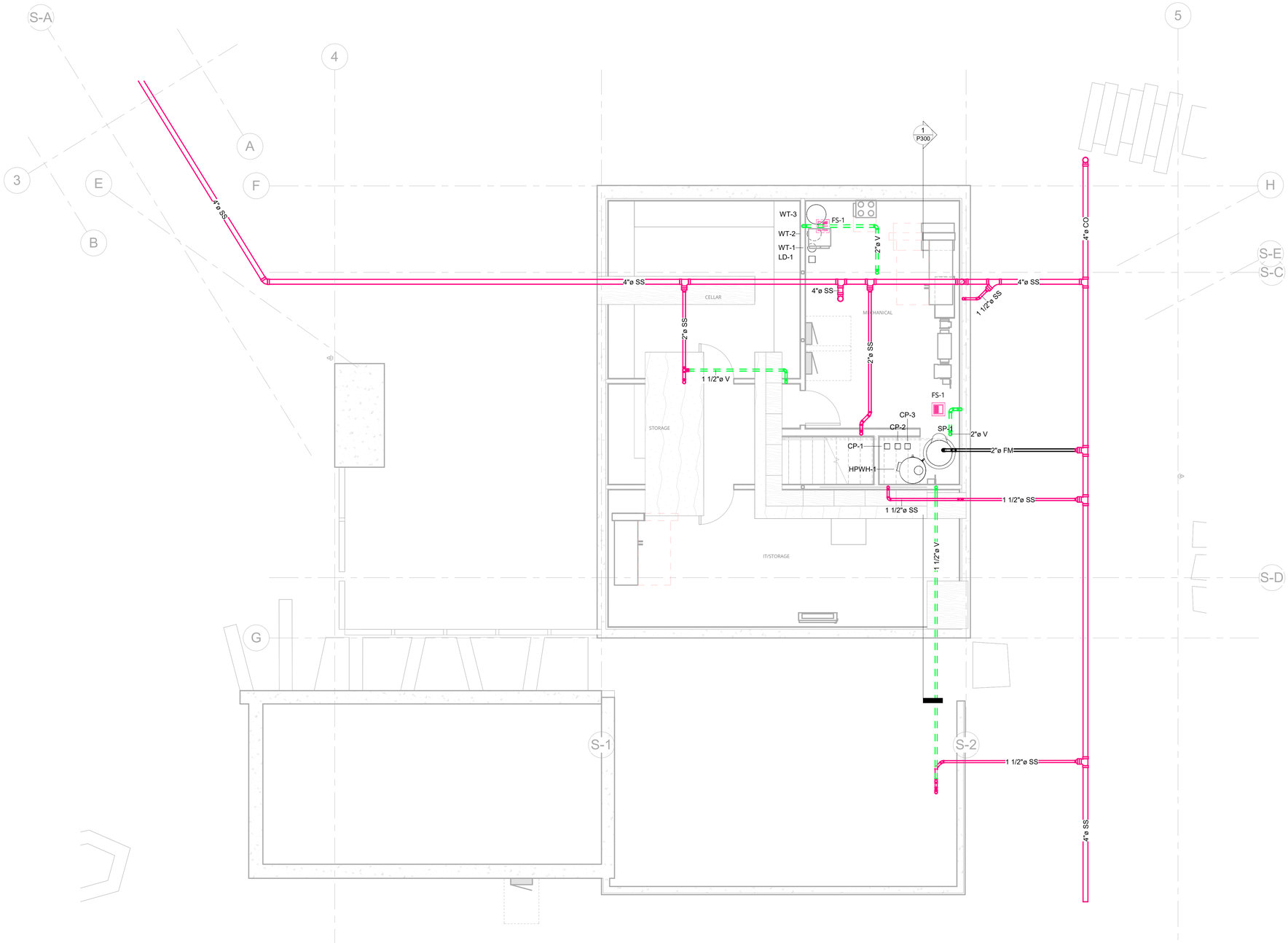
Plumbing Floor Plan - Great Room - Subslab - DWV

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P203

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Basement - Great Room - DWV
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Plumbing Floor Plan - Great Room - Basement - DWV

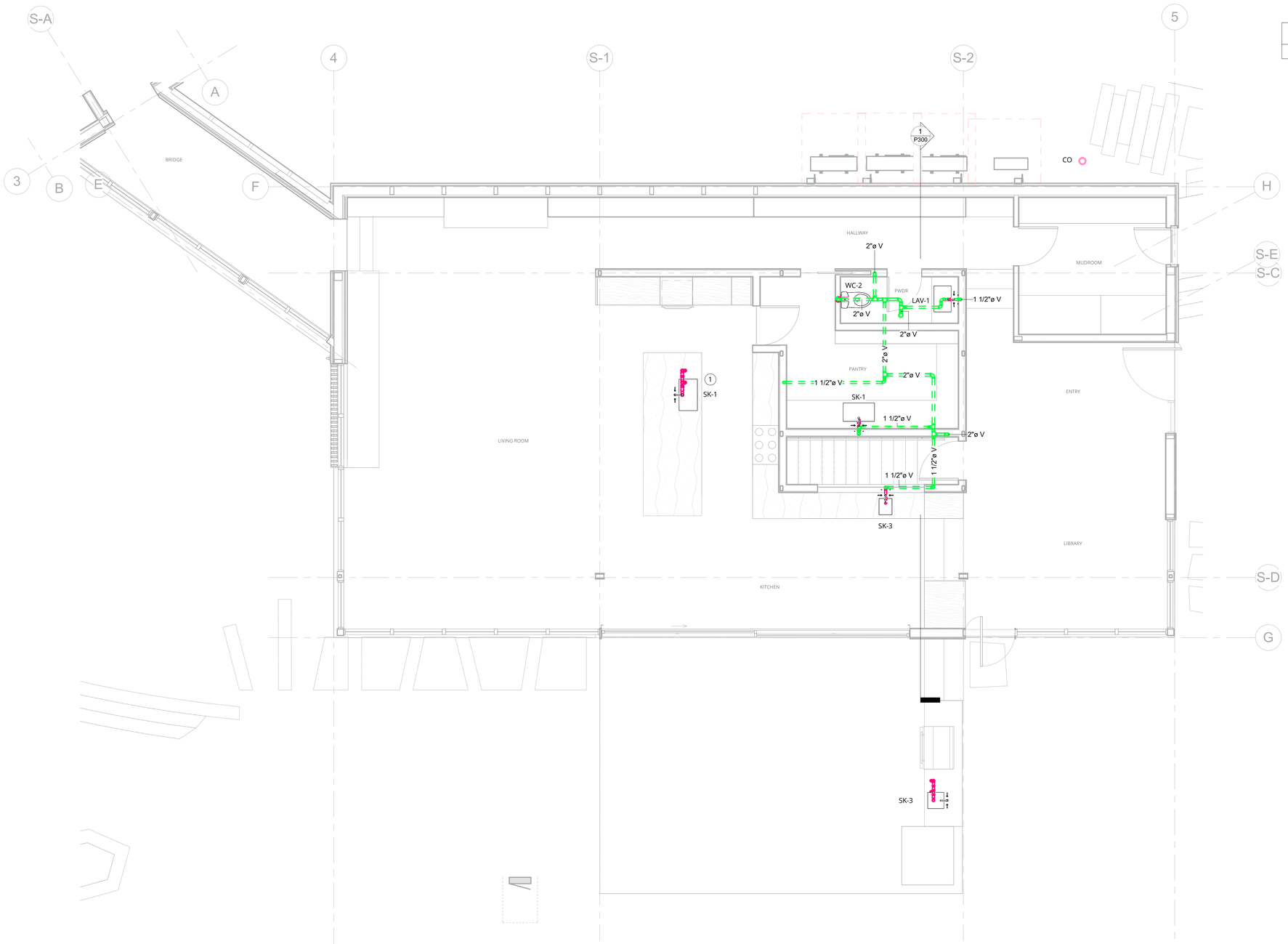
Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P204

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	

Keynotes - P205	
1	Island venting required.



1 Plumbing Plan - Level 1 - Great Room - DWV
1/4" = 1'-0"

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23 Vasquez Trail
Carmel, CA 93923

Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

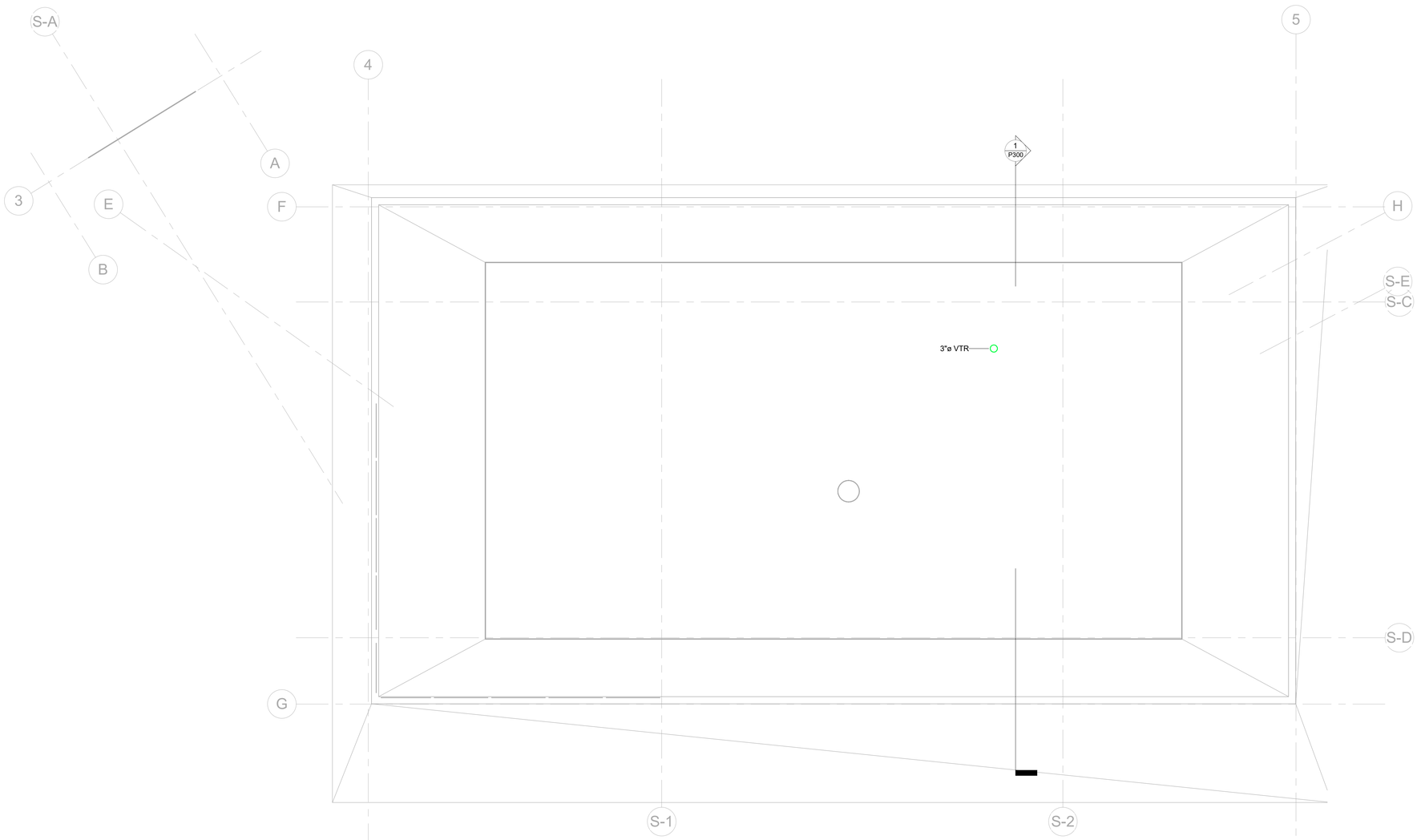
Plumbing Floor Plan - Great Room - Level 1 - DWV

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P205

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Roof - Great Room
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

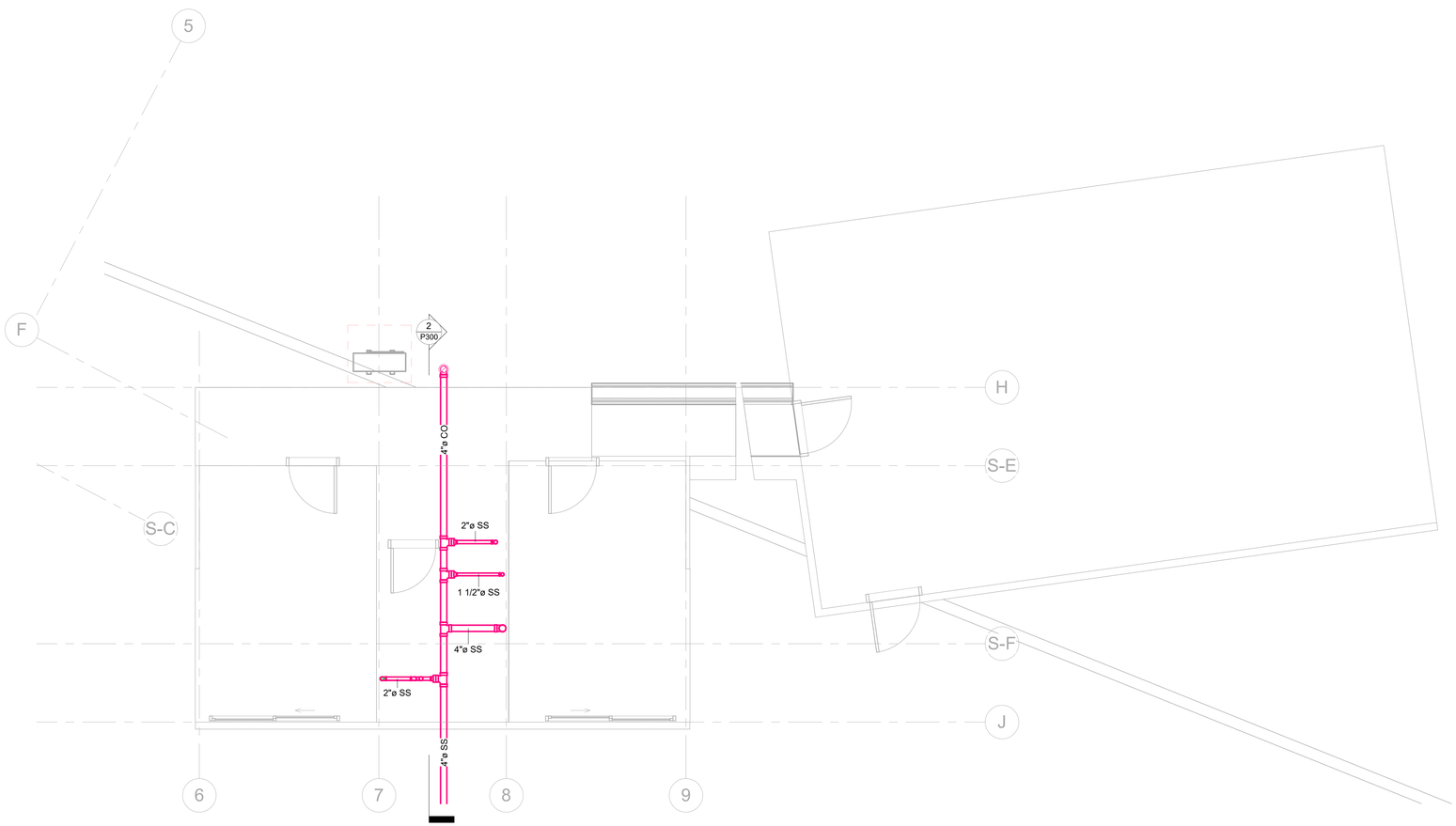
Plumbing Floor Plan - Great Room - Roof

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P206

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Subslab - Bedrooms & Garage - DWV
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

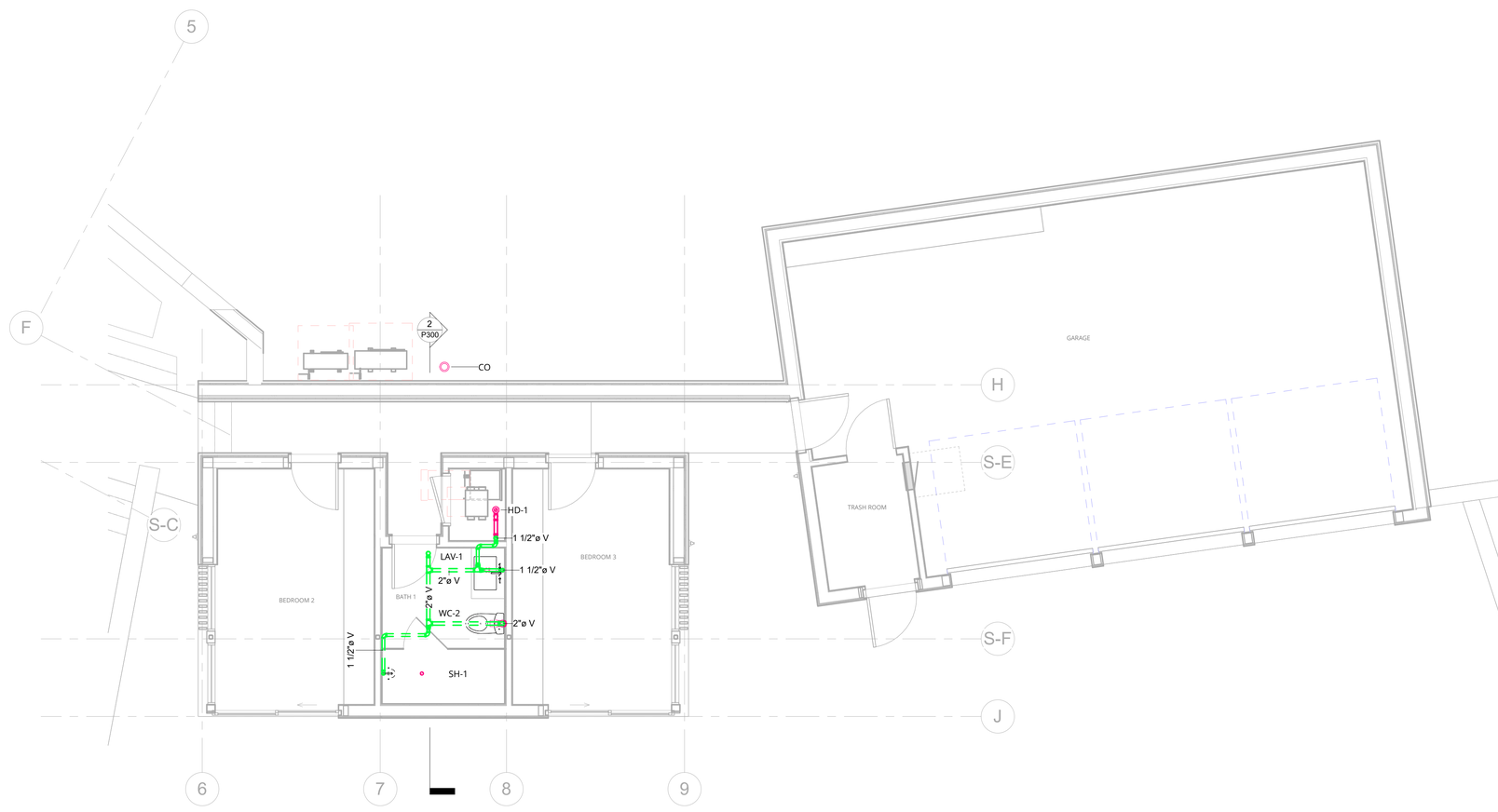
Plumbing Floor Plan - Bedrooms - Subslab - DWV

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P207

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Level 1 - Bedrooms & Garage - DWV
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

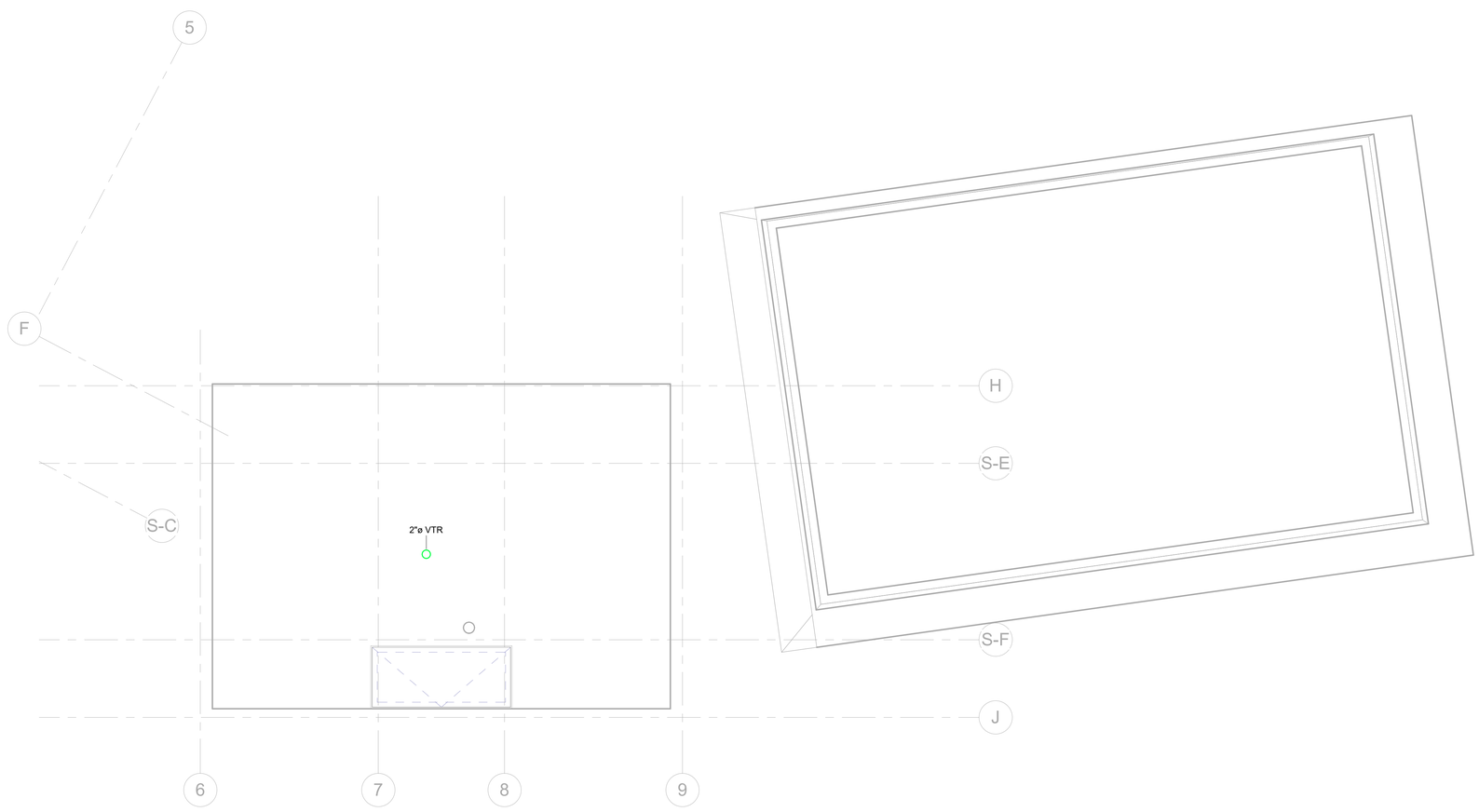
Plumbing Floor Plan - Bedrooms - Level 1 - DWV

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P208

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Roof - Bedrooms & Garage
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

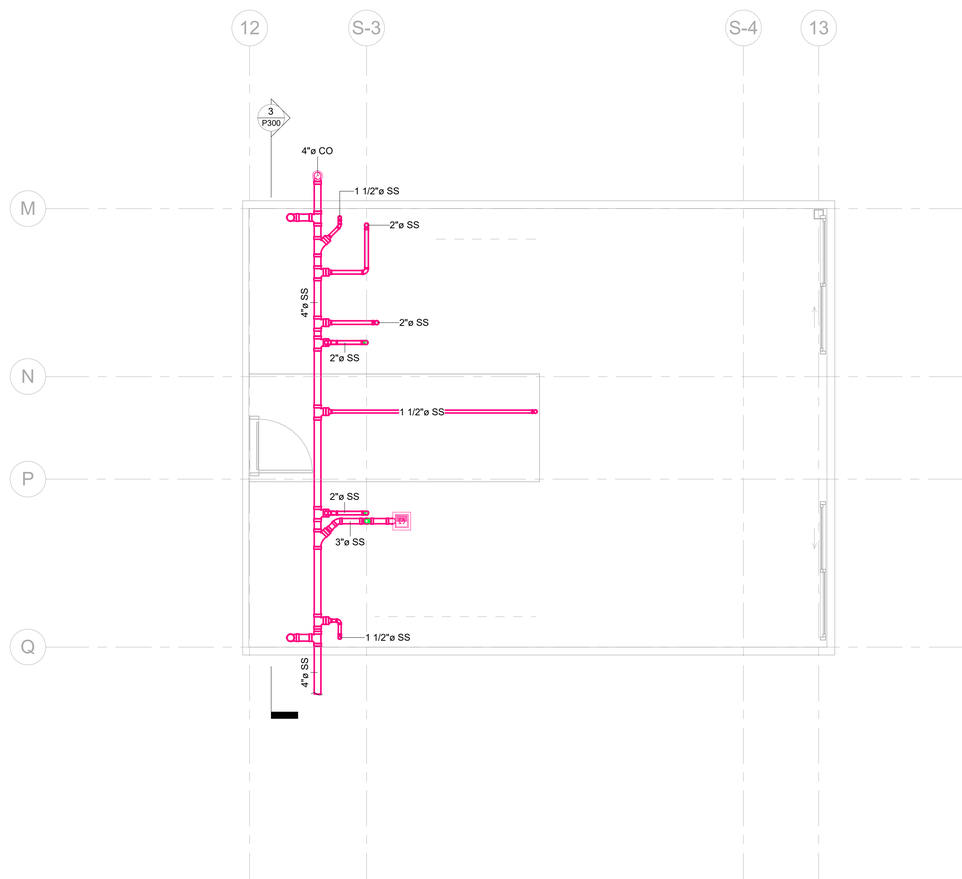
Plumbing Floor Plan - Bedrooms - Roof

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P209

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Subslab - Home Offices - DWV
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

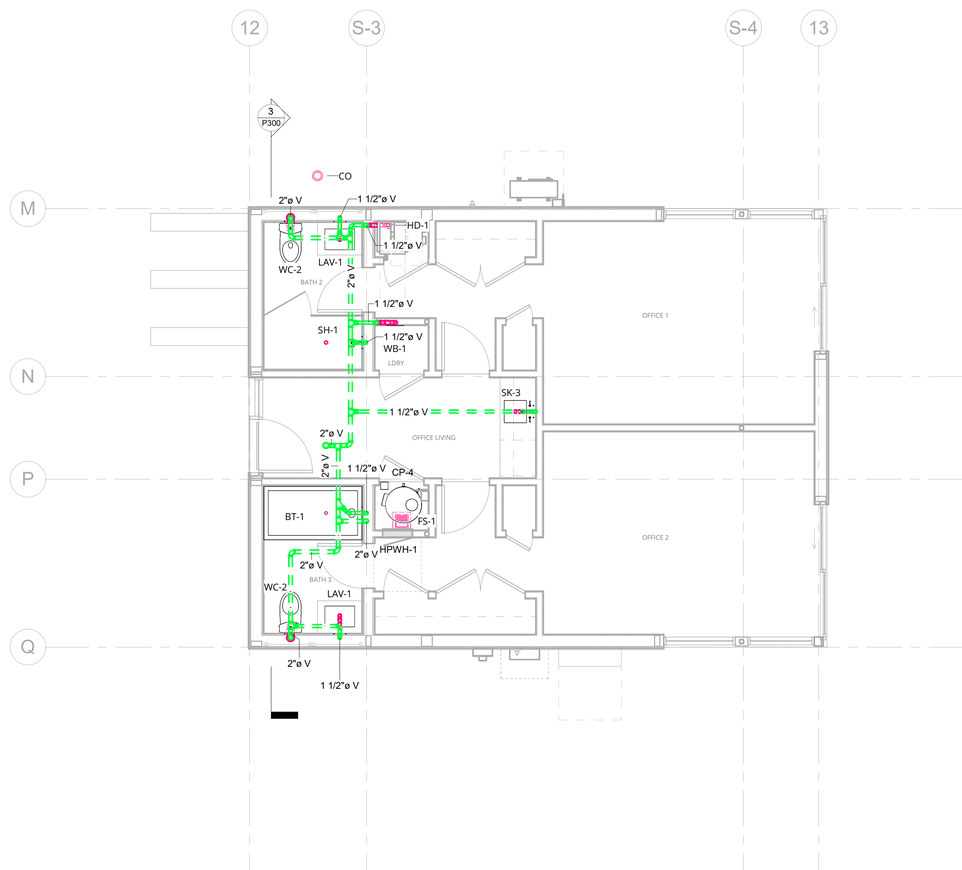
Plumbing Floor Plan - Home Offices - Subslab - DWV

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P210

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Level 1 - Home Offices - DWV
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

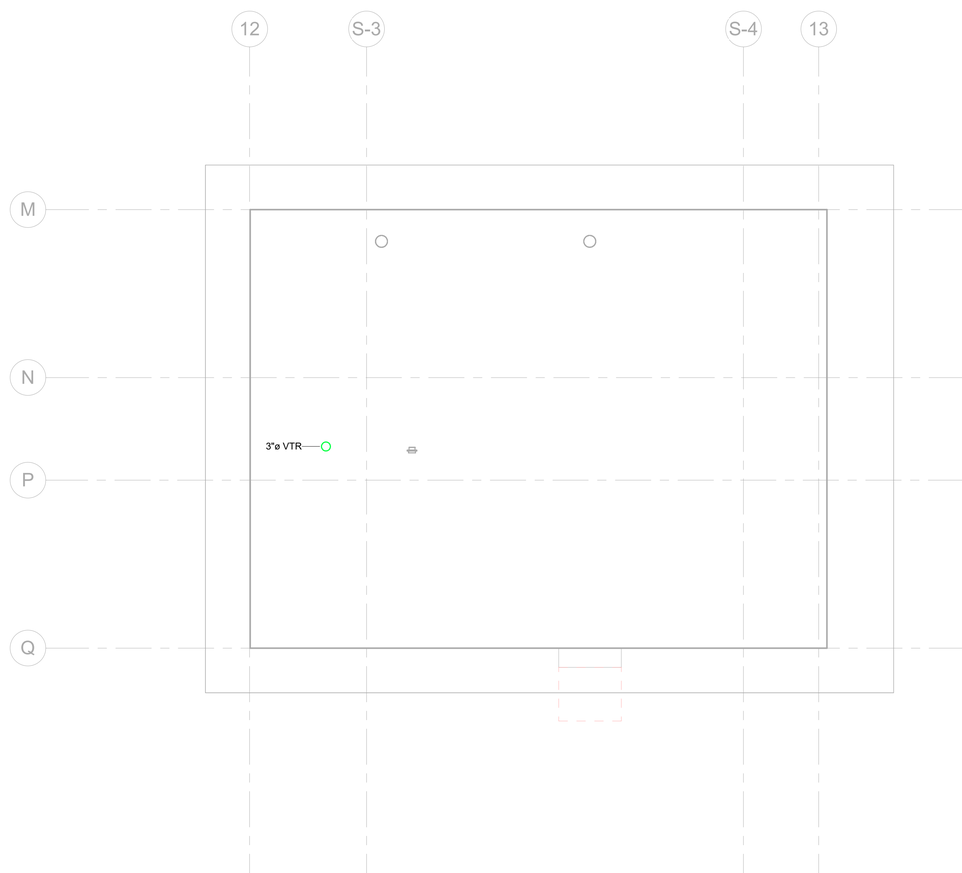
Plumbing Floor Plan - Home Offices - Level 1 - DWV

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P211

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Roof - Home Offices
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

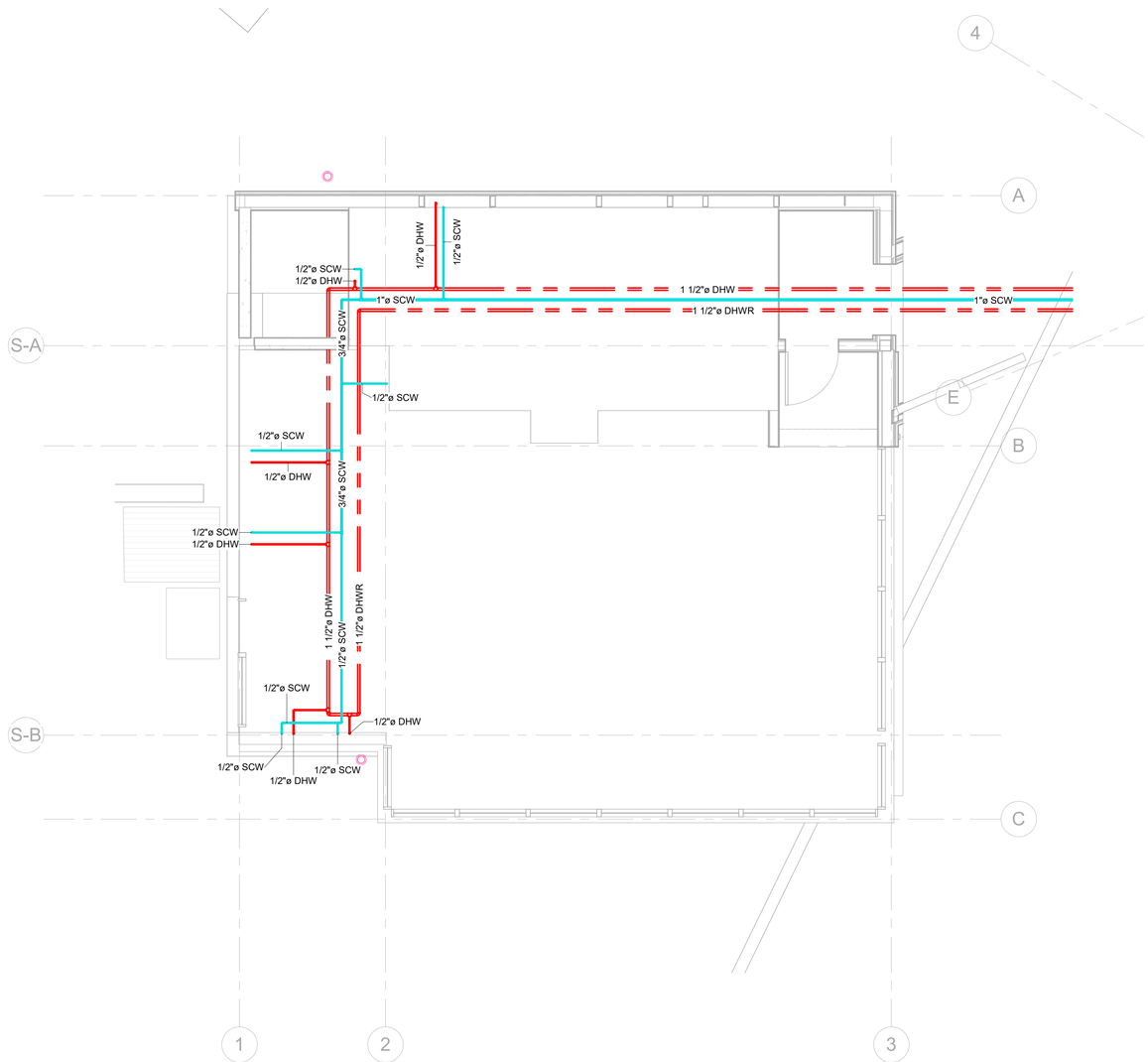
Plumbing Floor Plan - Home Offices - Roof

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P212

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Subslab - Primary Suite - Domestic Supply
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

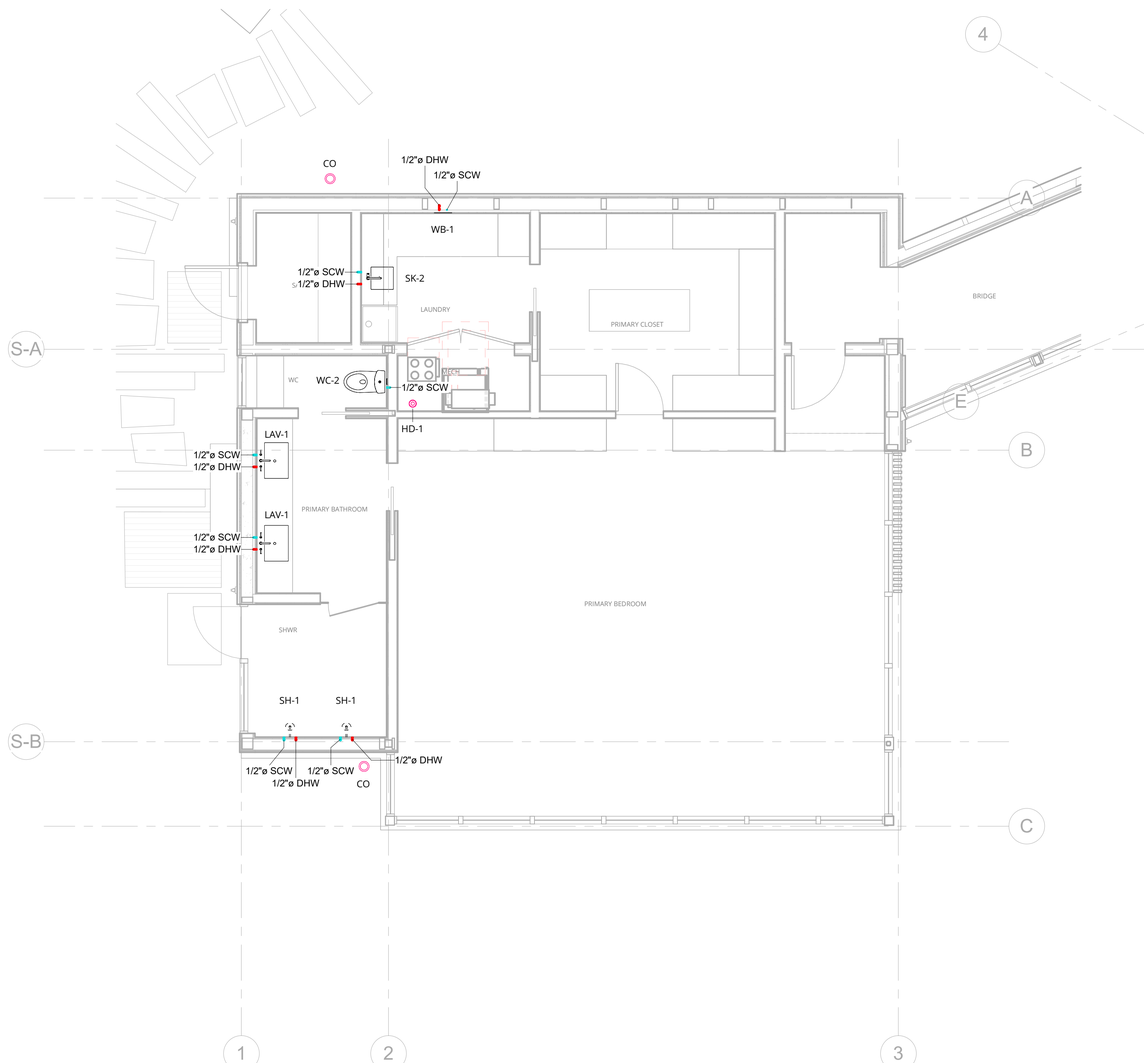
Plumbing Floor Plan - Primary Suite - Subslab - Domestic Supply

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P213

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Level 1 - Primary Suite - Domestic Supply
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Plumbing Floor Plan - Primary Suite - Level 1 - Domestic Supply

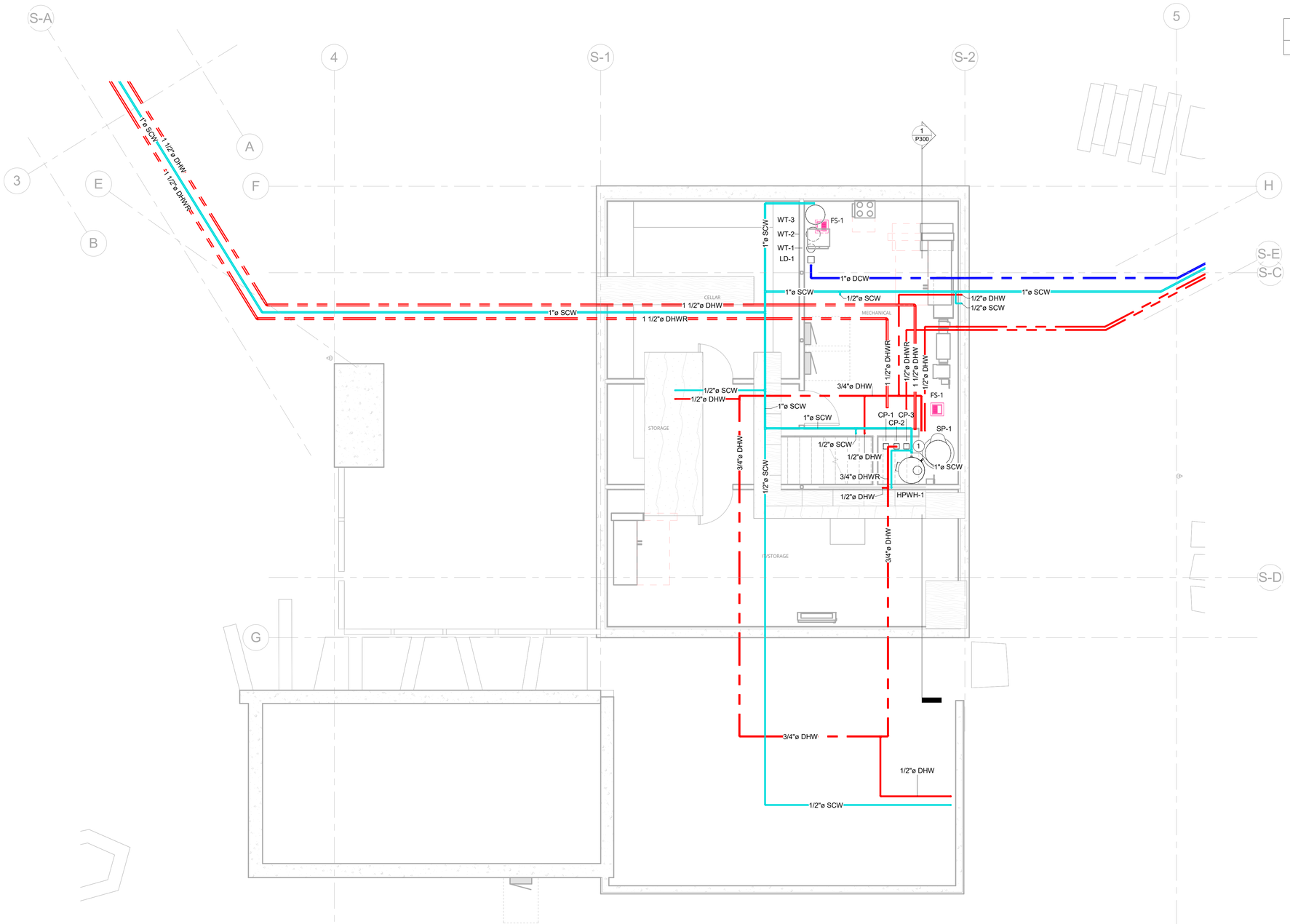
Scale:	1/4" = 1'-0"
Drawn By:	NZ
Reviewed By:	ELC

P214

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	

Keynotes - P215	
1	Serves heat pump water heater.



1 Plumbing Plan - Basement - Great Room - Domestic Supply
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

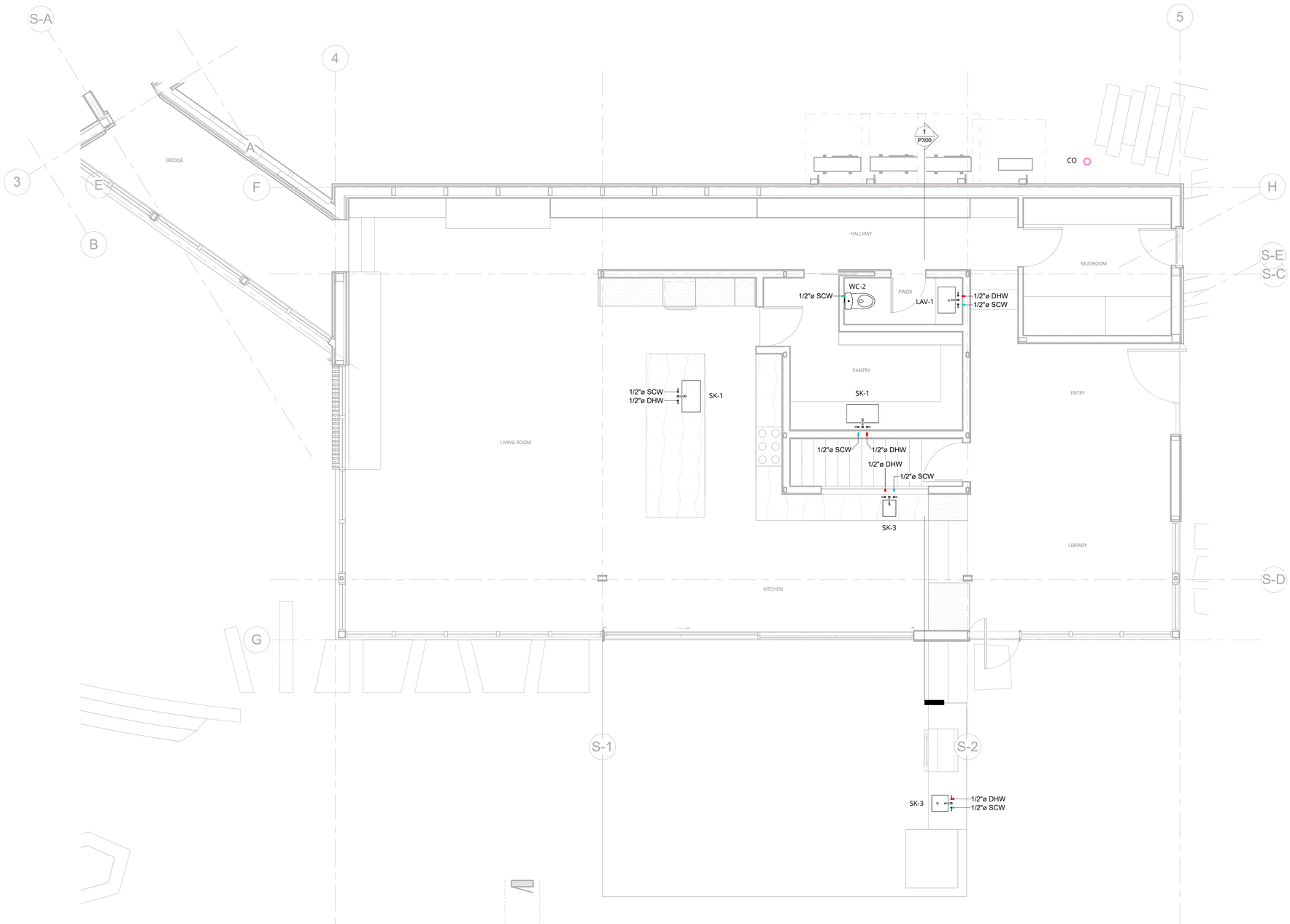
Plumbing Floor Plan - Great Room - Basement - Domestic Supply

Scale:	1/4" = 1'-0"
Drawn By:	NZ
Reviewed By:	ELC

P215

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Level 1 - Great Room - Domestic Supply
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

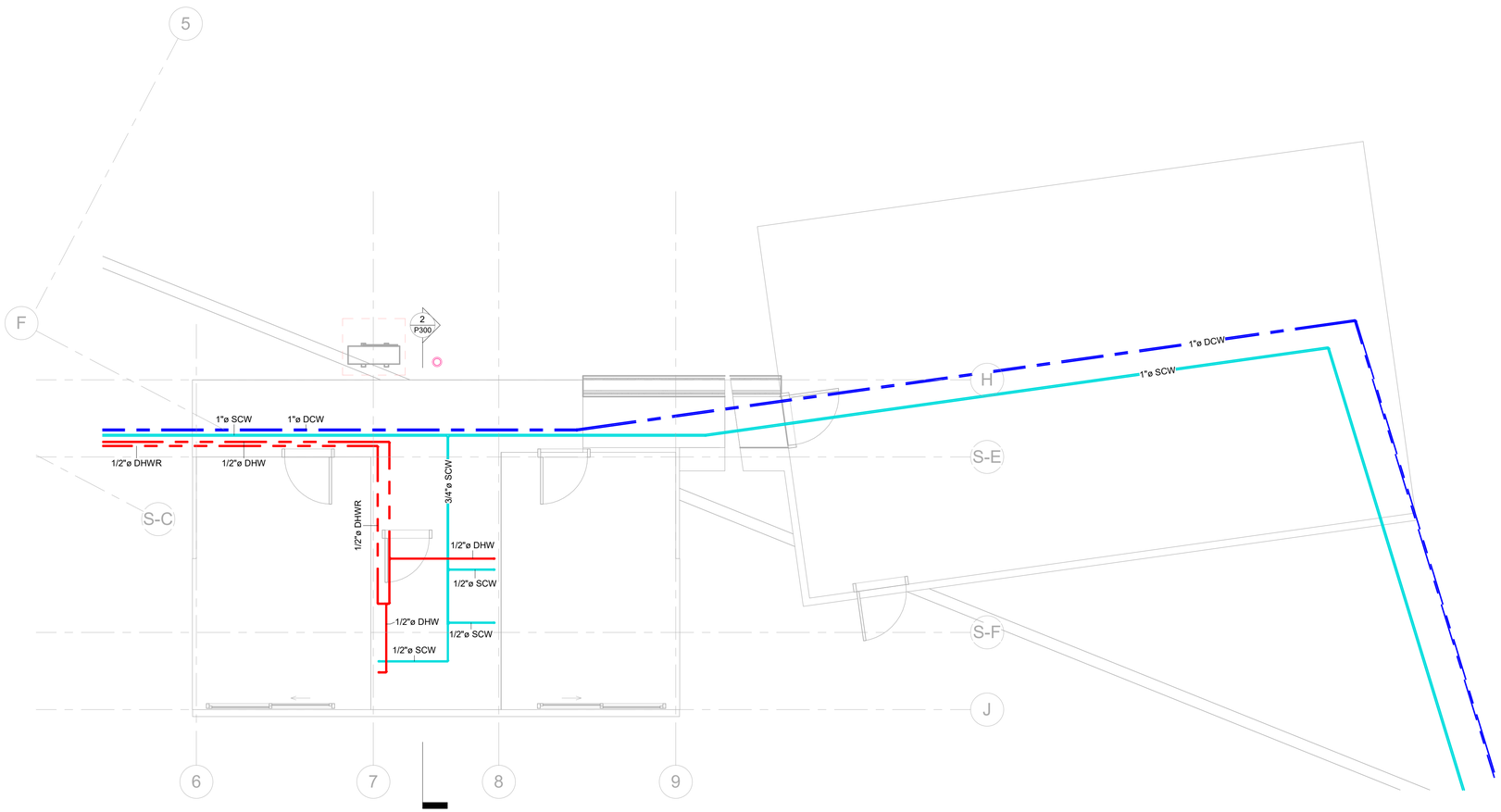
Plumbing Floor Plan - Great Room - Level 1 - Domestic Supply

Scale:	1/4" = 1'-0"
Drawn By:	NZ
Reviewed By:	ELC

P216

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Subslab - Bedrooms & Garage - Domestic Supply
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

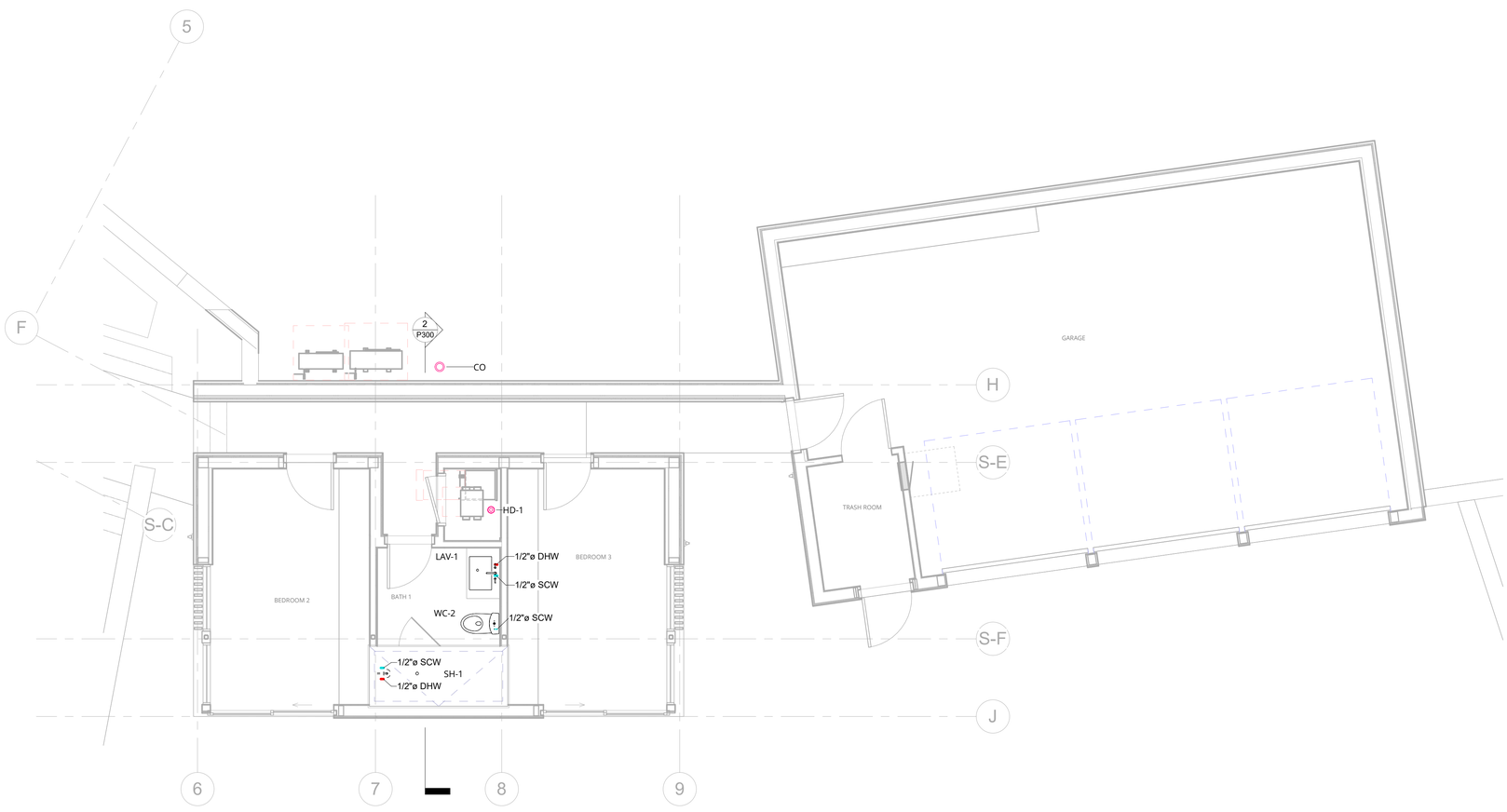
Plumbing Floor Plan - Bedrooms - Subslab - Domestic Supply

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P217

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Level 1 - Bedrooms & Garage - Domestic Supply
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

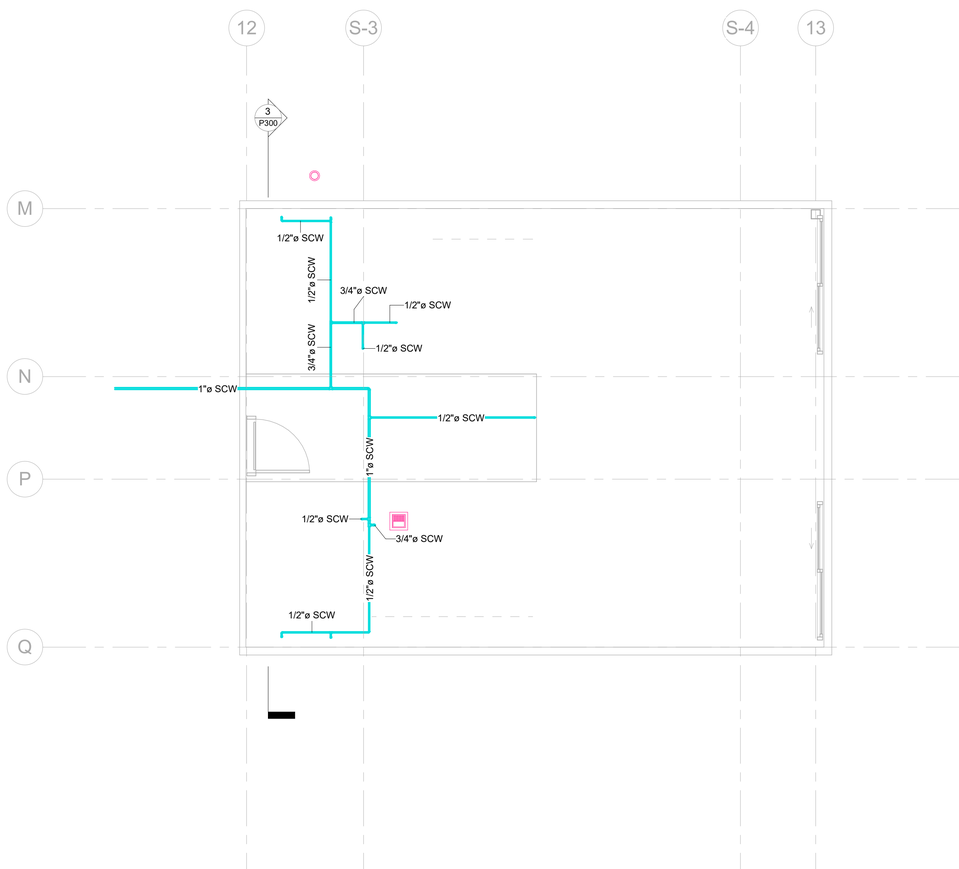
Plumbing Floor Plan - Bedrooms - Level 1 - Domestic Supply

Scale:	1/4" = 1'-0"
Drawn By:	NZ
Reviewed By:	ELC

P218

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



1 Plumbing Plan - Subslab - Home Offices - Domestic Supply
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Plumbing Floor Plan - Home Offices - Subslab - Domestic Supply

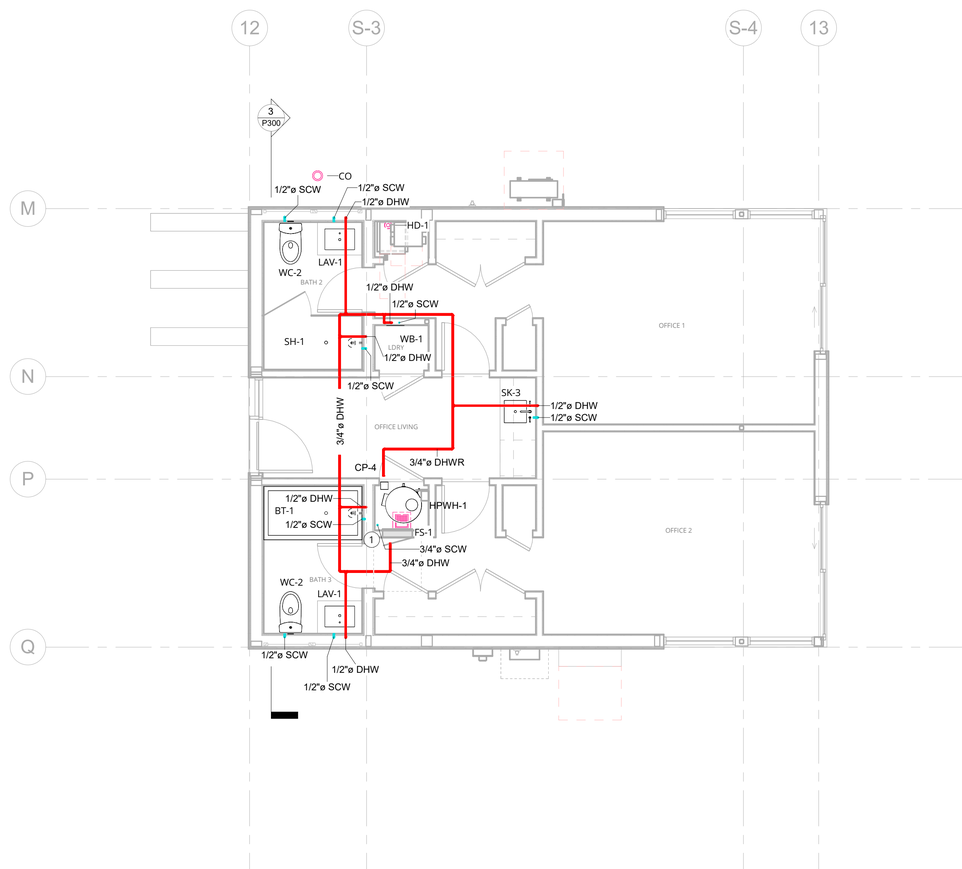
Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P219

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
SK-1	Sink - Kitchen	2	Specified by Architect	Specified by Architect	1.80	
SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
SK-3	Sink - Bar	3	Specified by Architect	Specified by Architect	1.20	
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	

Keynotes - P220	
1	Serves heat pump water heater.



1 Plumbing Plan - Level 1 - Home Offices - Domestic Supply
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Plumbing Floor Plan - Home Offices - Level 1 - Domestic Supply

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P220

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
SH-1	Shower	4	Specified by Architect	Specified by Architect	1.80	
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SK-2	Sink - Utility	1	Specified by Architect	Specified by Architect	1.80	
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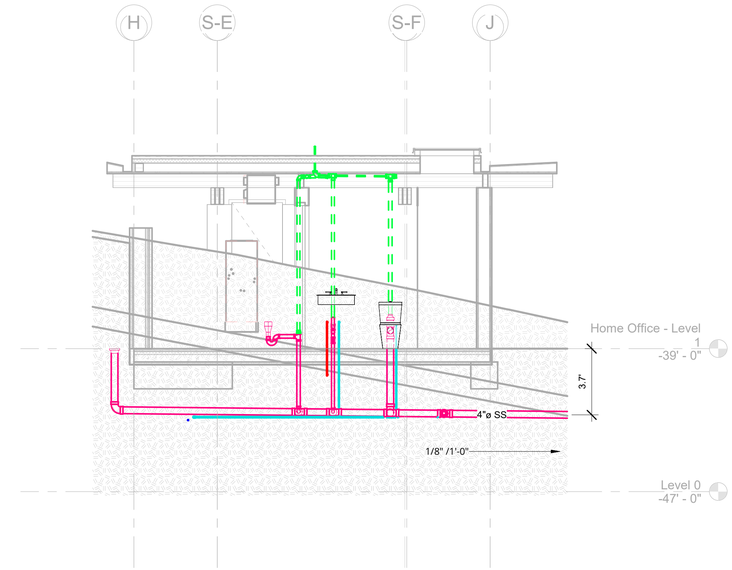
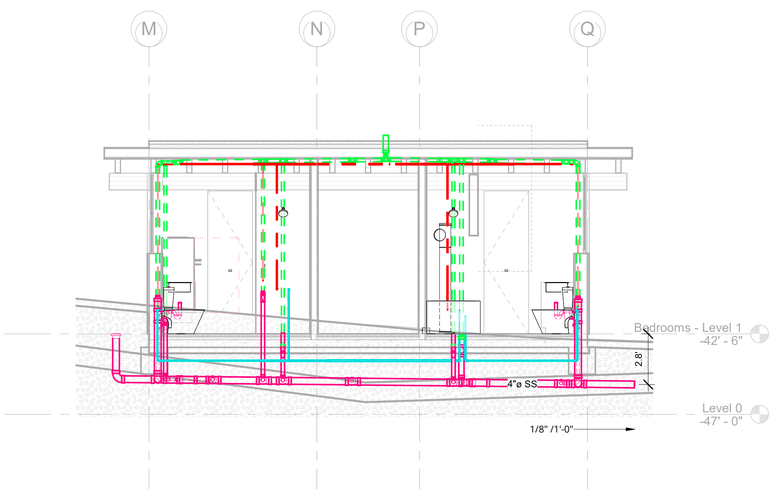
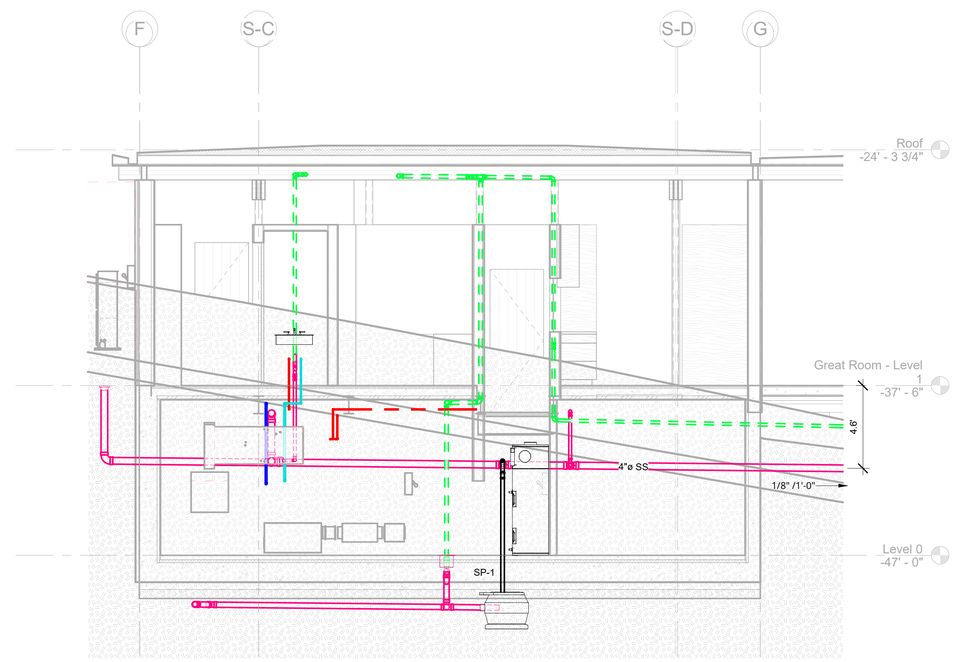
WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



2 Invert Section - Home Office
1/4" = 1'-0"



3 Invert Section - Bedrooms
1/4" = 1'-0"



1 Invert Section - Great Room
1/4" = 1'-0"

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Issue Dates:

SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Sections & Elevations

Scale: 1/4" = 1'-0"
Drawn By: NZ
Reviewed By: ELC

P300

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
LAV-1	Lavatory	6	Specified by Architect	Specified by Architect	1.20	
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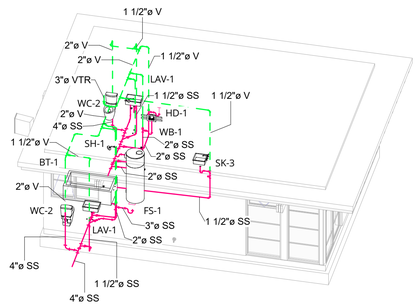
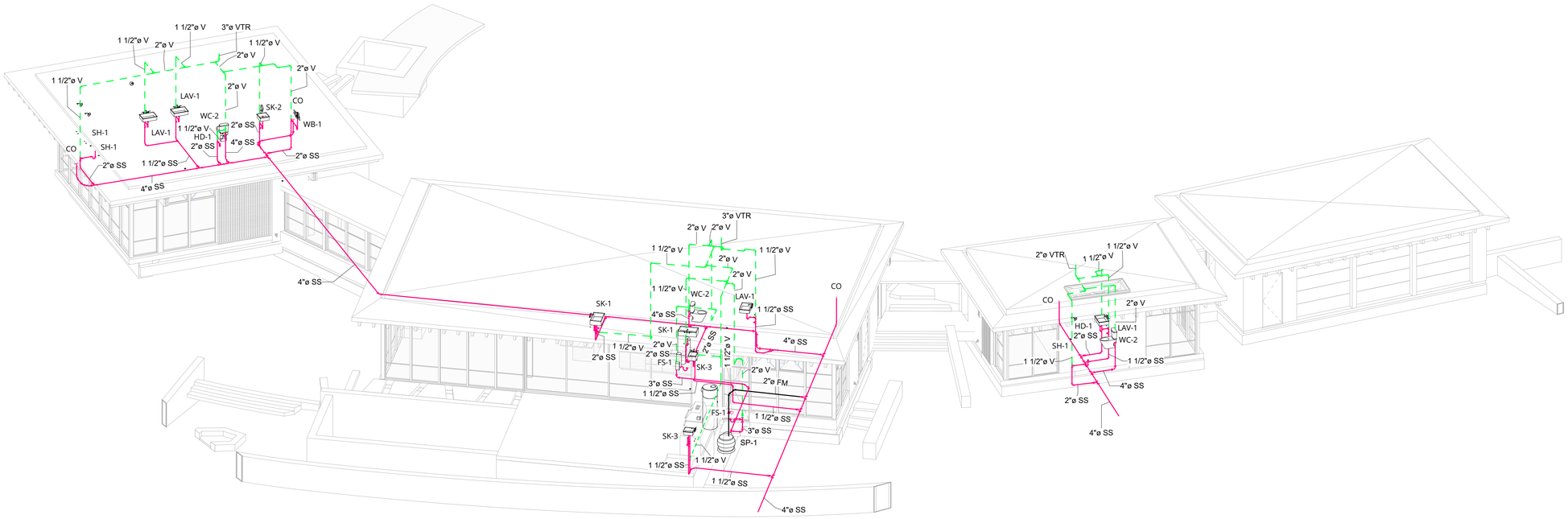
WC-2	Water Closet - Wall Mounted	5	Specified by Architect	Specified by Architect	1.28	



2 Riser Diagram - Drain Waste Vent



1 Riser Diagram - Drain Waste Vent

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Issue Dates:

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Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Riser Diagrams - DWV

Scale:
Drawn By: NZ
Reviewed By: ELC

P400

Plumbing Fixture and Connection Schedule

Mark	Description	Count	Manufacturer	Model	Max Flow Rate (GPM/GPF)	Notes
BT-1	Bathtub	1	Specified by Architect	Specified by Architect		
CO	Cleanout	5	Field built	Field built		
FS-1	Floor Sink - Half Grate 3"	3	Zurn	FD2375		Provide with trap seal protection device
HD-1	Hub drain	3	Field built	Field built		
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WB-1	Wall Box - Clothes Washer	2	Oatey Company	38540		
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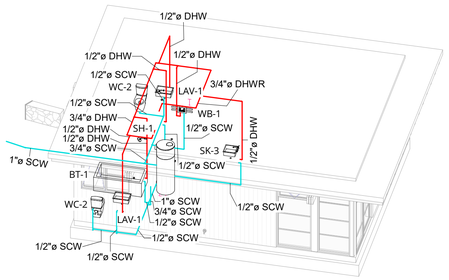
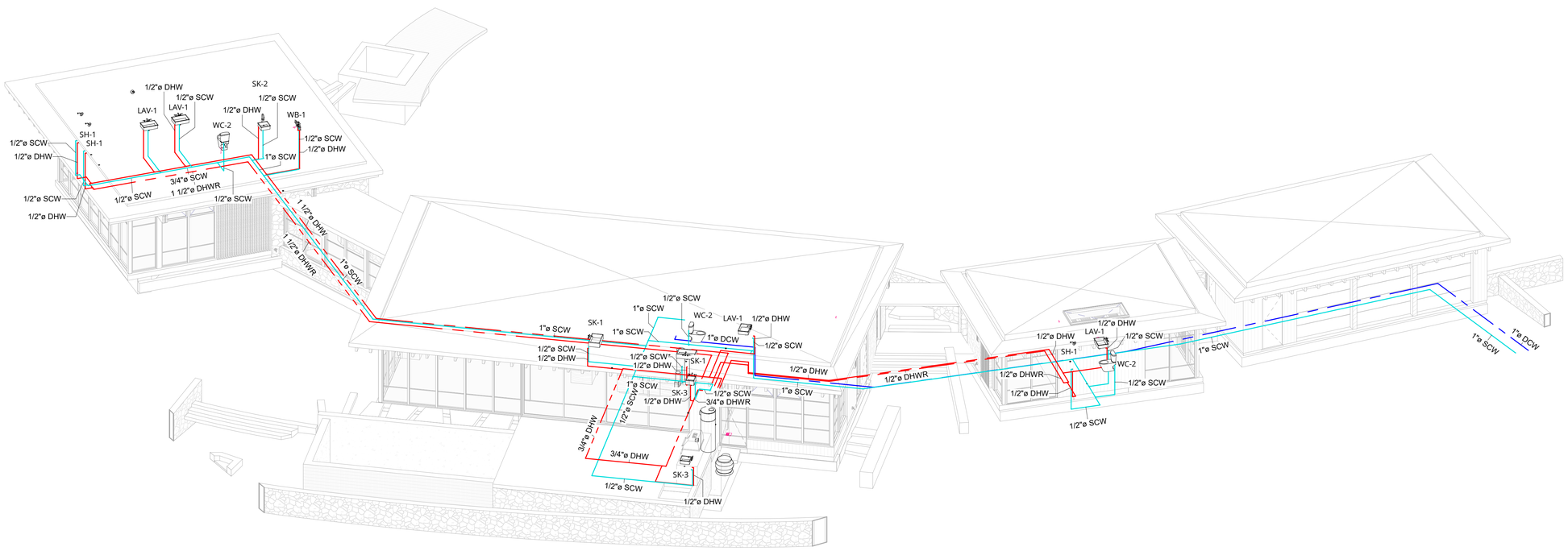


2 Riser Diagram - Domestic Supply



1 Riser Diagram - Domestic Supply

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Issue Dates:

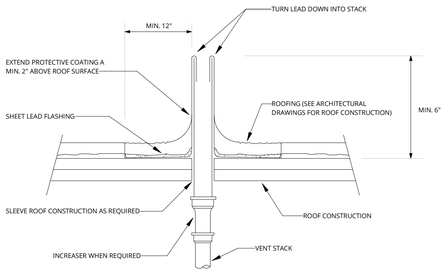
SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

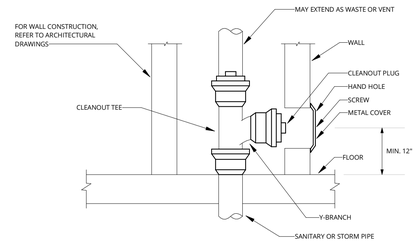
Riser Digrams - Domestic Supply

Scale:
Drawn By: NZ
Reviewed By: ELC

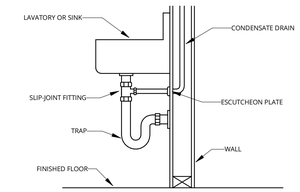
P401



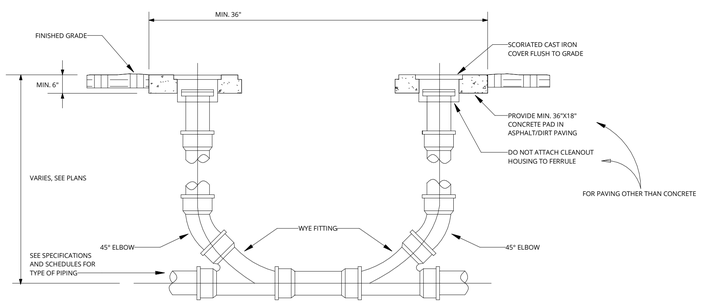
9 Vent Through Roof
Not to Scale



6 Wall Clean Out
Not to Scale



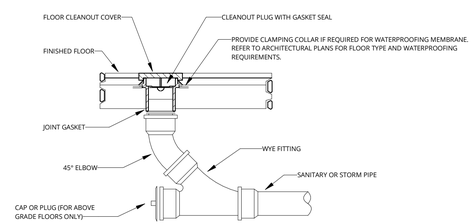
3 Condensate Drain
Not to Scale



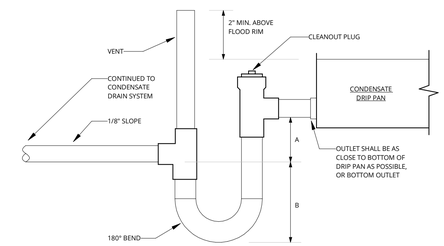
NOTES:

1. FOR CONCRETE PAVING, SET CLEANOUT COVER FLUSH WITH GRADE.

8 Grade Clean Out - Two Way
NTS



5 Floor Clean Out
Not to Scale



DRAW-THROUGH (NEGATIVE PRESSURE):

A = EQUAL TO OR LARGER THAN THE PLENUM NEGATIVE STATIC PRESSURE AT DESIGN OPERATION CONDITIONS.

B = A/2 + 1 - 1/2" (MIN)

BLOW-THROUGH (POSITIVE PRESSURE):

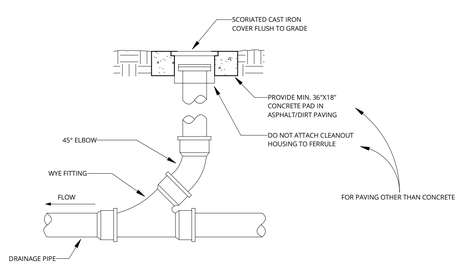
A = N/A.

B = PLENUM/DUCT STATIC PRESSURE AT DESIGN CONDITIONS PLUS 1" (MIN. 3")

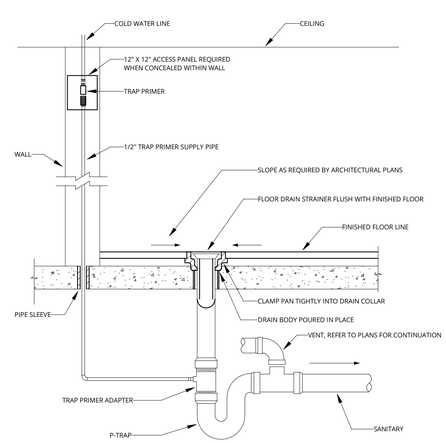
NOTES:

1. ALL CONDENSATE DRAIN PIPING MATERIAL SHALL BE COPPER, UNLESS OTHERWISE NOTED.
2. FOR CONDENSATE PIPE SIZE REFER TO 2013 CPC TABLE 814.1.

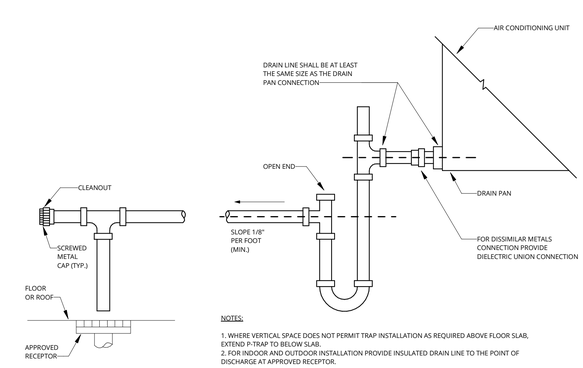
2 Condensate Trap
Not to Scale



7 Grade Clean Out
Not to Scale



4 Floor Drain
Not to Scale



NOTES:

1. WHERE VERTICAL SPACE DOES NOT PERMIT TRAP INSTALLATION AS REQUIRED ABOVE FLOOR SLAB, EXTEND P-TRAP TO BELOW SLAB.
2. FOR INDOOR AND OUTDOOR INSTALLATION PROVIDE INSULATED DRAIN LINE TO THE POINT OF DISCHARGE AT APPROVED RECEPTOR.

1 Condensate Trap
Not to Scale

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Issue Dates:

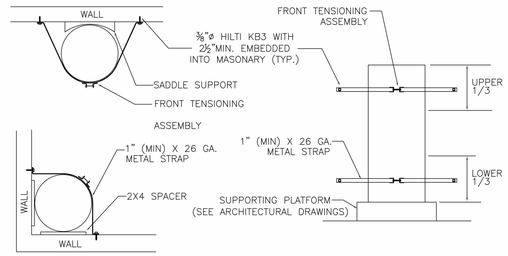
SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

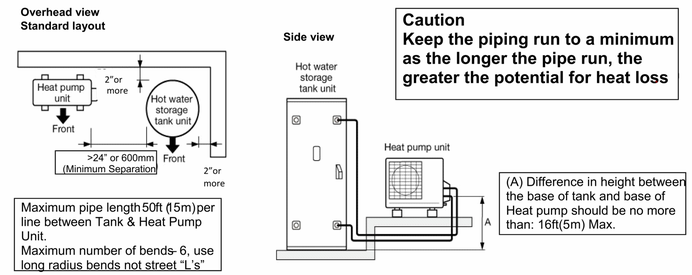
Details & Clearances

Scale: NTS
Drawn By: NZ
Reviewed By: ELC

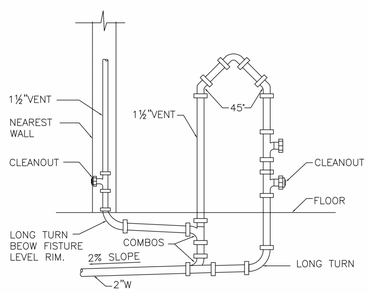
P500



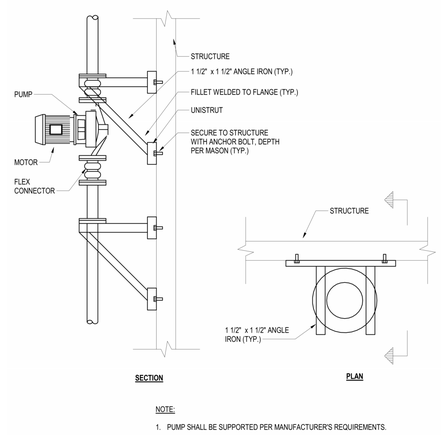
6 Tank Type Water Heater - Typical Installation
Not to Scale



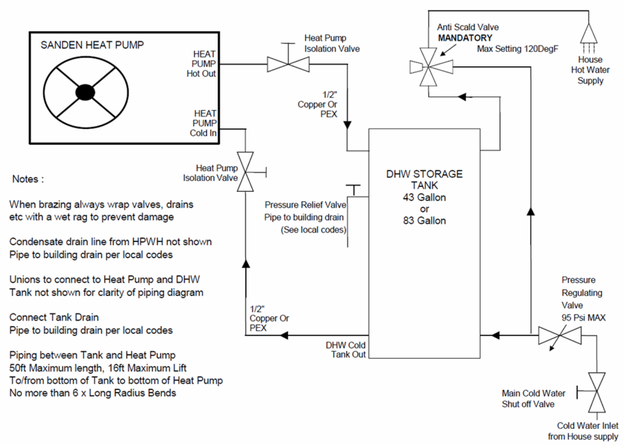
3 SANCO2 Heat Pump Water Heater - Install Figure 2
Not to Scale



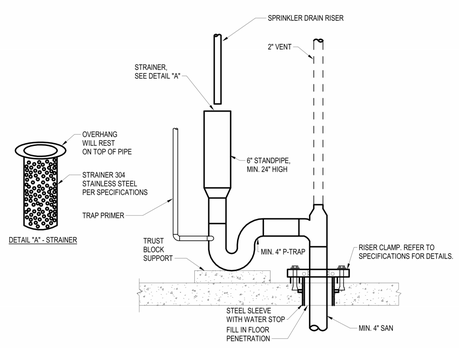
8 Island Vent
Not to Scale



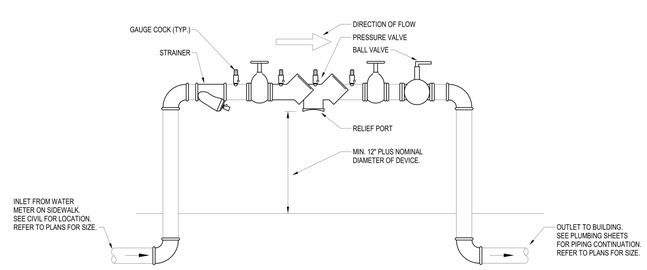
5 Inline Pump - Vertical Installation
Not to Scale



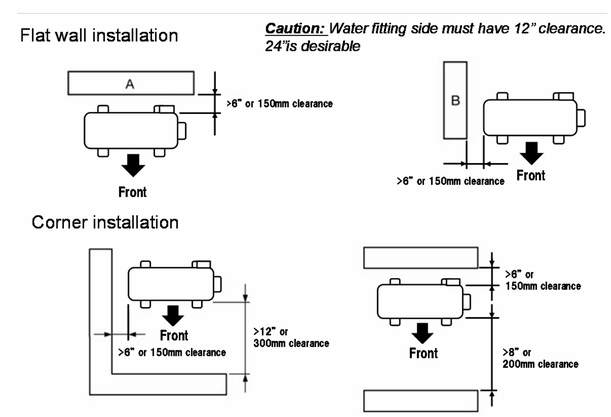
2 SANCO2 Heat Pump Water Heater - Piping
Not to Scale



7 Hub Drain
Not to Scale



4 Backflow Preventer - Horizontal, Above Grade, Reduce Pressure Assembly
Not to Scale



1 SANCO2 Heat Pump Water Heater - Install Figure 1
Not to Scale

Positive Energy
1114 South 1st Street
Austin, Texas 78704
512.462.1000
www.positiveenergy.pro
F-17960

Permit Set

Feldman Architecture
1648 Pacific Avenue, Suite B
San Francisco, CA 94109
415.252.1441

Ward Residence
23 Vasquez Trail
Carmel, CA 93923

Issue Dates:

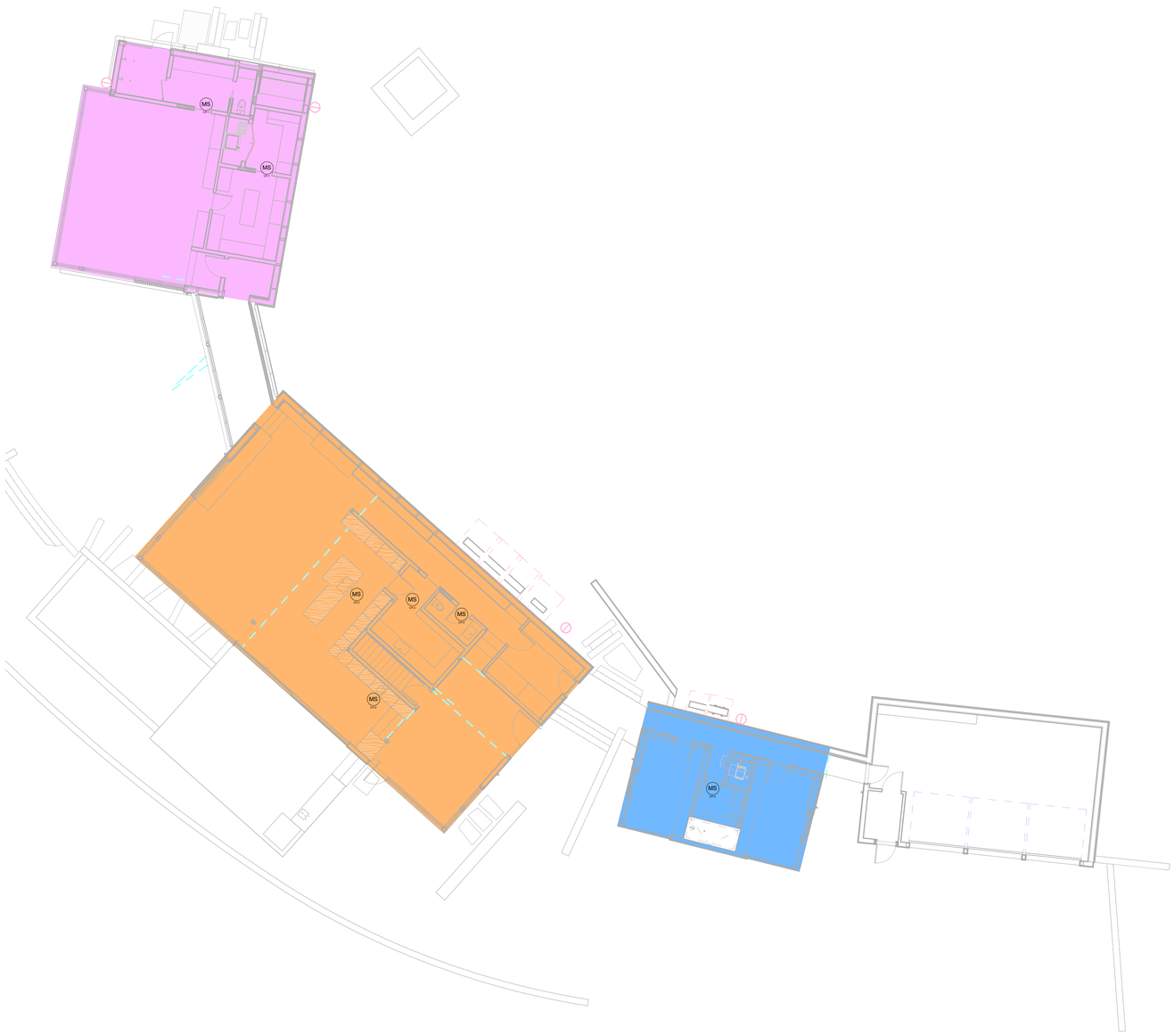
SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Details & Clearances

Scale: NTS
Drawn By: NZ
Reviewed By: ELC

P501



Zoning Legend

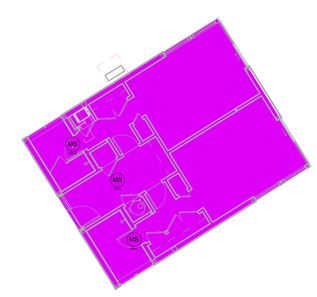
- Zone CP-1: Primary Suite
- Zone CP-2: Great Room
- Zone CP-3: Offices
- Zone CP-4: Bedrooms

Control Legend

MS — MOTION SENSOR

Hot Water Control Device Schedule

Mark	Count	Description	Manufacturer	Model	Notes
MS	1	Motion Senson - Hard Wired	D'Mand Kontrols	HWMSRB-O	
MS	1	Motion Senson - Hard Wired	D'Mand Kontrols	HWMSRB-O	
MS	1	Motion Senson - Hard Wired	D'Mand Kontrols	HWMSRB-O	
MS	1	Motion Senson - Hard Wired	D'Mand Kontrols	HWMSRB-O	
MS	1	Motion Senson - Hard Wired	D'Mand Kontrols	HWMSRB-O	
MS	1	Motion Senson - Hard Wired	D'Mand Kontrols	HWMSRB-O	
MS	1	Motion Senson - Hard Wired	D'Mand Kontrols	HWMSRB-O	
MS	1	Motion Senson - Hard Wired	D'Mand Kontrols	HWMSRB-O	
MS	1	Motion Senson - Hard Wired	D'Mand Kontrols	HWMSRB-O	
MS	1	Motion Senson - Hard Wired	D'Mand Kontrols	HWMSRB-O	



1 Demand Based Domestic Hot Water Recirculation Zoning and Controls Plan
1" = 10'-0"

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Carmel, CA 93923

Issue Dates:

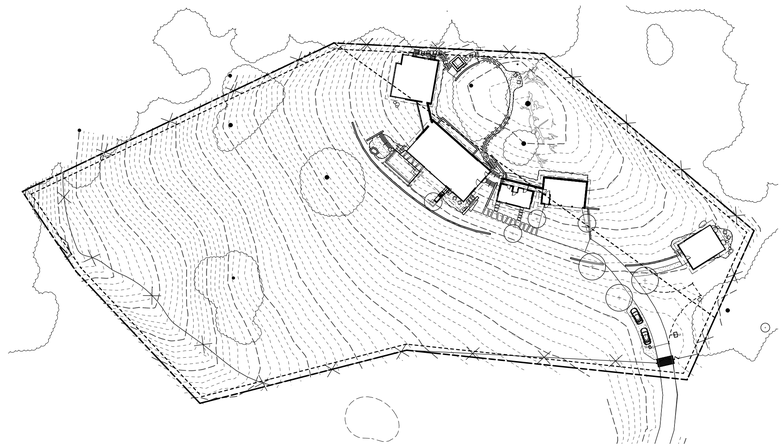
SD 50 Set	04/29/2025
Pricing Set - SD100	05/16/2025
DD	XX/XX/XXXX

Revisions:

Schematics & Controls

Scale: As indicated
Drawn By: NZ
Reviewed By: ELC

P600



0 30' 60' 120'

ABBREVIATION LEGEND	
+/-	PLUS OR MINUS
ADD	ADDENDUM, ADDITON
A.D.	AREA DRAIN
ADD'L	ADDITIONAL
AGGR	AGGREGATE
AR	ARBORIST REPORT
ARCH	ARCHITECTURAL
BLDG	BUILDING
BO	BOTTOM OF
BW	BOTTOM OF WALL
CLR	CLEAR
CJ	CONTROL JOINT
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONT	CONTINUOUS
CTR	CENTER
DG	DECOMPOSED GRANITE
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DS	DOWNSPOUT
DWGS	DRAWINGS
(E)	EXISTING
EA	EACH
EJ	EXPANSION JOINT
ENG	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
EXP	EXPANSION
EXT	EXTERIOR
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FIXT	FIXTURE
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOPLY	FACE OF PLYWOOD
FOS	FACE OF STUD
FS	FINISHED SURFACE
FTG	FOOTING
FUT	FUTURE
GALV	GALVANIZED
GFI	GROUND FAULT INTERRUPT
HB	HOSE BIBB
HDR	HEADER
HT	HEIGHT
ID	INSIDE DIAMETER
JST	JOIST
JT	JOINT
LA	LANDSCAPE ARCHITECT
LOW	LIMIT OF WORK
LSK	LANDSCAPE SKETCH
MAX	MAXIMUM
MFR	MANUFACTURER

MISC	MISCELLANEOUS
MIN	MINIMUM
MTL	METAL
(N)	NEW
NA	NOT APPLICABLE
NOM	NOMINAL
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PA	PLANTED AREA
PIP	POURED IN PLACE
PL	PROPERTY LINE
PLYWD	PLYWOOD
POB	POINT OF BEGINNING
POC	POINT OF CONNECTION
POO	POINT OF ORIGIN
PP	POWER POLE
PSI	PER SQUARE INCH
PT	PRESSURE TREATED
PTDF	PRESSURE TREATED DOUGLAS FIR
RAD	RADIUS
REF	REFERENCE
REINF	REINFORCED
REV	REVISION
ROW	RIGHT OF WAY
RWD	REDWOOD
SAD	SEE ARCHITECTURAL DRAWINGS
SCD	SEE CIVIL DRAWINGS
SCHED	SCHEDULE
SECT	SECTION
SF	SQUARE FEET
SIM	SIMILAR
SMD	SEE MECHANICAL DRAWINGS
SPEC	SPECIFICATION
SPD	SEE PLUMBING DRAWINGS
SSD	SEE STRUCTURAL DRAWINGS
SS	STAINLESS STEEL
STD	STANDARD
STRUCT	STRUCTURAL
SQ	SQUARE
TBD	TO BE DETERMINED
TBR	TO BE REMOVED
T&G	TONGUE AND GROOVE
TC	TOP OF CURB
TME	TO MATCH EXISTING
TMA	TO MATCH ARCHITECTURE
TOC	TOP OF CONCRETE
TW	TOP OF WALL
TYP	TYPICAL
VIF	VERIFY IN FIELD
WL	WATER LEVEL
WM	WATER METER
W/0	WITHOUT

WARD RESIDENCE
LANDSCAPE IMPROVEMENTS
23 VASQUEZ TRAIL
CARMEL, CA 93923

PROJECT DESCRIPTION

Addition of new hardscape, landscape walls, pool, spa, outdoor kitchen, fire pit, plantings, irrigation system, and landscape lighting.

SITE LOCATION

SYMBOL LEGEND	
	ALIGN
DN	STAIR RISERS
	HOSE BIBB
G	GAS
	ELECTRICAL OUTLET
+ 150.50	SPOT ELEVATION
	PROPERTY LINE
120	EXISTING CONTOUR
125	PROPOSED CONTOUR
℄	CENTER LINE
	MATERIALS CALLOUT
1	REVISION CLOUD & NUMBER
	SETBACK LINE
	TREE TO BE REMOVED

DETAIL NUMBER — 1 / L0.00 — DRAWING TITLE, SCALE 1"=1'-0" — SHEET NUMBER

PROJECT DIRECTORY

OWNER:
SARAH AND RICHARD WARD
23 VASQUEZ TRAIL
CARMEL, CA 93923
(206) 369-3252

ARCHITECT:
FELDMAN ARCHITECTURE
1648 PACIFIC AVENUE, SUITE B
SAN FRANCISCO, CA 94109
CONTACT: ARMAN HADILOU
(415) 856-9244

LANDSCAPE ARCHITECT:
ARTERRA LANDSCAPE ARCHITECTS
88 MISSOURI ST.
SAN FRANCISCO, CA 94107
CONTACT: ANNE HOFFMAN
415-861-3100

CIVIL ENGINEER:
WHITSON ENGINEERS
6 HARRIS COURT
MONTEREY, CA 93940
CONTACT: RICHARD WEBER
(831) 649-5225

SURVEYOR:
WHITSON ENGINEERS
6 HARRIS COURT
MONTEREY, CA 93940
CONTACT: RICHARD WEBER
(831) 649-5225

ARBORIST:
THOMPSON WILDLAND MANAGEMENT
57 VIA DEL REY
MONTEREY, CA 93940
CONTACT: ROB THOMPSON
(831) 277-1419

SOILS ENGINEER:
SOIL SURVEYS GROUP
103 CHURCH STREET
SALINAS, CA 93901
CONTACT: BELINDA TALUBAN
(831) 757-2172

STRUCTURAL ENGINEER (POOL):
LENEHAN ENGINEERING
750 OAK AVENUE PARKWAY
SUITE 195
FOLSOM, CA 95630
CONTACT: GERRY LENEHAN
(916) 287-1445

STRUCTURAL ENGINEER (SITE):
ZFA STRUCTURAL ENGINEERS
601 MONTGOMERY STREET
SUITE 1450
SAN FRANCISCO, CA 94111
CONTACT: JOSH RANEY
(415) 243-4091 X214

SHEET INDEX	
LANDSCAPE	
L0.00	COVER SHEET
L1.00	LANDSCAPE SITE PLAN
L1.01	ENLARGED LANDSCAPE SITE PLAN
L1.03	TREE PROTECTION PLAN
L1.10	LAYOUT PLAN
L1.11	ENLARGED LAYOUT PLAN
L1.12	ENLARGED LAYOUT PLAN
L1.20	SECTIONS AND ELEVATIONS
L1.21	SECTIONS AND ELEVATIONS
L1.30	MATERIALS DIAGRAM
L2.00	MATERIALS LIST AND GENERAL NOTES
L2.10	DETAILS
L2.20	DETAILS
L2.30	DETAILS
L2.40	DETAILS
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L6.30	POOL & SPA DETAILS
L6.40	POOL SPECIFICATIONS
L6.50	POOL SPECIFICATIONS
L7.00	FOUNTAIN DETAILS
POOL STRUCTURAL	
SP1.0	STRUCTURAL ENGINEERING PIER POOL PLAN & DETAILS
SP1.1	STRUCTURAL ENGINEERING POOL & SPA PLANS
SP1.2	STRUCTURAL ENGINEERING POOL & SPA SECTIONS

ARTERRA
LANDSCAPE ARCHITECTS
88 MISSOURI SAN FRANCISCO 94107
415.861.3100
arterrasf.com

REGISTERED LANDSCAPE ARCHITECT
KATHERINE B. STICKLEY
4252
SIGNATURE
05.16.2025
DATE
STATE OF CALIFORNIA

WARD RESIDENCE
23 VASQUEZ TRAIL
CARMEL, CALIFORNIA
APN: 239-121-010

DATE:	ISSUE:
05.15.2025	FINAL DESIGN REVIEW
05.16.2025	PRICING SET - 90% DD
05.16.2025	COMBO PERMIT SET

SCALE: AS NOTED

COVER SHEET

L0.00

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SCALE: 1"=60'-0"

LANDSCAPE SITE PLAN

L1.00

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SCALE: 1/16" = 1'-0"

ENLARGED
LANDSCAPE PLAN

L1.01

TREE PROTECTION - CONSTRUCTION GUIDELINES:

1. TREE PROTECTION FENCING MUST BE INSTALLED BEFORE ANY CONSTRUCTION BEGINS.
2. HEAVY EQUIPMENT MAY NOT BE OPERATED WITHIN THE PROTECTION ZONE OF ANY TREE.
3. INJURY TO THE TRUNKS OF THE TREES MUST BE DOCUMENTED AND REPAIRED IMMEDIATELY.
4. WHEN TREE ROOTS ARE CUT BY NECESSITY, ROOTS 1" DIAMETER AND GREATER MUST BE SAW CUT AND TREATED.
5. FILL SOIL MUST BE KEPT FROM UNDER THE TREE PROTECTION ZONE.
6. NO STORAGE OF DUMPING OF TOOLS AND BUILDING MATERIAL MAY EXIST WITHIN THE DRIP LINE OF ANY TREE.
7. NO MATERIAL OF ANY KIND MAY BE STORED WITHIN THE PROTECTION ZONE OF ANY TREE.
8. ORIGINAL GRADE MUST BE LEFT UNDISTRUBED WITHIN THE PROTECTION ZONE OF ANY TREE.
9. ONLY MINOR UNAUTHORIZED PRUNING (PRUNING CUTS UNDER 1" DIAMETER) MAY BE PERFORMED BY CONTRACTORS.
10. NOTHING MAY BE TIED AROUND TREES TO ACT AS AN ANCHOR, FULCRUM, OR ANY OTHER FUNCTION EXCEPT DEMARCATION OF SPACE WITH APPROPRIATE STRING.
11. ANY EXPOSED ROOTS MUST BE COVERED WITH A MULCH MATERIAL.

NOTE:
TREE PROTECTIVE FENCING MUST BE INSTALLED PRIOR TO DEMOLITION, GRADING AND CONSTRUCTION AND REMAIN IN PLACE UNTIL FINAL INSPECTION OF THE PROJECT.

1 / L1.03 TREE PROTECTION DETAIL, PLAN
N.T.S.

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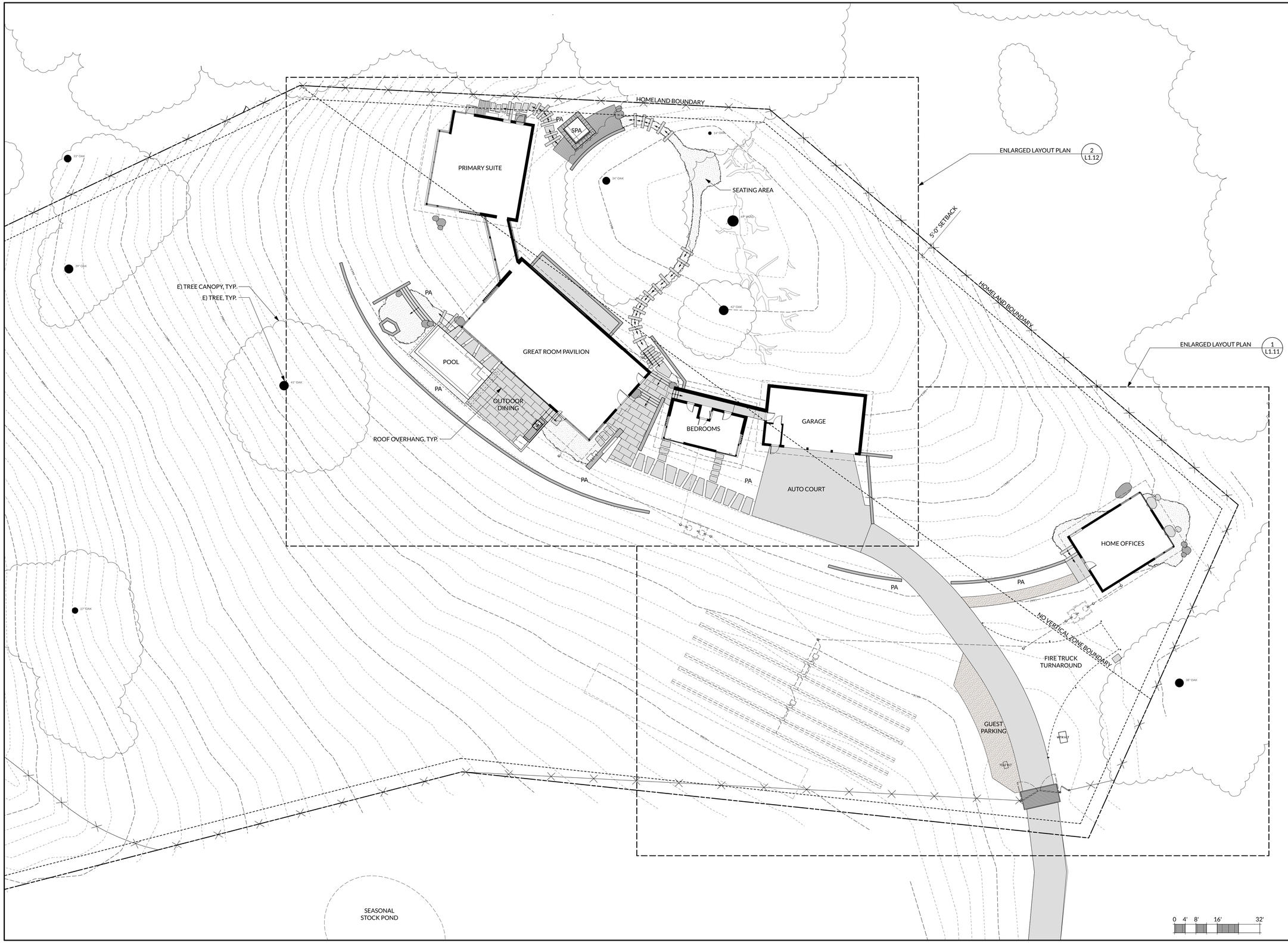
SCALE: 1/16"=1'-0"

TREE PROTECTION PLAN

L1.03



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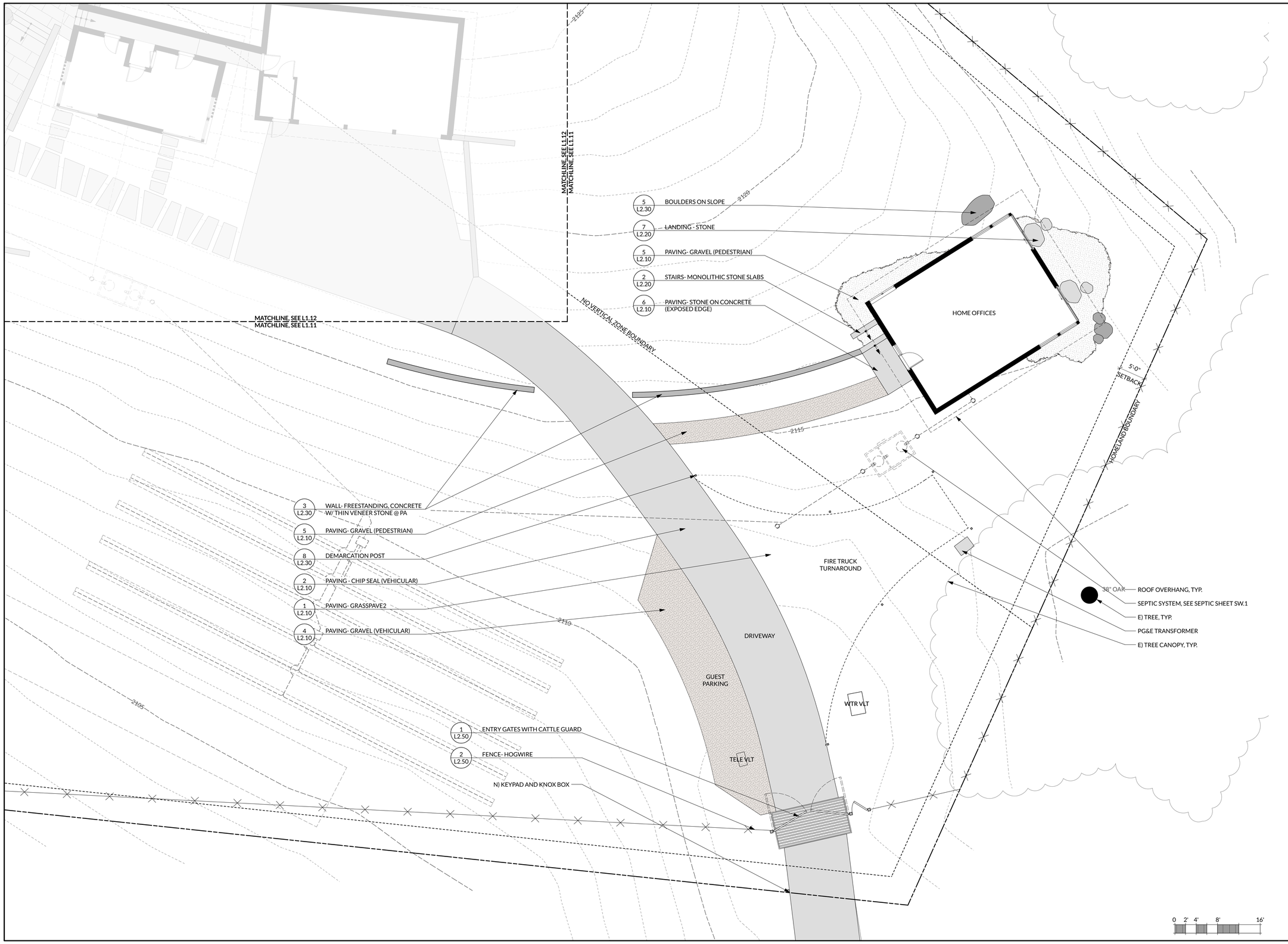
SCALE: 1/16" = 1'-0"

LAYOUT PLAN

L1.10



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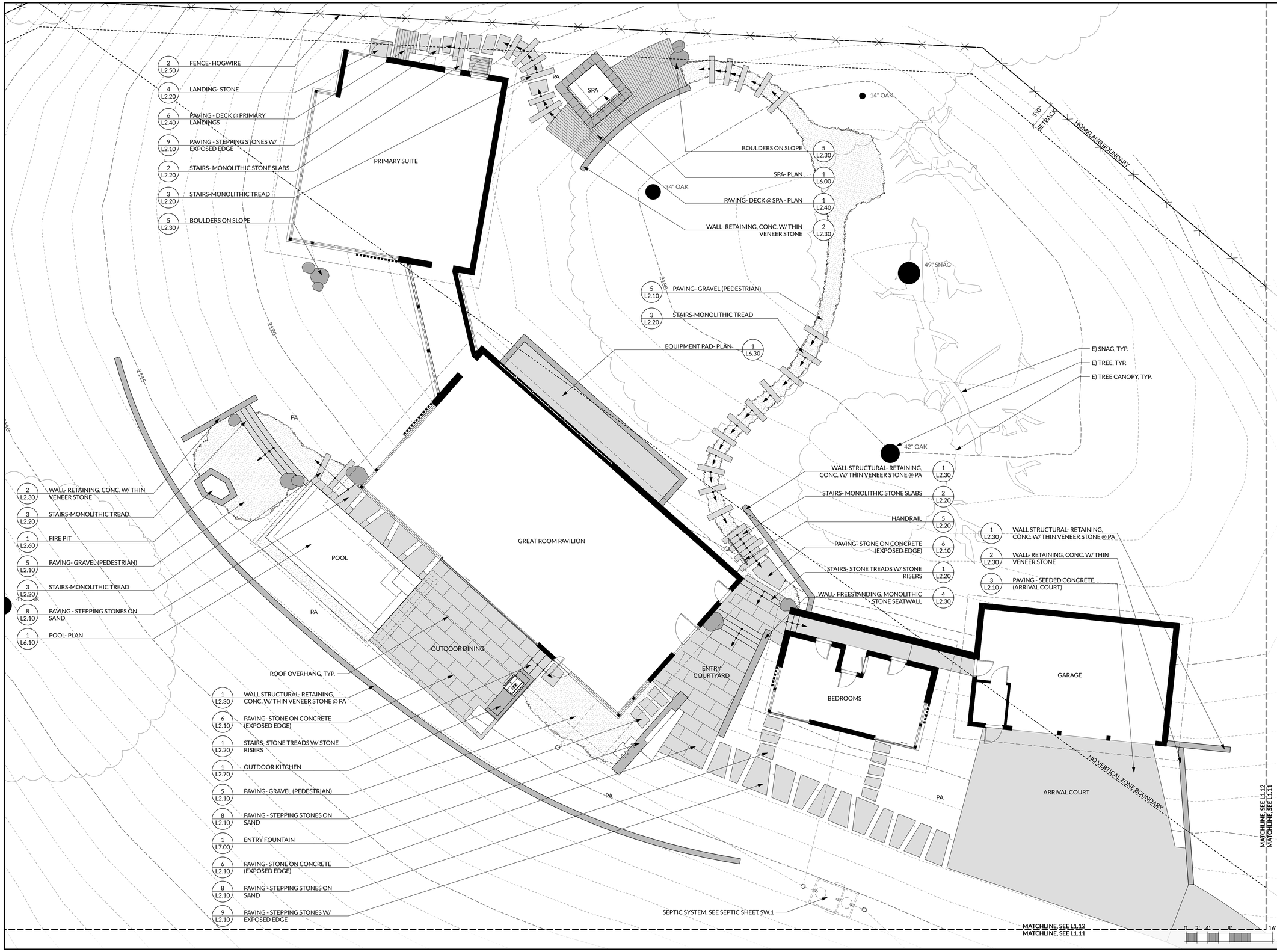
SCALE: 1/8" = 1'-0"

ENLARGED LAYOUT PLAN

L1.11



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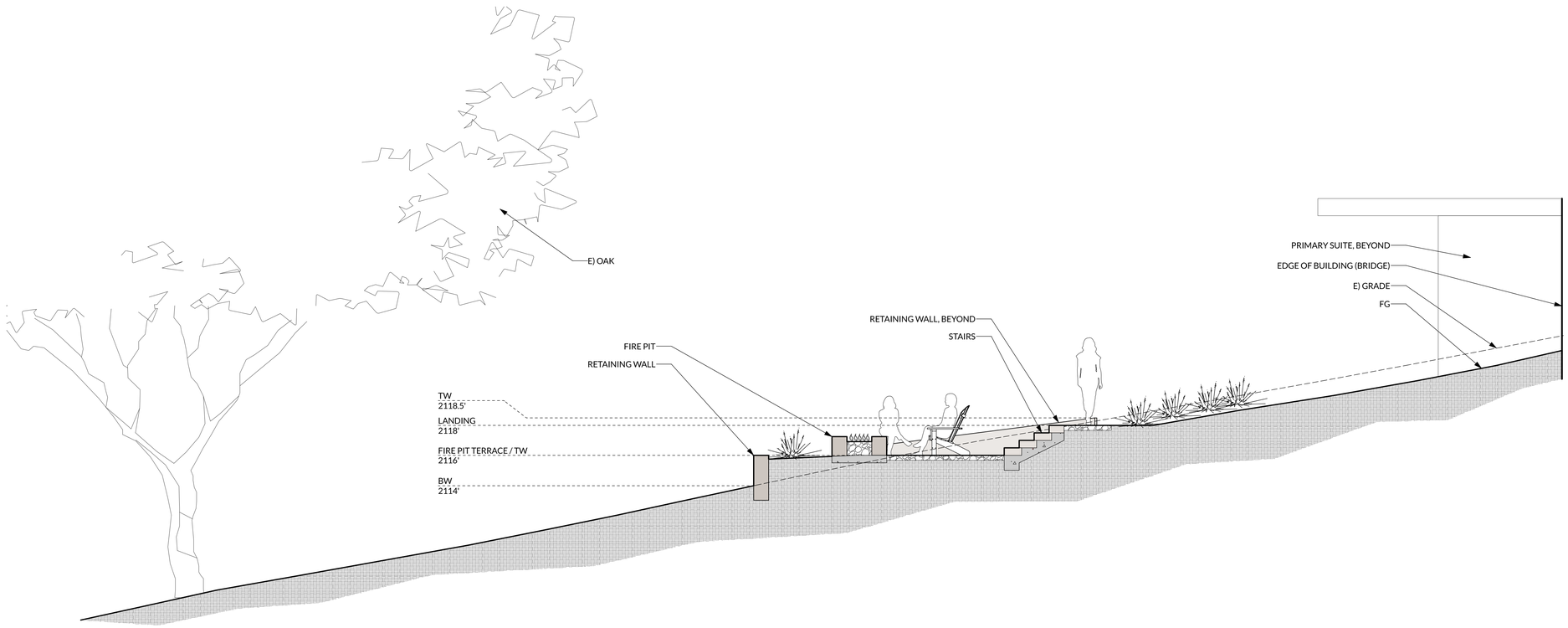
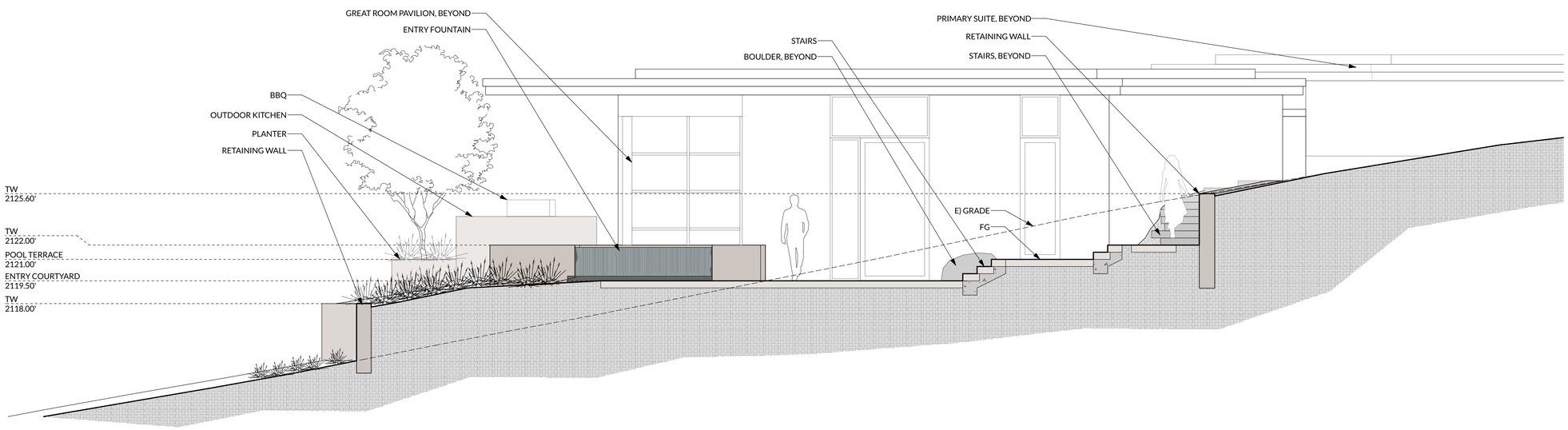
SCALE: 1/8" = 1'-0"

ENLARGED LAYOUT PLAN

L1.12



2 L1.20 SECTION - FIRE PIT SEATING AREA
Scale: 1/4" = 1'-0"



1 L1.20 SECTION - ENTRY COURTYARD
Scale: 1/4" = 1'-0"

0 1' 2' 4' 8'

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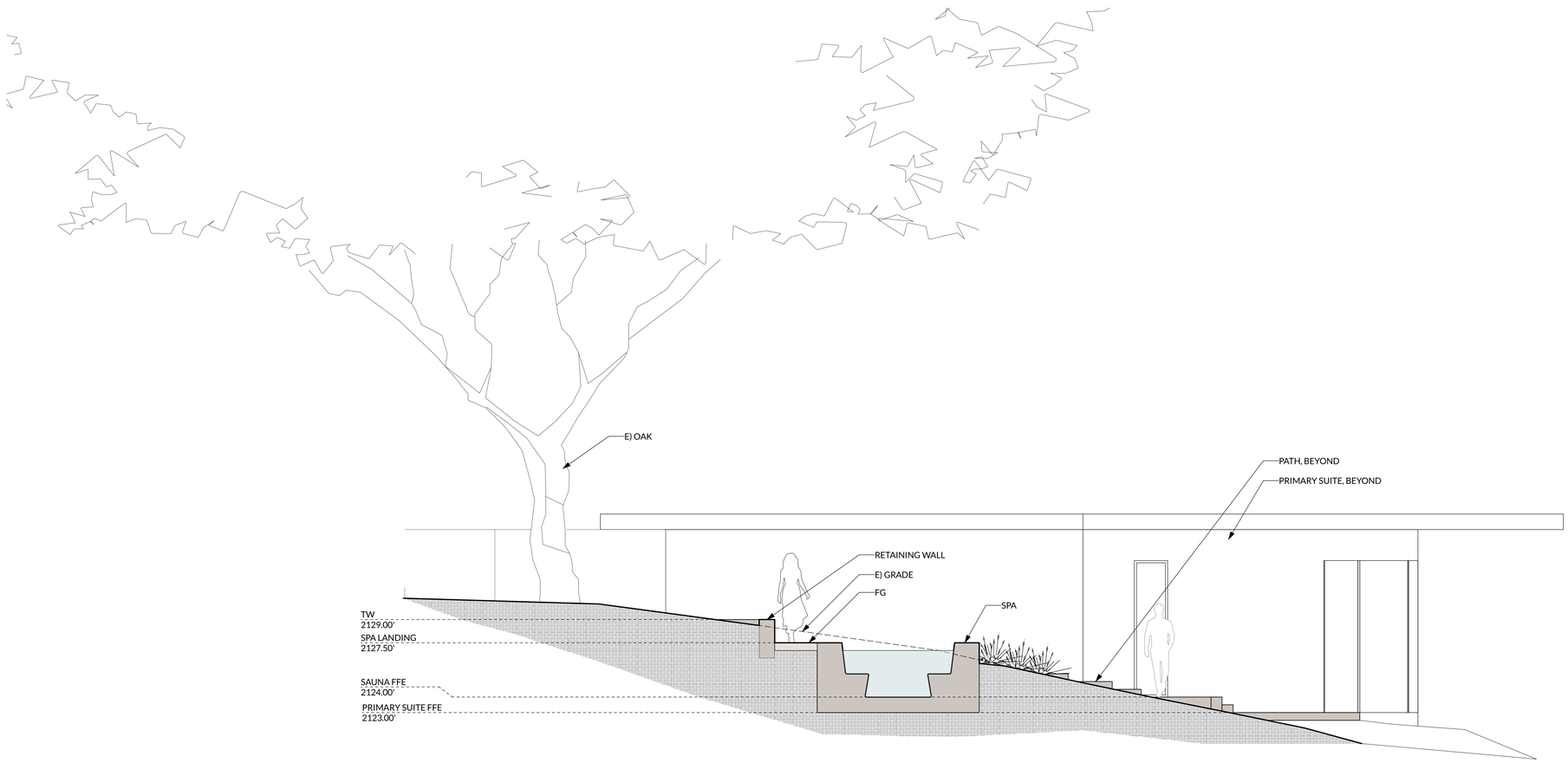
SCALE: AS NOTED

SECTIONS AND ELEVATIONS

L1.20



1 / L1.21 SECTION - SPA
Scale: 1/4" = 1'-0"

0 1' 2' 4' 8'

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WARD RESIDENCE

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DATE:	ISSUE:
05.15.2025	FINAL DESIGN REVIEW
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SCALE: AS NOTED

SECTIONS AND ELEVATIONS

L1.21

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05.16.2025	COMBO PERMIT SET

SCALE: AS NOTED

MATERIALS DIAGRAM

L1.30

GENERAL LANDSCAPE NOTES

These drawings indicate the expectation of best practice, first class work. If, in the opinion of the contractor, there is any doubt about the quality of work expected, s/he shall refer to the landscape architect for interpretation before proceeding with the work.

These drawings and the design they represent are the exclusive property of Arterra Landscape Architects.

Contractor is responsible for securely maintaining a current drawing set with complete LSK's on site during construction.

Contractor is responsible for ensuring all sub contractors receive complete set of plans/details and notes pertaining to their work.

Contractor shall be solely responsible for compliance with all Contract Documents, including, but not limited to drawings, specifications, manufacturer's instructions, Owner's directions, Codes, and Building official directions.

Contractor is solely responsible for correlating and confirming dimensions at the job site, choice of fabrication processes and techniques of construction, coordination of construction, coordination of his work with that of other trades, and performing the work in a safe and satisfactory manner.

All work is to be performed within the property. No underground structures or footings shall extend off the property. Confirm any adjustments in layout with LA prior to construction.

General Landscape Notes and specifications apply to all drawings.

Review Architectural, Civil and Structural Documents. Review Geotechnical Report and Arborist Reports.

All building information is based on drawings prepared by:
FELDMAN ARCHITECTS

All site civil engineering information is based on drawings prepared by:
WHITSON ENGINEERS

For geotechnical information see the Soils Report prepared by:
SOIL SURVEYS GROUP

For structural engineering see drawings prepared by:
ZFA STRUCTURAL ENGINEERS & LENEHAN ENGINEERING

For tree information see the Arborist Report prepared by:
THOMPSON WILDLAND MANAGEMENT

The Contractor agrees, by proceeding with construction and using these Construction Documents, that they have reviewed the documents, notes and specifications in detail, understands them and agrees that the drawing conventions employed, the amount of detailing and level of detailing are appropriate and adequate to allow his/her satisfactory construction of the Project.

It is the responsibility of the contractor to bring to the attention of the Landscape Architect any conditions, which will not permit the construction indicated in these documents, prior to proceeding with the work.

All work to be performed in accordance with all state and local building codes in effect for Carmel, California.

All landscape elements are indicated in approximate locations. Field-verify all dimensions. Written dimensions supersede scaled dimensions. Conditions not shown or foreseen may alter new work shown and may require additional work.

Contractor is responsible for coordinating final layout on site. Prepare paint out and string lines for review and approval by LA/Owners prior to commencement of construction.

All materials, finishes, colors, fixtures, fittings, etc. specified in these drawings are to be verified with the LA/Owners, prior to ordering.

In the event of a conflict between the plans, specifications, and/or manufacturers' literature, the more stringent requirement shall govern.

Coordinate schedule of work with other contractors as is required to complete this scope of work, in a timely manner and make best use of equipment and materials.

Verify all utility data and locations prior to commencing any work with the local power companies and coordinate work as necessary according to actual and verified

With reasonable promptness consistent with the stage of the Project, LA shall respond to the contractor's reasonable requests for clarification or interpretation in a timely manner.

Conduct construction operations to prevent windblown dust and dirt from interfering with the progress of the work and from causing a nuisance to the existing residence and neighboring property owners. Keep work sprinkled to prevent dust.

SUBMITTALS
A. Submit all material, finish, color, fixtures, fittings, etc. specified in these drawings for final approval by the Landscape Architect and Owners, prior to ordering.

B. Contractor to provide a project binder and a digital copy file, to be delivered to the owners at the completion of construction. The binders should be tabbed and organized by category (lighting, irrigation, drainage, etc.). It should include manufacturer operating instructions, replacement part information, warranties, and any other pertinent information. **Binders are due prior to date of final project acceptance.**

C. Contractor to provide as built drawings for irrigation, water features, lighting and drainage mechanical, prior to final project acceptance.

AT COMPLETION
Final Acceptance shall commence when all work is complete, including all submittals required above.

All work, materials and equipment to have a one-year warranty, commencing on the date of the final project acceptance. Replace work due to faulty workmanship or materials at no additional cost to the Owner. Coordinate work with the Owner or representative and perform at such time and manner to cause minimal interruption and inconvenience to the Owner.

Contractor to meet with Owner, their representative for landscape maintenance and the LA to coordinate plant maintenance and instruct in the operation and upkeep of equipment and systems.

MATERIALS LIST				
KEY	**ITEM/LOCATION**	**SPECIFICATION**	**FINISH**	**VENDOR**
A - PAVING				
A-1	GRASSPAVE2	INVISIBLE STRUCTURES GRASSPAVE2		
A-2	CHIPSEAL DRIVEWAY	ASPHALT, YOSEMITE TAN, 3/8", CRUSHED	AGGREGARTE TO MATCH GRAVEL PAVING	
A-3	SEEDED CONCRETE - ARRIVAL COURT	INTEGRAL COLOR, DAVIS COLOR, SIERRA	GRAVEL - YOSEMITE TAN, 3/8", CRUSHED	
A-4	GRAVEL	YOSEMITE TAN, 3/8", CRUSHED		
A-5	STONE ON CONCRETE	SYDNEY PEAK, 2" THICKNESS, RANDOM SIZING	TO MATCH ARCHITECTURAL SPECIFICATIONS	PENINSULA BUILDING MATERIAL
A-6	MONOLITHIC STEPPING STONES	SYDNEY PEAK, THICKNESS VARIES		PENINSULA BUILDING MATERIAL
A-7	GRAVEL MULCH	YOSEMITE TAN, 5/8", CRUSHED		
B - STAIRS / RAILINGS				
B-1	STAIRS - STACKED STONE	SYDNEY PEAK, 2"- 4" THICKNESS		PENINSULA BUILDING MATERIAL
B-2	STAIRS - MONOLITHIC STONE SLABS	SYDNEY PEAK, 6"-8" THICKNESS	NATURAL	
B-3	STAIRS - MONOLITHIC STONE TREAD	SYDNEY PEAK, 12" THICKNESS	NATURAL	
B-4	LANDING - STONE	BOULDER, 3'X5' MIN, FLATTENED TOP SURFACE		
B-5	HANDRAIL/GUARDRAIL	RAIL - HSS TUBE 1"X3"	TO MATCH ARCHITETURAL SPECIFICATIONS	
		POST - HSS TUBE 2"X2"		
C - WALLS				
C-1	WALLS - STONE THIN VENEER	ST. HELENA COTTAGE, FULL DIMENSION	TO MATCH ARCHITECTURAL SPECIFICATIONS	SBI MATERIALS
C-2	WALL - FREESTANDING , MONOLITHIC STONE	WALNUT TRAVERTINE		PENINSULA BUILDING MATERIAL
D - DECKING				
	WOOD DECKING	1X6 TEAK	TO MATCH ARCHITECTURAL SPECIFICATIONS	
	WOOD FASCIA	1X6 TEAK	TO MATCH ARCHITECTURAL SPECIFICATIONS	
	WOOD JOISTS	2X8 PTDF		
	WOOD LEDGER	2X8 PTDF		
	WOOD BEAM	4X6 PTDF		
	WOOD POST	4X6 PTDF		
	JOIST HANGER	SIMPSON OR APPROVED EQUIVALENT		
	POST ATTACHMENT	SIMPSON OR APPROVED EQUIVALENT		
	ATTACHEMENT PLATE	SIMPSON OR APPROVED EQUIVALENT		
E - FENCE / GATE / CATTLE GUARD				
E-1	ENTRY GATE - DRIVE	FRAME - 2"X3" 11 GA TUBE STEEL, 1.5"X3/16" STEEL FRAME WELDED TO TUBE STEEL	WEATHERED STEEL	
		POST - 6"X6" STEEL TUBE	WEATHERED STEEL	
		PANEL - 2"X2" WELDED WIRE MESH	WEATHERED STEEL	
		HINGES - TBD		
E-2	ENTRY GATE - PEDESTIRAN	FRAME - 2"X3" 11 GA TUBE STEEL, 1.5X3/16" STEEL FRAME WELDED TO TUBE STEEL	WEATHERED STEEL	
		POST - 6"X6" STEEL TUBE	WEATHERED STEEL	
		PANEL - 2"X2" WELDED WIRE MESH	WEATHERED STEEL	
		HINGES - TBD		
		LATCH - TBD		
E-3	CATTLE GUARD	UPPER FRAME - 2"X2" TUBE, WEATHERING STEEL		
		PIPES - 2-1/2" SCH 80 STEEL PIPES, WEATHERING STEEL		
		IBEAM FRAME - 3"X3" TUBE STEEL		
		IBEAM - W 14"X28" I-BEAM, CUT IN HALD AND NOTCHED PER DETAIL		
		LOWER FRAME - 16" CHANNEL		
E-4	HOG FENCING	POST - SPLIT CEDAR, 5X5		
		WIRE MESH - 4"X4"X36"	UNFINISHED	
		BARBBEDWIRE ALONG BOTTOM ROW	UNFINISHED	
F - FIREPIT, SEE SHEET L2.50				
G - OUTDOOR KITCHEN, SEE SHEET L2.60				
H - FOUNTAIN, SEE SHEET L7.00				
S - SPA , SEE SHEET L6.00				
P - POOL, SEE SHEET L6.10				
J - EQUIPMENT PAD				
J-1	WALL STONE	ST. HELENA COTTAGE, FULL DIMENSION	TO MATCH ARCHITECTURAL SPECIFICATIONS	SBI MATERIALS
J-2	WOOD SCREEN	SIDING - TO MATCH ARCH	TO MATCH ARCH	
		FRAMING - 2X4 PTDF		
		POSTS - 4X4 PTDF		
Z - MISC				
Z-1	EDGER	STEEL 3/16" THICK		
Z-2	BOULDERS	CARMEL GRANITE, ROUGHLY 3-4 HEAD SIZE	VINEYARD STONE PRODUCTS	
Z-3	ADDRESS MARKER A	CARMEL STONE	TO MATCH SLP STONE ADDRESS MARKER STANDARD	
Z-4	ADDRESS MARKER B	CEDAR POST, 6X6, METAL NUMBERS		
Z-5	FIRETRUCK TURNAROUND MAKRERS	CEDAR POST, 4X4, REFLECTIVE DOT		

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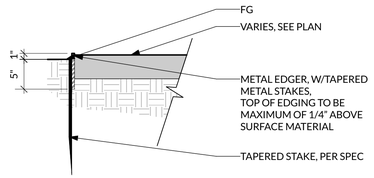
SCALE: AS NOTED

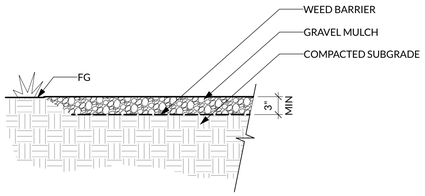
MATERIAL LIST AND GENERAL NOTES

L2.00

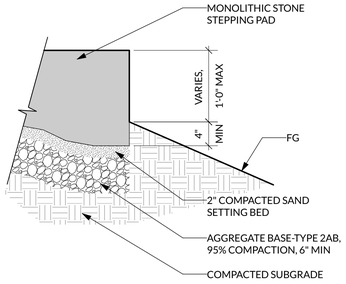


NOTES:
-PEDESTRIAN: 3/16" - 1/4" FOR STRAIGHT PATH
-VEHICULAR: 3/16" OR 1/4"
FOR L2.0 MATERIAL LIST SPECIFY THICKNESS FOR GIVEN APPLICATION

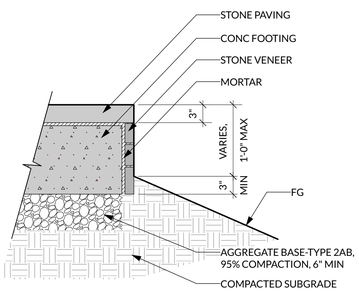
Z-1 / 12 / L2.10 EDGER- METAL
Scale: 1" = 1'-0"



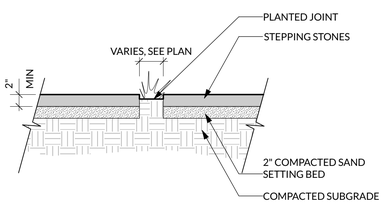
A-7 / 11 / L2.10 PAVING - GRAVEL MULCH
Scale: 1" = 1'-0"



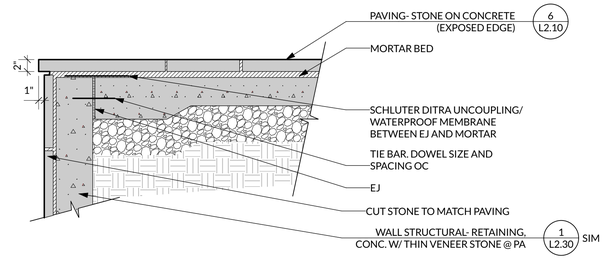
A-6 / 10 / L2.10 PAVING - MONOLITHIC STEPPING STONES
Scale: 1" = 1'-0"



C-1 A-6 / 9 / L2.10 PAVING - STEPPING STONES W/ EXPOSED EDGE
Scale: 1" = 1'-0"

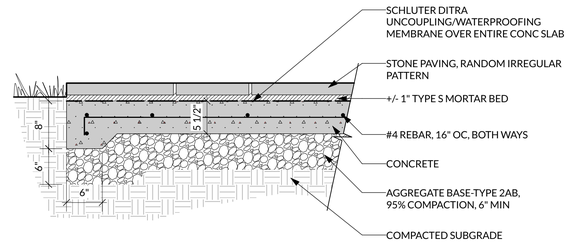


A-6 / 8 / L2.10 PAVING - STEPPING STONES ON SAND
Scale: 1" = 1'-0"



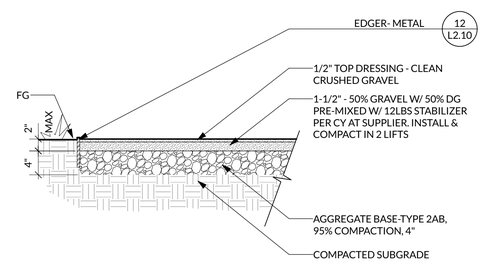
NOTE:
CONFIRM SUBBASE WITH GEOTECH REPORT

A-5 / 7 / L2.10 PAVING- STONE ON CONCRETE (EXPOSED EDGE @ POOL PATIO)
Scale: 1" = 1'-0"



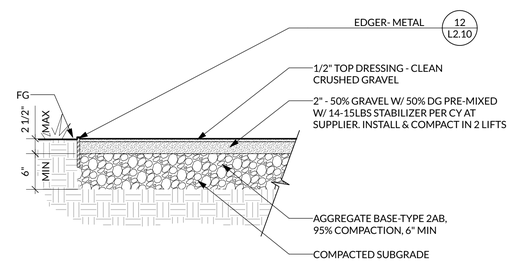
NOTES:
-CONFIRM SUBBASE WITH GEOTECH REPORT.
-FOR PAVING PATTERN, SEE SHEET L.X.X.

A-5 / 6 / L2.10 PAVING- STONE ON CONCRETE (EXPOSED EDGE)
Scale: 1" = 1'-0"



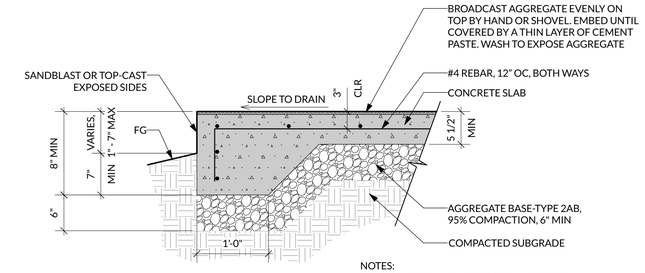
NOTE:
CONFIRM SUBBASE WITH GEOTECH REPORT

A-4 / 5 / L2.10 PAVING- GRAVEL (PEDESTRIAN)
Scale: 1" = 1'-0"



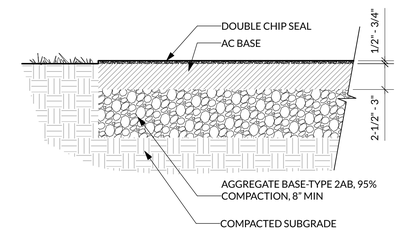
NOTE:
CONFIRM SUBBASE WITH GEOTECH REPORT

A-4 / 4 / L2.10 PAVING- GRAVEL (VEHICULAR)
Scale: 1" = 1'-0"



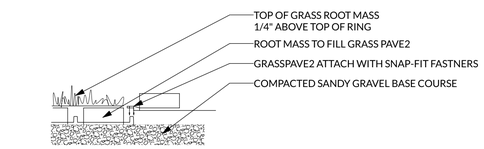
NOTES:
-CONFIRM CJ SAWCUT OR TROWEL JOINTS W/ LA. TROWEL JOINTS 1/8" R MAX
-CONFIRM SUBBASE WITH GEOTECH REPORT

A-3 / 3 / L2.10 PAVING - SEEDED CONCRETE (ARRIVAL COURT)
Scale: 1" = 1'-0"

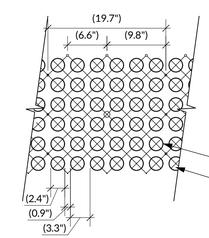


NOTE:
CONFIRM SUBBASE WITH GEOTECH REPORT.

A-2 / 2 / L2.10 PAVING - CHIP SEAL (VEHICULAR)
Scale: 1" = 1'-0"



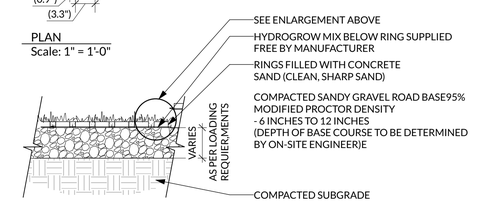
ENLARGEMENT SECTION
Scale: Scale: NTS



PLAN
Scale: 1" = 1'-0"

SPECIFICATIONS

UNIT SIZE - (20" X 20" X 1")
AVAILABLE IN 9 STANDARD ROLL SIZES
UNIT WEIGHT - (18 OZ.) OR (4.5 POUNDS)
STRENGTH - (5720 PSI)
COLOR - BLACK (STANDARD)
RESIN - HDPE
(WITH SOME POST-CONSUMER RECYCLED CONTENT)



SECTION
Scale: 1" = 1'-0"

NOTE: GRASS/PLANT TYPES SHALL BE SPECIFIED BY A LANDSCAPE ARCHITECT OR LANDSCAPE DESIGNER

A-1 / 1 / L2.10 PAVING- GRASSPAVE2
Scale: 1" = 1'-0"

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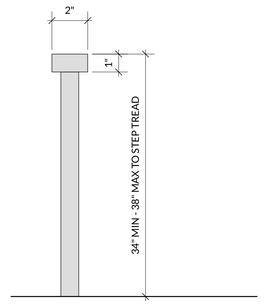
SCALE: AS NOTED

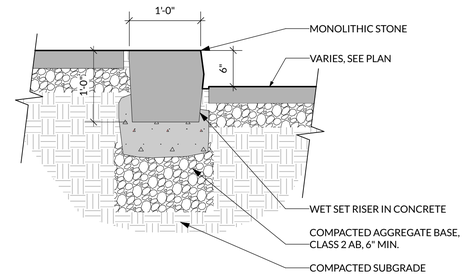
DETAILS

L2.10



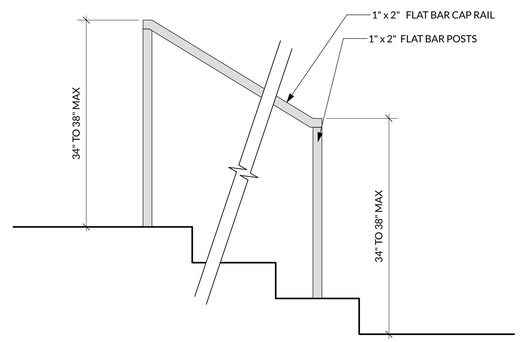
NOTE:
HANDRAIL PERIMETER DIMENSION 4" MIN TO 6-1/2" MAX

B-5 6 L2.20 HANDRAIL, CROSS SECTION
Scale: 3" = 1'-0"

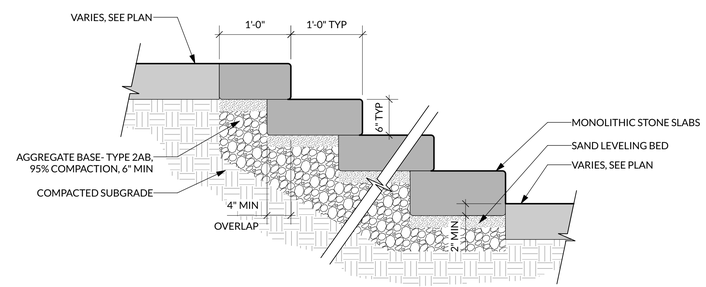


NOTE: TREAD WIDTH AND RISER HEIGHT TO BE UNIFORM ON ANY GIVEN RUN OF STEPS.

B-3 3 L2.20 STAIRS-MONOLITHIC TREAD
Scale: 1" = 1'-0"

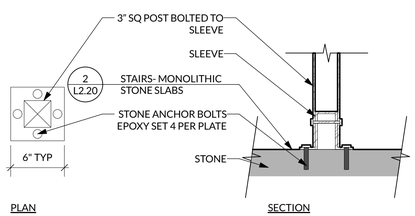


B-5 5 L2.20 HANDRAIL
Scale: 1" = 1'-0"

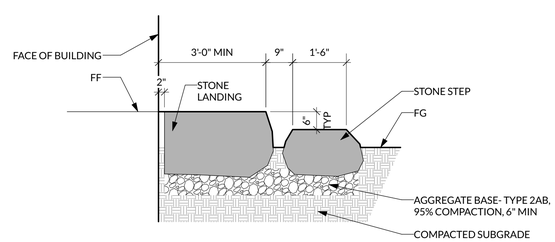


NOTE: TREAD WIDTH AND RISER HEIGHT TO BE UNIFORM ON ANY GIVEN RUN OF STEPS.

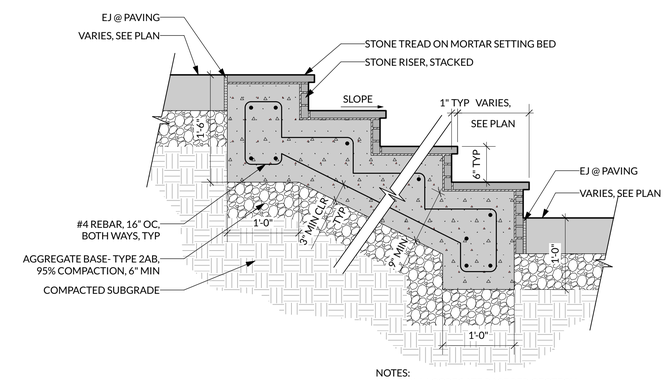
B-2 2 L2.20 STAIRS- MONOLITHIC STONE SLABS
Scale: 1" = 1'-0"



B-5 7 L2.20 HANDRAIL, TOP MOUNT ATTACHMENT
Scale: 1 1/2" = 1'-0"



B-4 4 L2.20 LANDING- STONE
Scale: 1/2" = 1'-0"



NOTES:
CONFIRM AGGREGATE BASE PER GEOTECH REPORT

TREAD WIDTH AND RISER HEIGHT TO BE UNIFORM ON ANY GIVEN RUN OF STEPS

B-1 1 L2.20 STAIRS- STONE TREADS W/ STONE RISERS
Scale: 1" = 1'-0"

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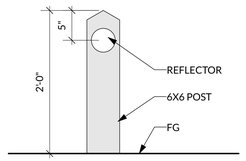
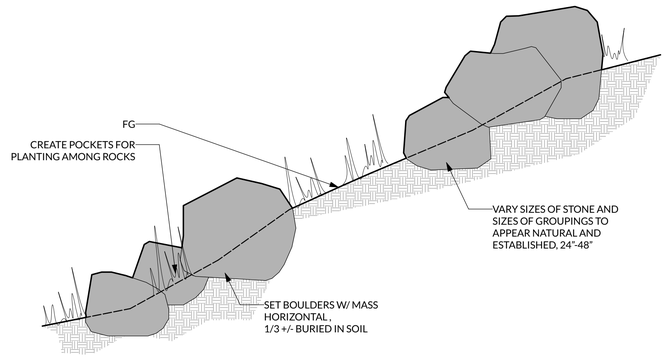
SCALE: AS NOTED

DETAILS

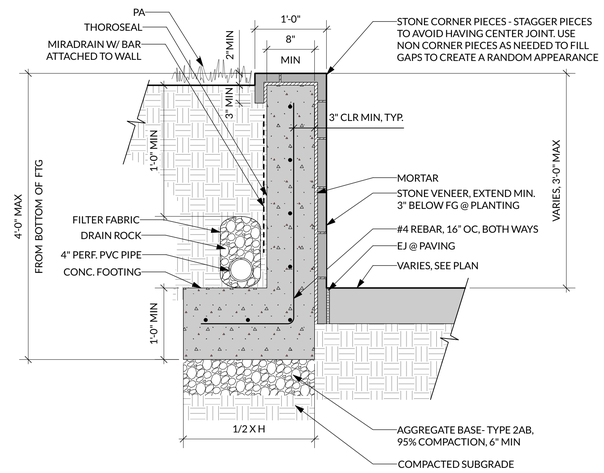
L2.20



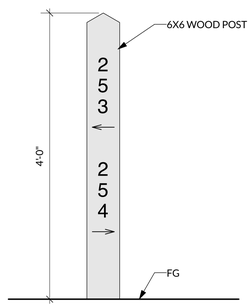
Z-5 8 L2.30 DEMARCATION POST
Scale: 1" = 1'-0"



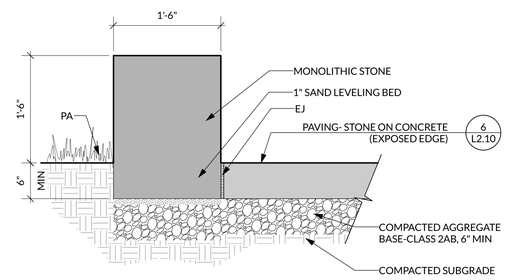
Z-2 5 L2.30 BOULDERS ON SLOPE
Scale: 1" = 1'-0"



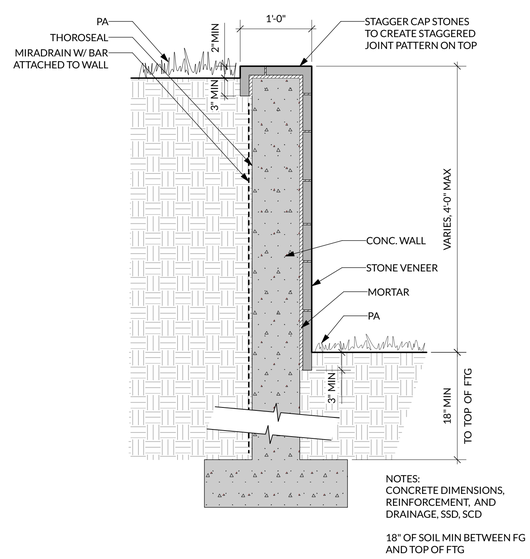
C-1 2 L2.30 WALL- RETAINING, CONC. W/ THIN VENEER STONE
Scale: 1" = 1'-0"



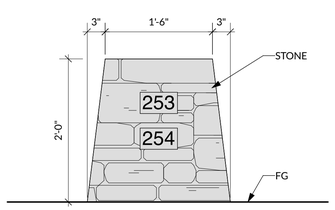
Z-4 7 L2.30 ADDRESS MARKER B - ELEVATION
Scale: 1" = 1'-0"



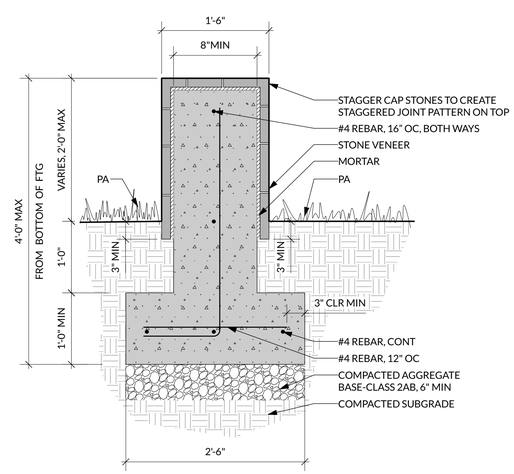
C-2 4 L2.30 WALL- FREESTANDING, MONOLITHIC STONE SEATWALL
Scale: 1" = 1'-0"



C-1 1 L2.30 WALL STRUCTURAL- RETAINING, CONC. W/ THIN VENEER STONE @ PA
Scale: 1" = 1'-0"



Z-3 6 L2.30 ADDRESS MARKER A - ELEVATION
Scale: 1" = 1'-0"



C-1 3 L2.30 WALL- FREESTANDING, CONCRETE W/ THIN VENEER STONE @ PA
Scale: 1" = 1'-0"

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APN: 239-121-010

DATE:	ISSUE:
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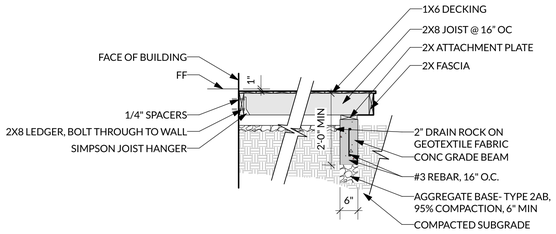
05.16.2025	COMBO PERMIT SET

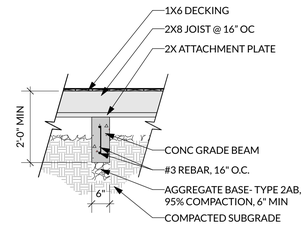
SCALE: AS NOTED

DETAILS

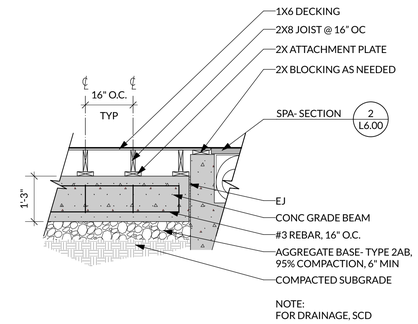
L2.30



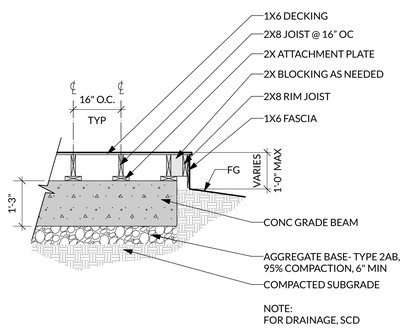
D 6 L2.40 PAVING - DECK @ PRIMARY LANDINGS
Scale: 1/2" = 1'-0"



D 3 L2.40 PAVING - DECK @ SPA - SECTION B
Scale: 1/2" = 1'-0"



D 2 L2.40 PAVING - DECK @ SPA - SECTION A
Scale: 1/2" = 1'-0"



D 5 L2.40 PAVING - DECK @ SPA - SECTION D
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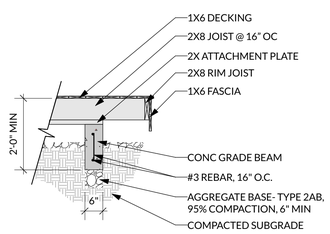
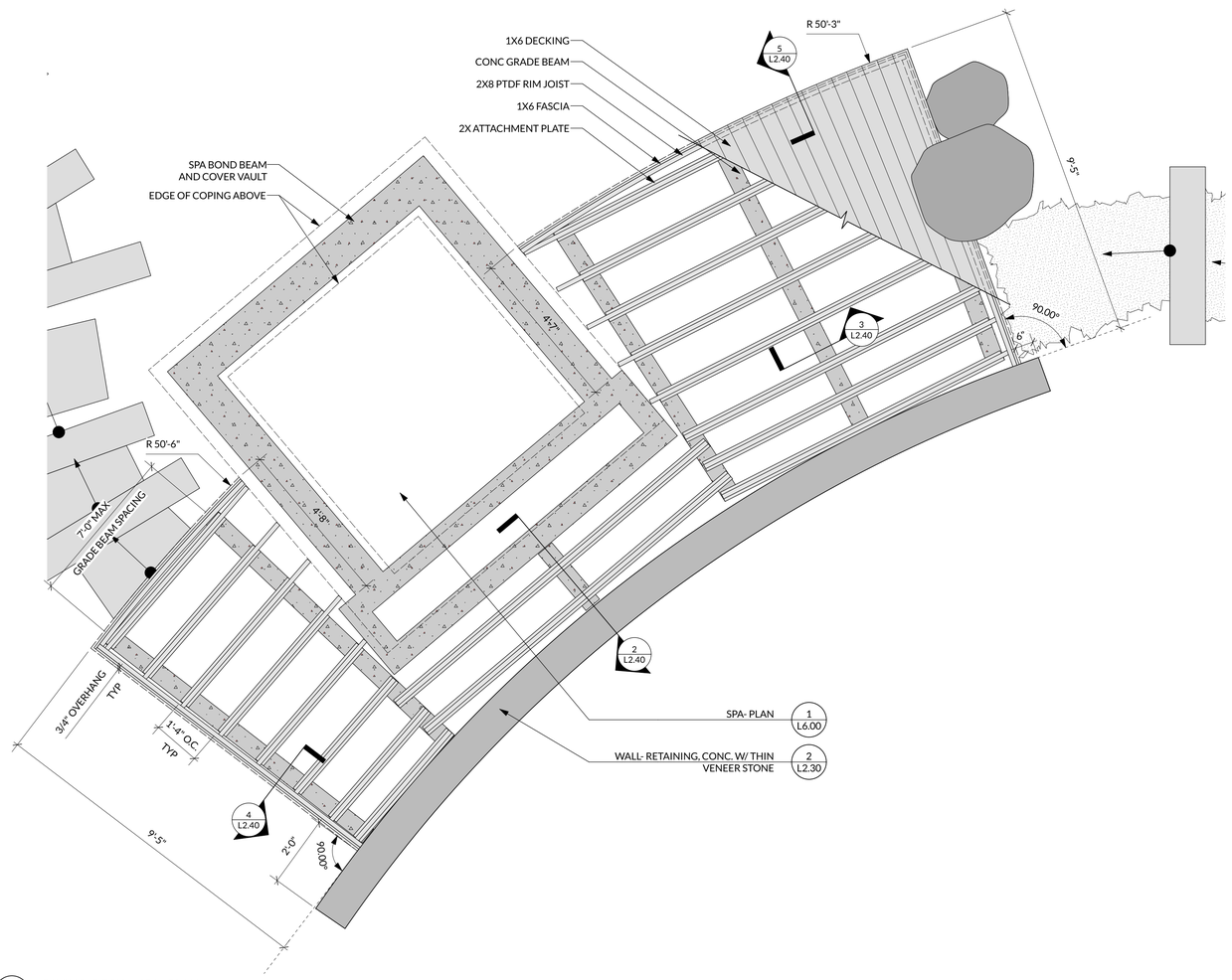


D 4 L2.40 PAVING - DECK @ SPA - SECTION C
Scale: 1/2" = 1'-0"



D 1 L2.40 PAVING- DECK @ SPA - PLAN
Scale: 1/2" = 1'-0"

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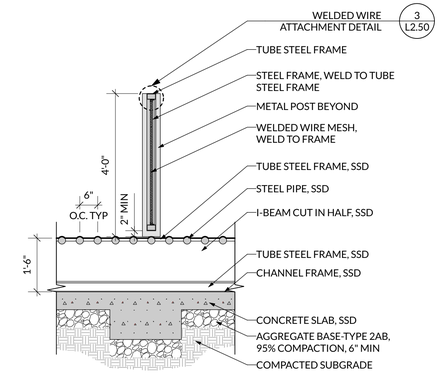
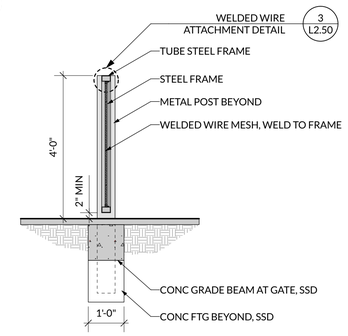
DETAILS

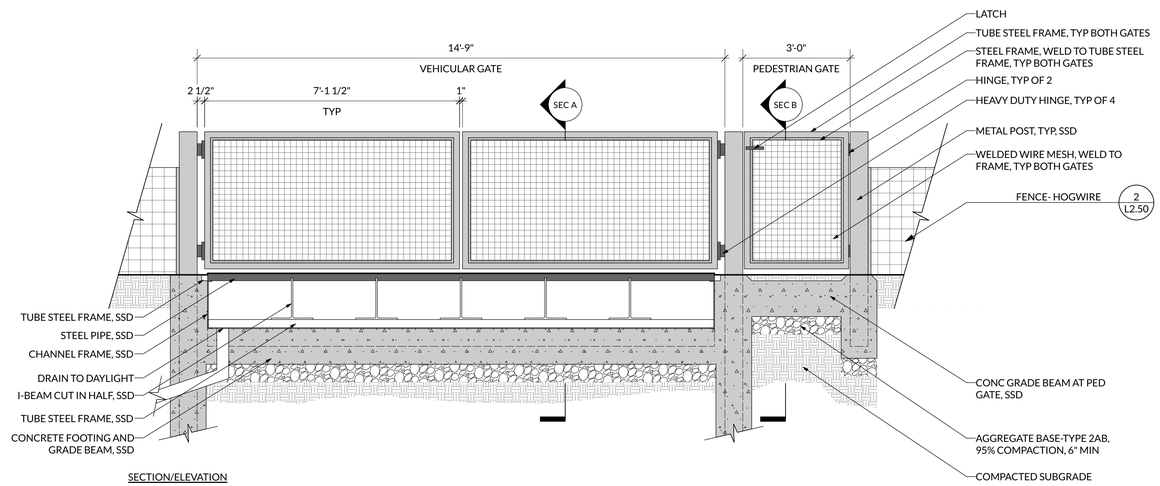
L2.40



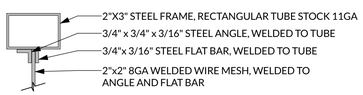
SECTION A - VEHICULAR GATE & CATTLE GUARD



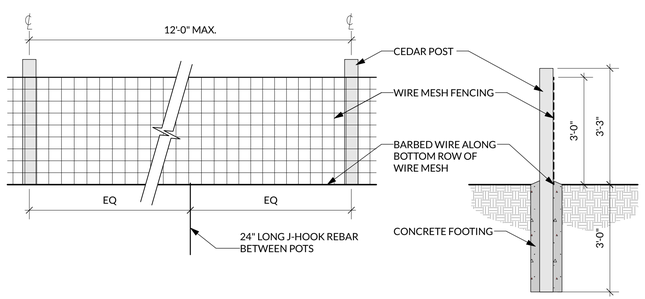
SECTION B - PEDESTRIAN GATE



SECTION/ELEVATION

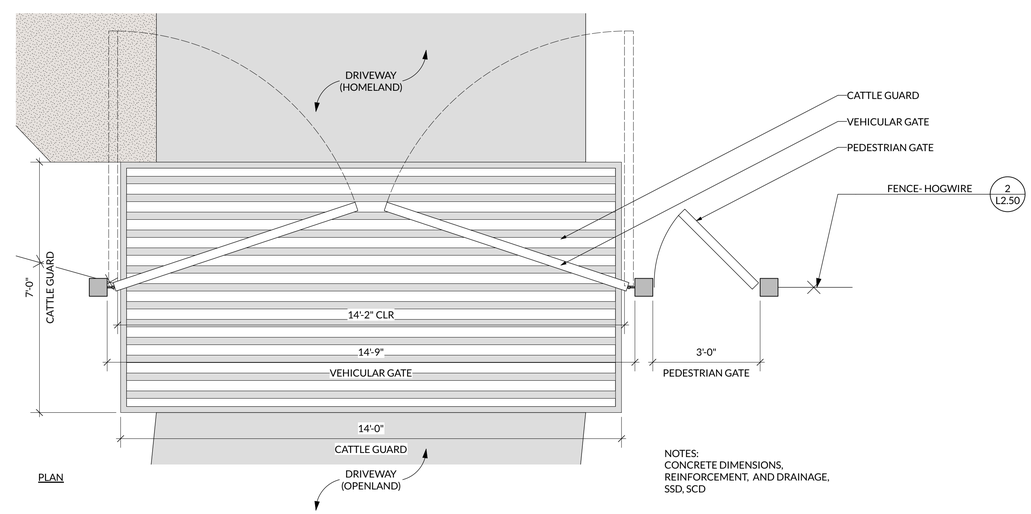


E 3 L2.50 WELDED WIRE ATTACHMENT DETAIL
Scale: 3" = 1'-0"



ELEVATION SECTION

E-4 2 L2.50 FENCE- HOGWIRE
Scale: 1/2" = 1'-0"



PLAN

NOTES:
CONCRETE DIMENSIONS, REINFORCEMENT, AND DRAINAGE, SSD, SCD

E 1 L2.50 ENTRY GATES WITH CATTLE GUARD
Scale: 1/2" = 1'-0"

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DETAILS

L2.50

FIRE FEATURE NOTES
Refer to General Landscape Notes

GENERAL
Contractor is responsible for the construction, installation and operation of gas fire pits and/or fireplaces, including all electrical service, gas service and plumbing service and equipment as indicated on the drawings and required for operation.

Contractor is responsible for the purchase and installation of the fire feature vessel, fire manifold, fire rocks/glass, and the fire pit cover as specified in the drawings.

All work to be done in accordance with all state and local codes in effect, including requirements for emergency gas and electrical shut off valves.

Electrical and Gas service to be performed by licensed electrician and plumber.

Install all equipment according to manufacturer's specification. Should there be any question or concern about intended installation/operation clarify with LA prior to commencing with construction of any structure that contains the burner. This includes venting, drainage and heat output effect on adjacent materials.

Deliver features in a clean and working order. Review with LA/Client flow and display patterns so that flame is at desired height.

OPERATION
Fire pits to operate with remote control/key and lighter as specified in the drawings.
Locate electrical and gas emergency shut off valves, per code. LA to approve locations for shutoff valve and control switches..

All Fire pit work, materials and equipment to be warranted for one year, from date of accepted completion.

SUBMITTALS
A. Confirm all final appliances specifications and material/finishes with owners/LA, prior to ordering and install.

B. Confirm with LA that all venting and drain provisions are accounted for before support structures are installed.

C. Submit options for remote control/key operation to owners prior to ordering.

AT COMPLETION
A. Provide 2) remotes/lighter/key to owners.

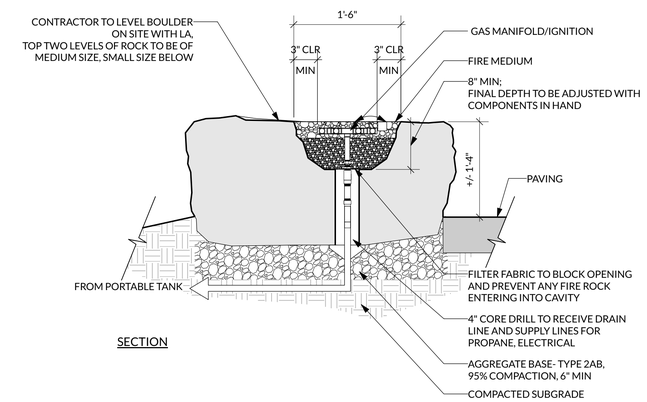
B. Instruct owners in adjustment, maintenance and emergency shut offs for all equipment.

C. Provide owners with manufacturers information on all components, replacement parts and recommended maintenance. Include this material in project binder, to be delivered to owners.

D. Provide as-built record drawings of actual pipe, wire and fixture locations and all emergency shut off valve locations. Include in project binder.

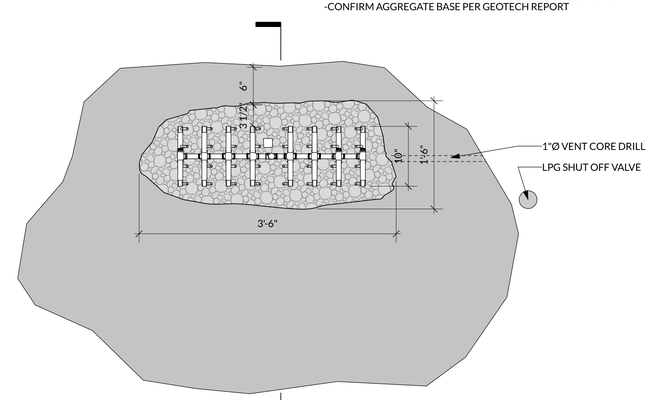
NOTE TO FABRICATOR:
AFTER CHIPPING OUT BASIN TO RECIEVE BURNER ASSEMBLY A 4" DIAMETER HOLE IS TO BE DRILLED AT CENTER OF CHIPPED OUT BASIN.
A 1" DIAMETER VENT HOLE TO BE DRILLED FROM BASIN TO SIDE OF BOULDER TERMINATING APPROXIMATELY 6" FROM BOTTOM.
BOTH CORE DRILLINGS TO TAKE PLACE ONLY AFTER FINAL BASIN APPROVAL IS RECEIVED FROM LANDSCAPE ARCHITECT.
LOCATIONS OF CORE DRILLINGS TO BE APPROVED BY LA PRIOR TO DRILLING

MATERIALS LIST						
KEY	ITEM/LOCATION	SPECIFICATION	COLOR	FINISH	VENDOR	NOTES
F - FIRE PIT						
F-1	BOULDER	5' X 7' X 3'	TBD	TBD		
F-2	BURNER ASSEMBLY	CFBTD320LP	BRASS	BRASS	WARMING TRENDS	
F-3	FIRE MEDIUM	SMALL LAVA ROCK, MEDIUM LAVA ROCK, NORTHERN FLAME	BLACK		WOODLAND DIRECT	TOP 2 LEVELS OF ROCK TO BE MEDIUM



SECTION

NOTES:
-DRAIN TO OUTFALL THROUGH WOOD RETAINING WALL- CONFIRM WITH LA IN FIELD PRIOR TO CONSTRUCTION. DO NOT CONNECT TO DRAINAGE SYSTEM.
CAP WITH SCREEN TO PREVENT ANIMAL INTRUSION.
-SET BOULDER AND ADJUST TO MAKE TOP SURFACE AT BURNER LEVEL WITH FINISH GRADE. LA TO BE ON SITE TO APPROVE PLACEMENT.
-CONFIRM AGGREGATE BASE PER GEOTECH REPORT



PLAN

NOTES:
-SHUT OFF VALVE TO BE PERMANENTLY LABELED WITH A PLAQUE.
-MAIN METER GAS LINE TO BE LABELED.
-CONFIRM LOCATION W/ LA PRIOR TO CONSTRUCTION:
ELECTRONIC SWITCH, GAS VALVE/KEY AND EMERGENCY SHUT OFF.
-EMERGENCY SHUT OFF SHALL BE LOCATED NEAR FIRE FEATURE.

F 1 L2.60 FIRE PIT
Scale: 1" = 1'-0"

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SCALE: AS NOTED

DETAILS

L2.60

KITCHEN NOTES

GENERAL
Contractor is responsible for the construction, installation and providing a fully operational outdoor kitchen, including all electrical, gas and plumbing service and all appliances and equipment as indicated on the drawings.

Contractor is responsible for construction of kitchen base/cabinets, countertop, backsplash and lighting as indicated on the drawings.

Electrical and Gas service to be performed by licensed electrician and plumber. Do work in accordance with all state and local codes in effect, including requirements for emergency gas and electrical shut off valves.

Confirm outlet and light locations with LA prior to setting formwork and pouring concrete.

Contractor is responsible for the purchase and installation of all appliances. Confirm with LA/Owner before purchasing.

Install all equipment according to manufacturer's specification. Should there be any question or concern about intended installation/operation, clarify with LA/Owner, prior to commencing with work.

Deliver kitchen in a clean and working order.

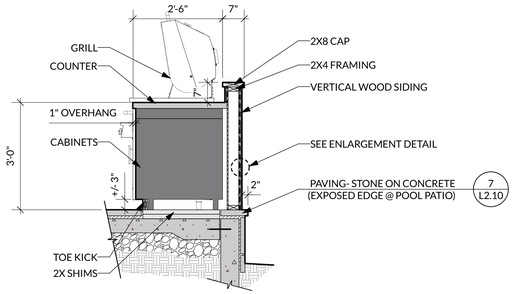
SUBMITTALS
Confirm all final appliances specifications and material/finishes with owners/ Landscape Architect, prior to ordering and installation.

AT COMPLETION
A. Provide owners with manufacturer's information on all components, replacement parts and recommended maintenance. Include this material in project binder.

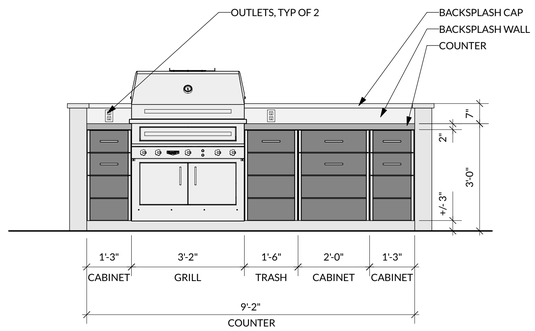
B. Instruct owners in use, maintenance and emergency shut offs for all equipment.

C. All kitchen work, materials and equipment to be warranteed for one year, from date of accepted completion.

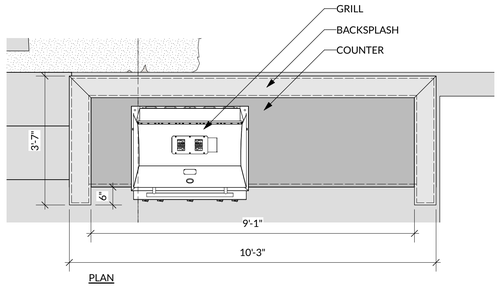
MATERIALS LIST				
KEY	ITEM/LOCATION	SPECIFICATION	FINISH	VENDOR
G - KITCHEN				
G-1	COUNTER	TBD		
G-2	CABINETS	TBD		
G-3	GRILL	KALAMAZOO K750HB BUILT-IN HYBRID FIRE GRILL		
G-4	WOOD SURROUND	CAP - 2X8	TO MATCH ARCH	
		SIDING - TO MATCH ARCH	TO MATCH ARCH	
		FRAMING - 2X4 PTDF		



SECTION



ELEVATION



PLAN

G 1 L2.70 OUTDOOR KITCHEN
Scale: 1/2" = 1'-0"

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SCALE: AS NOTED

DETAILS

L2.70

FUEL MANAGEMENT PLAN NOTES

1. Treatments shall be scheduled and implemented for the appropriate season.
   a. Trees should be pruned between November and April.
   b. Mowing should occur late spring to early summer. Timing of mowing affects the species composition in subsequent years. A Lot-specific plan may advise for the appropriate timing and frequency to retain desirable wildflowers, native grasses, or protected species.
2. Native vegetation should be retained as much as possible when creating and maintaining enough defensible space and safe access to protect watershed functions and scenic values.
3. Conversion of existing native habitat types in the Openlands is only permitted with a multi-year habitat restoration plan with the Conservancy (if available, refer to Openlands Management Plan).
4. Use of vehicles in the Openlands shall be limited to the area necessary for treatment.
5. Invasive weeds shall be removed from both the Homelands and Openlands of each Lot as part of annual vegetation management (if available, refer to Openlands Management Plan).

For additional guidance on ways to minimize environmental impacts, please refer to the Best Management Practices for Fuel Management section of the Santa Lucia Preserve Fuel Management Standards.

If the treatments described below are properly implemented in the Fuel Management Zone (FMZ) of Lot 253 (also in some cases referred to as the fuel reduction zone and defensible space zone) 0-2 foot flame lengths are expected to occur in most of the flatter mowed areas of the FMZ, exception being some of the steeper woodland areas in the outer FMZ where flame lengths could exceed 8 feet despite vegetation management activities. Fuels that produce lower flame lengths and prevent ember production are the result of fuel mitigation treatments of varying actions and distances from the structure, based on existing vegetation and terrain within the FMZ. On Lot 253 the property boundary does not limit or constrain fuel reduction activities, and in no case does this Fuel Management Plan authorize the property owner to take fuel management actions beyond the property boundary. The Conservancy must approve this FMP prior to performing any fuel management activities in the Openlands. Furthermore, fuel management activities shall not be conducted anywhere in the Openlands beyond the approved FMZ area. This rule and restriction also applies to the surrounding Wildlands, which are owned and managed by the Conservancy.

Each zone has a unique set of standards by which compliance will be gauged. Treatments in each zone are fully described in the Fuel Management Standards. Unless specified here, treatments must be consistent with the Standards. Any exceptions and additional actions will be noted in bold, underlined italics.

The Fuel Management Zones are as follows:
1. Non-combustible Zone - To a distance of 5 feet from structures.
2. Landscaping Zone - Per landscaping plans.
3. Driveway Zone - To a distance of 15 feet from edge of pavement.
4. Grassland Zone - To a distance of 30 feet from structures.
5. Oak Savanna Zone - To a distance of 150 feet from structures.
6. Oak Woodland Zone - To a distance of 150 feet from structures.

NON-COMBUSTIBLE ZONE – TO A DISTANCE OF 5 FEET

A Non-Combustible Zone should be maintained within a 5-foot buffer around structures.

Property development has not started so the Non-Combustible Zone does not yet exist. Hardscape surfaces or landscape materials, such as gravel, bare soil or low growing and high moisture content irrigated turf, native perennial bunch grasses and/or succulent herbaceous plants, are examples of materials that are suitable for the 0-5 foot Non-Combustible Zone. Wood mulch is not considered non- combustible. Landscape architects are encouraged to make liberal use of hardscaping within 5 feet of structures. Care should be taken in the design phase to ensure there is adequate room within the Homeland for such treatments.

LANDSCAPING ZONE – WITHIN ENTIRE LANDSCAPED AREA

Approved landscaping must be designed and maintained to minimize flammability. All landscaping occurs within the Homeland area.

The Homeland has not yet been developed so the Landscape Zone does not yet exist. Approved landscaping must be designed and maintained to minimize flammability. All landscaping occurs within the Homeland area.

Ornamental landscaping often results in large amounts of more combustible shrubby vegetation being planted near structures. Many commonly used landscape plants, such as more flammable woody trees and shrubs, and tall ornamental grasses, should be avoided in the maintained landscape because they may create a fire threat to a home that would otherwise be fire safe. All plant material that is removed from the landscaping must be composted within the Homeland or removed from The Preserve and disposed of properly. In no case can material from the landscaping zone be left in the Openlands, and must be properly processed if it will remain in the Homeland.

The Landscaping Zone should consist of firesafe landscape materials, a mosaic of low density and lower growing planting configurations, and properly spaced and pruned trees and shrubs, or, alternatively, a minimalist type landscape that would have few or no trees and shrubs. This zone should be a firesafe landscape that is not overly dense with vegetation and should be designed and properly maintained in a manner to provide adequate horizontal and vertical spacing between various vegetation types. Landscape flora should primarily be composed of drought tolerant species and plants with a higher moisture content that have a greater resistance to fire (e.g., native bunch grasses, succulents, ferns, among several other options [consult The Preserve's Design Review Board (DRB) regarding approved landscaping plants and materials]). Landscape plants and plant groupings should not be allowed to get too dense and should be properly maintained (i.e., pruned and thinned) to remove dense, unhealthy and dead plant material that is highly flammable. Larger landscape plants, such as trees and shrubs, should not be located too close to one another. The taller and wider the shrubs, trees or plant groupings the more spacing is needed between them. A properly maintained landscape mosaic with minimal vegetation primarily consisting of low growing and higher moisture content plants that are more fire resistant, such as native perennial bunch grasses, should be encouraged.

DRIVEWAY ZONE – 15 FEET FROM EDGE OF DRIVEWAY PAVEMENT

Safe ingress and egress must be maintained along the driveway.

The Driveway Zone is important to allow for safe ingress and egress to the property, and to provide a location where firefighters and first responders can safely move and engage in fire response. Similar to the Homeland, vegetation along the driveway is dominated by non-native annual grasses.
   a. Grassland areas along the driveway should be mowed to a minimum of 15 feet from the edge of pavement, according to the recommendations in the grassland zone.
   b. All tree branches extending over driveway surfaces should be pruned to ensure 15 feet of vertical clearance. Whenever possible, healthy overhanging branches higher than 15 feet should be left in place to shade driveway areas, which will assist in reducing understory growth.
   c. Every residential structure shall have a dedicated fire hydrant and a hammerhead or other safe turnaround for fire equipment access as detailed in the Santa Lucia Preserve Design Guidelines. Vegetation around these facilities must be maintained as needed to ensure visibility and access, vegetation must be cleared three feet around fire hydrant.

GRASSLAND ZONE – TO A DISTANCE OF 30 FEET FROM STRUCTURES

Grassland zones must be mowed at least once annually in late spring or early summer.

Grasslands dominated by non-native annual grasses are generally dry and become flammable at the start of summer. As a result, grassland areas will need annual attention by mowing prior to the summer season. By mowing in late spring, native grasses and wildflowers are retained and will contribute to reduced fuel loads and a lower fire hazard condition. Non-native invasive weed species, such as French broom, poison hemlock and thistles should be removed annually.

As previously discussed, most of Lot 253 is dominated by annual grassland, oak savanna and woodland habitat. Understory vegetation in savanna and oak woodland areas is primarily composed of annual grasses. According to fire behavior predictions, grassland areas are expected to produce flame lengths less than 2 feet following vegetation management activities, which appears to be accurate assuming proper execution of vegetation management activities and the absence of extreme weather/fire conditions.

Prescriptions for grass mowing:
   a. Within 30 feet from structures, all annual grassland areas should be mowed in early summer to maintain a minimum height of 4 inches during the summer.
   b. Native perennial grasses and wildflower stands should not be mowed more frequently than 60 days, ideally shortly after they have set seed. This may require a delayed mowing schedule in wetter years to maintain their density. Consult with the Conservancy staff as needed.
   c. Trees occurring within the Grassland Zone should be treated according to the recommendations made in the Oak Savanna and Oak Woodland Zone.
   d. Coyote bush and French broom should be managed to preserve open native grasslands as part of a Conservancy approved Openlands Management Plan (OMP) at no cost. Though the majority of these areas are outside of the Grassland Zone, relative to the structure's proposed siting, reducing coyote brush and French broom will promote the grassland's integrity and increased biodiversity. The OMP will also provide directions on how to best target invasive species.

OAK SAVANNA ZONE – TO A DISTANCE OF 150 FEET

Grasses under trees must be mowed annually, and small-diameter lower tree branches must be pruned. Based on the proposed landscape architecture layout, most of the Homeland will effectively emulate conditions that of Oak Savanna.

Oak savannas consist of well-spaced individual oaks or oak groupings with clearings (areas with no canopy cover) and understory vegetation primarily composed of grasses (refer to previous photos, Figures 2, 4, 11 & 12). Both trees and grass should be maintained to provide a vertical separation between the ground and the tree canopy. This corresponds to the area mapped as coast live oak to the west of the proposed homesite. Mowing grasses under and around trees reduces fire intensity and rate of spread of fire to an acceptable level and diminishes the possibility that fire can climb into the tree canopy. Pruning small lower tree branches, as noted below, will reduce the possibility that a fire can spread into the canopy.

Highly flammable invasive weed species, such as French broom, poison hemlock and thistles should be removed annually. According to fire behavior predictions, many areas of oak savanna are expected to produce flame lengths ranging from 0-2 feet following vegetation treatments, which appears to be accurate assuming property execution of vegetation management activities and the absence of extreme weather/fire conditions.

Prescriptions for grass mowing:
   a. Within 30 feet of structures, all grassland areas should be mowed in early summer to a height of 4 inches, according to the recommendations in the Grassland Zone.
   b. Within 100 feet of structures, all grasses growing under trees, out to 6 feet beyond the driplines of trees, should be mowed in early summer to a height of 4 inches.
   c. Within 30-100 feet of structures (depending on slope and other factors), grasses growing in the open, away from trees, does not need to be mowed.
   d. Trees occurring within the Oak Savanna and Grassland Zone should be treated according to the recommendations made in the Oak Woodland Zone.
   e. Coyote brush and other shrub species occurring within the Grassland Zone may be removed to maintain open grasslands as part of an approved Lot-Specific Plan.

Prescriptions for removing dead wood on the ground:
   a. Throughout the Fuel Management Zone (FMZ), remove all dead branches on the ground smaller than 6-inch diameter.
   b. Large dead material located within the FMZ may be removed or relocated as recommended by a Lot-Specific Plan. Dead limbs larger than 8 inches diameter in the Openlands portion of the FMZ should remain on the site if isolated from dead material that is smaller than 4-inches in diameter, if not under a tree canopy, or if moved at least 100 feet from the structure. Large woody material by itself does not ignite readily and does not produce long flames. Retaining these features in open areas serves a beneficial purpose of retaining soil moisture and supporting nutrient cycling and wildlife habitat. Once dead logs become rotted through and friable, they should be removed or scattered in the general area to avoid a concentration of lighter fuels.

Prescriptions for tree pruning:
   a. All branches, living or dead, less than 3 inches diameter in width and less than either 8 feet from the ground or 3 times the height of any understory shrubs, whichever is greater, shall be removed. Lower branches of trees should be pruned to 8 ft in height or no more than a 1/3 of the height of the tree. Care should be taken to remove only branches smaller than 3 inches in diameter.
   b. Living branches that are greater than 3 inches in diameter but lower than 8 feet in height can be beretained, provided that the area within the dripline of trees is maintained. Oaks with large living limbs resting on the ground need not be removed, but all ground debris around and beneath the limbs must be removed to reduce fire risk.
   c. Dead limbs less than 8 feet in height shall be removed.
   d. In landscaped areas, healthy tree branches less than 3 inches in diameter or 8 inches diameter if split or diseased, should be removed to provide vertical clearance of 3 times the height of the understory plants, or 8 feet above understory plants, whichever is greater.
   e. Once initial pruning is performed, tree pruning is likely to be needed in frequently, on an interval of about once every 3 to 5 years.
   f. Do not thin or prune the tree canopy, as this will provide increased sunlight penetration that will encourage more plant growth in the understory, resulting in increased risk that fire will spread to the tree canopy.

OAK WOODLAND ZONE – TO A DISTANCE OF 150 FEET

Understory plants must be kept short, and small lower tree branches must be removed.

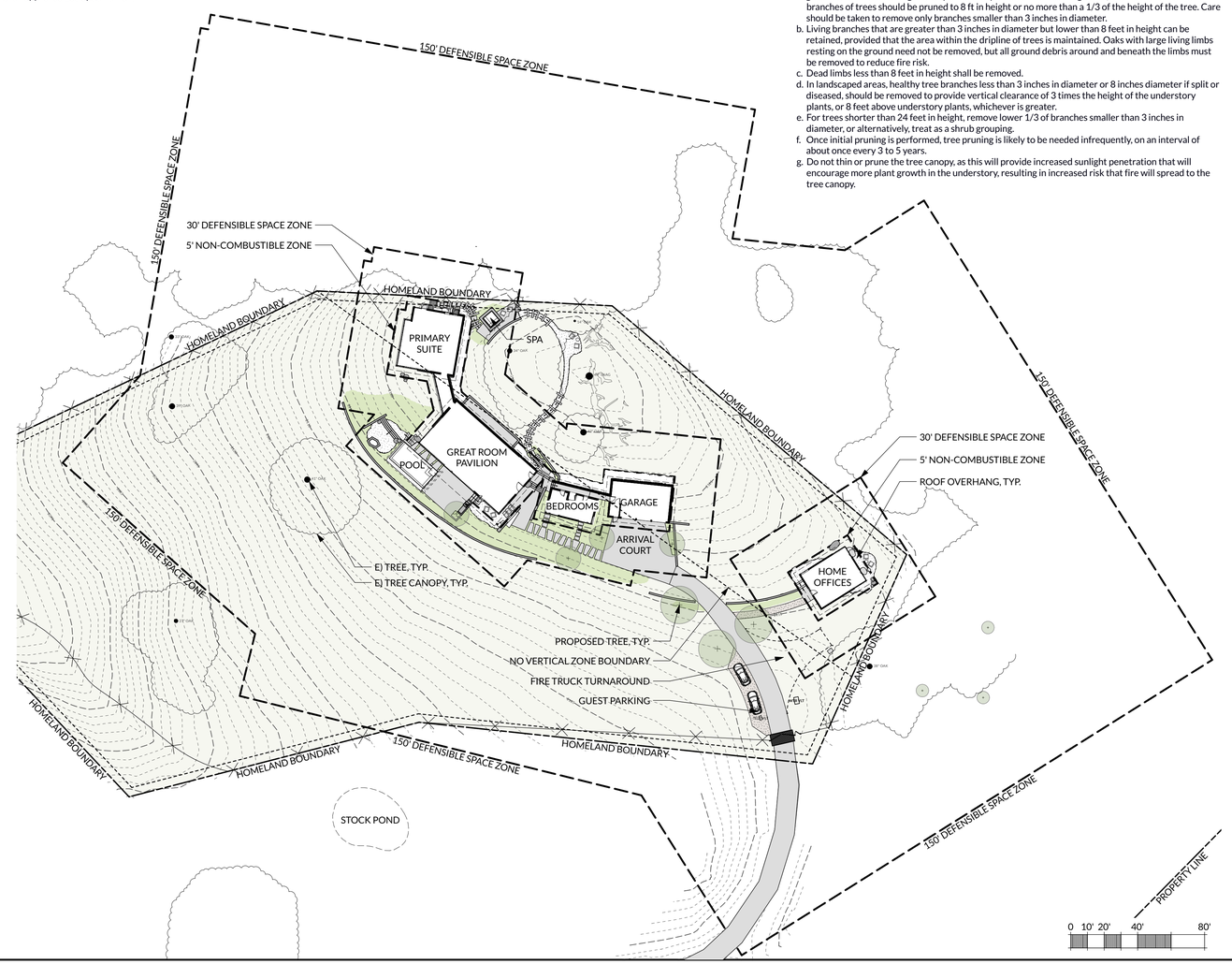
The woodland areas on the property consist of blue oak, valley oak and coast live oak trees in moderate to steep terrain. Understory fuels primarily consist of non-native annual grasses, some stands of exotic broadleaf weeds, a relatively low density of native shrub species, and some fallen tree limbs and other dead material.

The understory of oak woodland habitat includes shade tolerant shrubs and grasslands. The goal of vegetation management activities is to maintain an existing woodland with a short-statured understory of grasses (preferably native perennial grasses), forbs, herbaceous plants and perennial shrubs, and a tree canopy at least 8 feet above the ground. An initial treatment will be required to prune smaller branches of trees up to 8 feet above the ground and to reduce density and stature of native understory shrubs. Non-native invasive shrubs and weeds should be controlled, contained, managed and removed. After the initial treatment, annual maintenance will be needed to cut back shrub sprouts in order to maintain a maximum height of 2 to 3 feet. According to fire behavior predictions, many areas of oak woodland are expected to produce flame lengths of less than 4 feet following vegetation management activities, with pockets of higher fire intensity.

Prescriptions for understory maintenance:
   a. Within 30 feet from structures, at the beginning of each summer ensure that the herbaceous and grass understory is maintained at a maximum height of 4 inches.
   b. Understory vegetation should not be completely removed. Instead, selectively remove more flammable species like coyote brush and exotic broadleaf weeds, and prune-back and remove dead branches from less flammable native species.
   c. Native understory shrubs are to be kept free of dead branches and no more than 2.5 feet in height.
   d. Leaf litter depth should not exceed 4 inches.

Prescriptions for removing dead wood on the ground:
   a. Throughout the Fuel Management Zones, remove all dead branches on the ground smaller than 6- inch diameter.
   b. Large dead material located within the FMZ may be removed or relocated as recommended by a Lot-Specific Plan. Dead limbs larger than 8 inches diameter in the Openlands portion of the FMZ should remain on the site if isolated from dead material that is smaller than 4-inches in diameter, if not under a tree canopy, or if moved at least 100 feet from the structure. Large woody material by itself does not ignite readily and does not produce long flames. Retaining these features in open areas serves a beneficial purpose of retaining soil moisture and supporting nutrient cycling and wildlife habitat. Once dead logs become rotted through and friable, they should be removed or scattered in the general area to avoid a concentration of lighter fuels.

Prescriptions for tree pruning:
   a. All branches, living or dead, less than 3 inches diameter in width and less than either 8 feet from the ground or 3 times the height of any understory shrubs whichever is greater, shall be removed. Lower branches of trees should be pruned to 8 ft in height or no more than a 1/3 of the height of the tree. Care should be taken to remove only branches smaller than 3 inches in diameter.
   b. Living branches that are greater than 3 inches in diameter but lower than 8 feet in height can be retained, provided that the area within the dripline of trees is maintained. Oaks with large living limbs resting on the ground need not be removed, but all ground debris around and beneath the limbs must be removed to reduce fire risk.
   c. Dead limbs less than 8 feet in height shall be removed.
   d. In landscaped areas, healthy tree branches less than 3 inches in diameter or 8 inches diameter if split or diseased, should be removed to provide vertical clearance of 3 times the height of the understory plants, or 8 feet above understory plants, whichever is greater.
   e. For trees shorter than 24 feet in height, remove lower 1/3 of branches smaller than 3 inches in diameter, or alternatively, treat as a shrub grouping.
   f. Once initial pruning is performed, tree pruning is likely to be needed infrequently, on an interval of about once every 3 to 5 years.
   g. Do not thin or prune the tree canopy, as this will provide increased sunlight penetration that will encourage more plant growth in the understory, resulting in increased risk that fire will spread to the tree canopy.



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REGISTERED LANDSCAPE ARCHITECT
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05.16.2025
DATE
STATE OF CALIFORNIA

WARD RESIDENCE

23 VASQUEZ TRAIL
CARMEL, CALIFORNIA
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SCALE: AS NOTED

FUEL MANAGEMENT PLAN

L3.00

PLANTING NOTES
Refer to General Landscape Notes

GENERAL
This planting design applies hydrozone/xeriscape principles including native and low water use plants grouped with like water and sun needs. Any substitutions or revisions shall comply with these principles and be approved by the LA.

As a separate line item on the bid form, include an allowance of 15% for additional plants.

PREPARATION
Planting shall be performed by persons familiar with this type of work and under the supervision of a qualified planting foreman.

Landscape contractor is responsible for amending soil in all planting areas and bringing all planting areas up to finish grade. Soil must be amended before plants are set out.

Imported topsoil shall be approved by LA. Contractor to provide source and testing data prior to delivery to the site.

Notify LA if gopher baskets are advised.

Hardscape, irrigation main line and edgers are to be installed and accepted by LA prior to setting plants.

SOIL AMENDMENT
Provide 2" cover of Diestil turkey manure (LYNGSO) or approved equal, overall planted areas. Incorporate evenly into the top 12" of soil. Amend plant pits with soil mix.

Do not till soil under existing tree canopies. Amend new plant pits only.

Soil must be amended prior to delivery and placement plants on site. Bill of Lading for amendments shall submitted to the Landscape Architect for approval.

PLANTING
Select plant material that is healthy, vigorous, natural in form and free of pests and disease. All plant material to be approved by the LA prior to planting.

All trees shall be accepted or selected by LA prior to delivery to the site. Confirm with LA method of approval; Photo approval or nursery inspection.

Plant selection has been carefully coordinated with the owner, with specific varieties being selected for specific reasons. Confirm final varieties prior to ordering. If species is not indicated on the plant list, confirm with LA prior to ordering. If plant material specified is not available, LA may select alternative varieties. No unapproved substitutions will be accepted on site.

Plant material locations shown are diagrammatic and may be subject to change in the field by the LA before the maintenance period begins. LA reserves the right to make minor adjustments in tree locations after planting and at no cost to the owner.

Plant trees before container stock. Paint out or stake locations of trees for approval prior to digging tree pits.

Deeply soak each plant in the container, prior to planting. Then thoroughly soak the plant pit, after planting.

Plant crowns are to be set slightly higher than existing grade, to ensure positive drainage and to avoid crown rot. Trees are to be set higher than existing grade to accommodate for settling. Confirm height with LA. Ensure that soil is backfilled uniformly with no air pockets between rootball and native soil.

Remove all existing stakes, ties and labels from plant material, at time of planting. Leave labels on roses and fruit trees.

Double stake all trees, 15 gallon and 24" box, with rubber & wire tree ties. Use three stakes for larger trees.

MULCH
Finish all planter areas with 3" minimum of Forest Floor Mulch, or approved equal. Confirm with LA prior to delivery to the site.

Leave planters in a clean, smooth condition. Hold mulch back 2" from crown of trees. Do not bury crowns.

All irrigation line shall be covered and no visible.

HILLSIDE PLANTINGS (25% slope and greater)
Prepare plant pits as detailed and install plants and sub irrigation lines.

Install Jute Mesh after planting of larger container plantings and installation of sub irrigation.

Plant smaller plant material (1 gallon and smaller) and set surface irrigation after installation of jute mesh.

Mulch entire area after all planting, irrigation and jute mesh are installed. Completely cover mesh with a minimum 3" of mulch.

SEEDING
See Planting Legend on sheet L3.10

SUBMITTALS
A. Contractor to submit plant list prior to purchasing

B. Contractor to provide bill of lading/receipts for soil amendments and mulch, prior to placing plants.

C. Contractor to submit copies of shipping orders for all plant material, to confirm varieties of plants shipped.

AT COMPLETION
Refer to Irrigation Notes & Specifications. Ensure that irrigation emitters are properly placed so that root balls receive water and crown of plant will not rot.

The contractor shall maintain all planted stock for a period of 30 days after final acceptance by the owner.

The contractor shall guarantee a period of 90 days for container stock and trees in 24" box trees and larger shall be guaranteed for one year after final acceptance by the owner.

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SCALE: NTS

PLANTING NOTES

L3.01

RESEEDED MEADOW LEGEND

MEADOW - SUN MIX

Plant List - Seed Mix - Premium Grassland Blend

Qty	ID	Botanical Name	Common Name
25%		Danthonia californica	**California Oatgrass**
40%		Stipa pulchra	**Purple Needlegrass**
5%		Stipa lepida	**Foothill Needlegrass**
10%		Melica californica	**California Oniongrass**
20%		Wildflower Blend	

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SCALE: 1/16" = 1'-0"

HOMELAND - PLANTING PLAN

L3.10

L3.11 Plant List

Qty	ID	Botanical Name	Common Name	Scheduled Size	WUCOLS	Remarks
Trees						
1	AME	Amelanchier arborea	**Downy Serviceberry**	36" Box	M	
3	QUA	Quercus agrifolia	**Coast Live Oak**	60" Box	VL	
3	QUD	Quercus douglasii	**Blue Oak**	15 Gal	L	
Shrubs						
3	PFJ	Phlomis fruticosa	**Jerusalem Sage**	5 Gal	L	
Perennials						
7	EWS	Echinacea purpurea 'White Swan'	**Coneflower**	1 Gal	M	
3	PER	Perovskia atriplicifolia	**Russian Sage**	5 Gal	L	
47	SNC	Sisyrinchium bellum 'North Coast'	**North Coast Blue Eyed Grass**	1 Gal	VL	
Vines						
Ornamental Grasses						
34	DES	Deschampsia cespitosa	**Tufted Hair Grass**	5 Gal	L	
24	MUH	Muhlenbergia rigens	**Deer Grass**	5 Gal	L	
Cacti & Succulents						
21	DUD	Dudleya pulverulenta	**Dudleya**	5 Gal	L	
Seeding						
		Sun Mix - See sheet L3.10	**Native Grasses & Wildflowers**			

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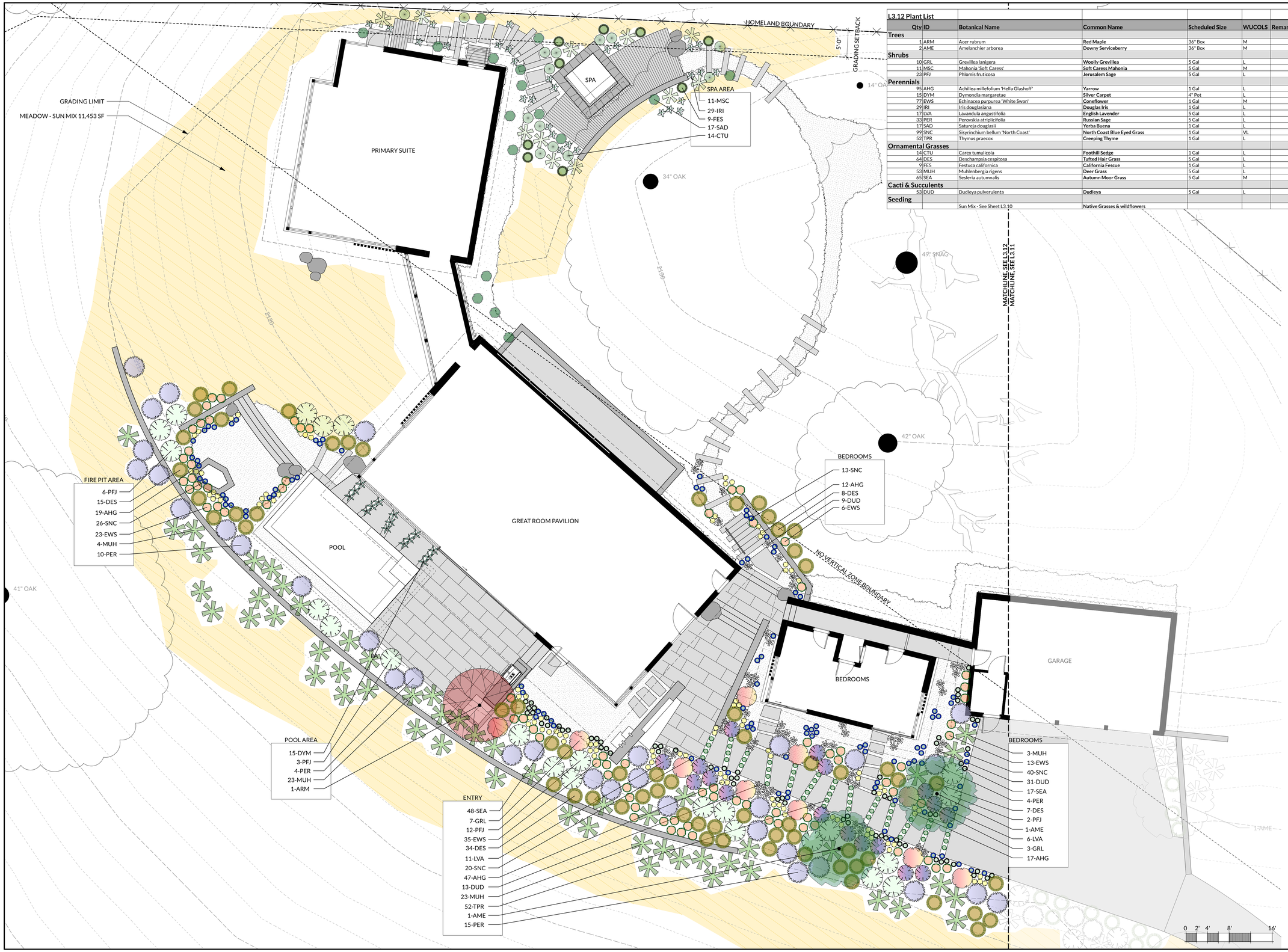
SCALE: 1/8" = 1'-0"

ENLARGED PLANTING PLAN

L3.11



L3.12 Plant List

Qty	ID	Botanical Name	Common Name	Scheduled Size	WUCOLS	Remarks
Trees						
1	ARM	Acer rubrum	**Red Maple**	36" Box	M	
2	AME	Amelanchier arborea	**Downy Serviceberry**	36" Box	M	
Shrubs						
10	GRL	Grevillea lanigera	**Woolly Grevillea**	5 Gal	L	
11	MSC	Mahonia 'Soft Caress'	**Soft Caress Mahonia**	5 Gal	M	
23	PFJ	Phlomis fruticosa	**Jerusalem Sage**	5 Gal	L	
Perennials						
95	AHG	Achillea millefolium 'Hella Glashoff'	**Yarrow**	1 Gal	L	
15	DYM	Dymondia margaretae	**Silver Carpet**	4" Pot	L	
77	EWS	Echinacea purpurea 'White Swan'	**Coneflower**	1 Gal	M	
29	IRI	Iris douglasiana	**Douglas Iris**	1 Gal	L	
17	LVA	Lavandula angustifolia	**English Lavender**	5 Gal	L	
33	PER	Perovskia atriplicifolia	**Russian Sage**	5 Gal	L	
17	SAD	Satureja douglasii	**Yerba Buena**	1 Gal	L	
99	SNC	Sisyrinchium bellum 'North Coast'	**North Coast Blue Eyed Grass**	1 Gal	VL	
52	TPR	Thymus praecox	**Creeping Thyme**	1 Gal	L	
Ornamental Grasses						
14	CTU	Carex tumulicola	**Foothill Sedge**	1 Gal	L	
64	DES	Deschampsia cespitosa	**Tufted Hair Grass**	5 Gal	L	
9	FES	Festuca californica	**California Fescue**	1 Gal	L	
53	MUH	Muhlenbergia rigens	**Deer Grass**	5 Gal	L	
65	SEA	Sesleria autumnalis	**Autumn Moor Grass**	5 Gal	M	
Cacti & Succulents						
53	DUD	Dudleya pulverulenta	**Dudleya**	5 Gal	L	
Seeding						
		Sun Mix - See Sheet L3.10	**Native Grasses & wildflowers**			

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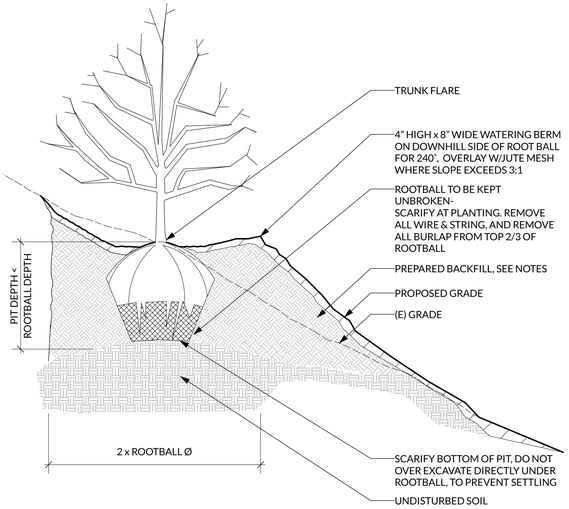
SCALE: 1/8" = 1'-0"

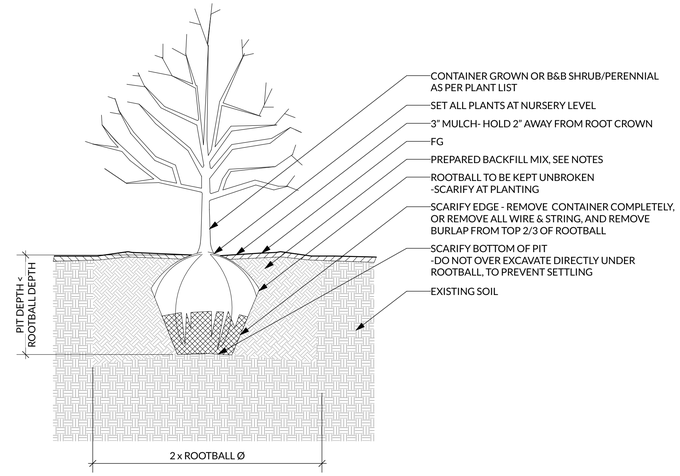
ENLARGED PLANTING PLAN

L3.12

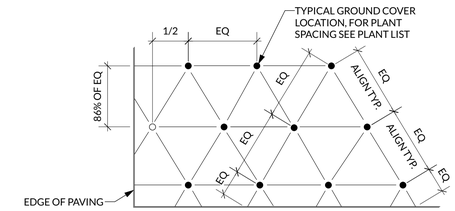


NOTE:
PLACE CROWN OF SHRUB HIGH AT PLANTING, TO ALLOW FOR SETTLING.

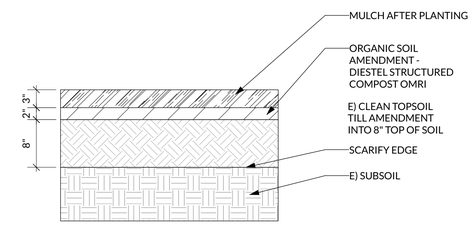
7 L3.20 PLANTING - SHRUB ON SLOPE DETAIL
Scale: NTS



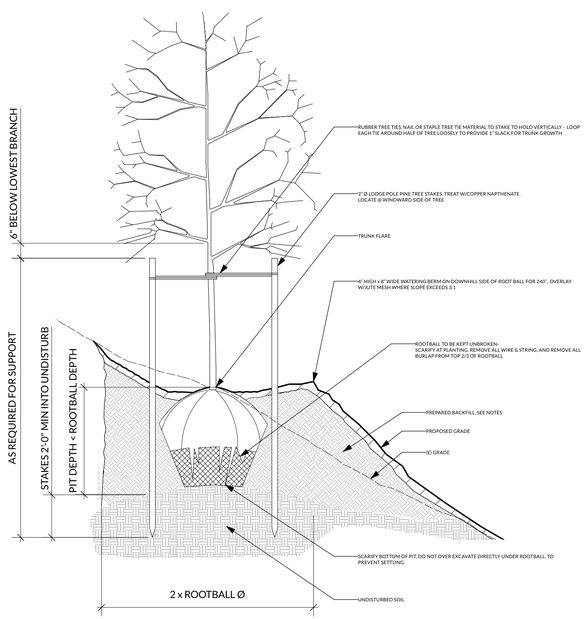
5 L3.20 PLANTING - SHRUB DETAIL
Scale: NTS



3 L3.20 TYPICAL GROUND COVER SPACING
Scale: 1" = 1'-0"



2 L3.20 TYP SOIL DETAIL
Scale: 1" = 1'-0"



NOTE:
PLACE CROWN OF TREE HIGH AT PLANTING, TO ALLOW FOR SETTLING.

6 L3.20 PLANTING - TREE ON SLOP DETAIL
Scale: NTS

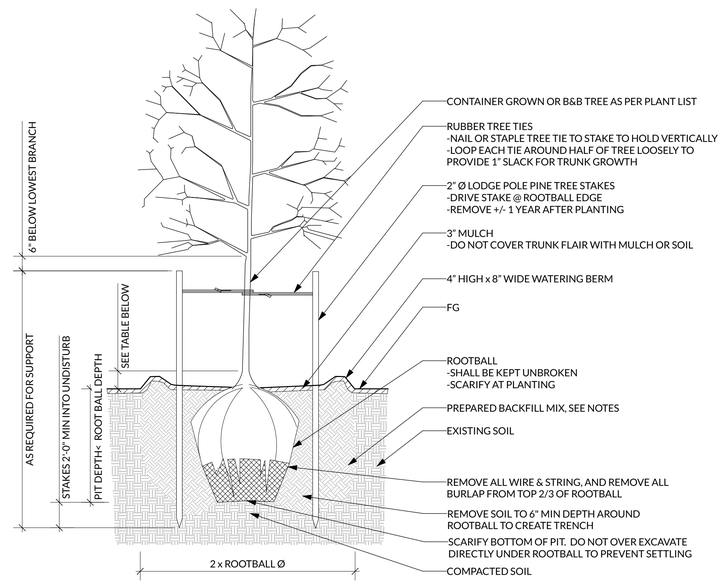


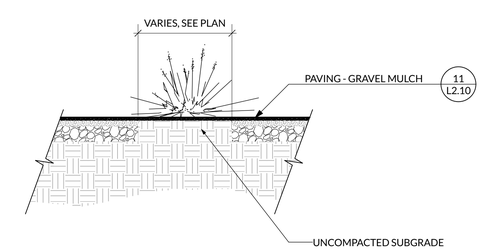
TABLE:

SIZE OF TREE	DISTANCE BOTTOM OF TRUNK FLAIR SITS ABOVE FINISH GRADE
15 GAL	6" HIGH MIN
24" BOX	9" HIGH MIN
36"-60" BOX	1'-0" HIGH MIN

-CONFIRM FINAL HEIGHT WITH PARTNER - BASED ON SOIL TYPE

4 L3.20 PLANTING - TREE DETAIL
Scale: NTS

CONFIRM WITH LA IF DRAIN LINES ARE NEEDED IN TREE PIT



1 L3.20 PLANT POCKET @ GRAVEL - TYP. SECTION
Scale: 1" = 1'-0"

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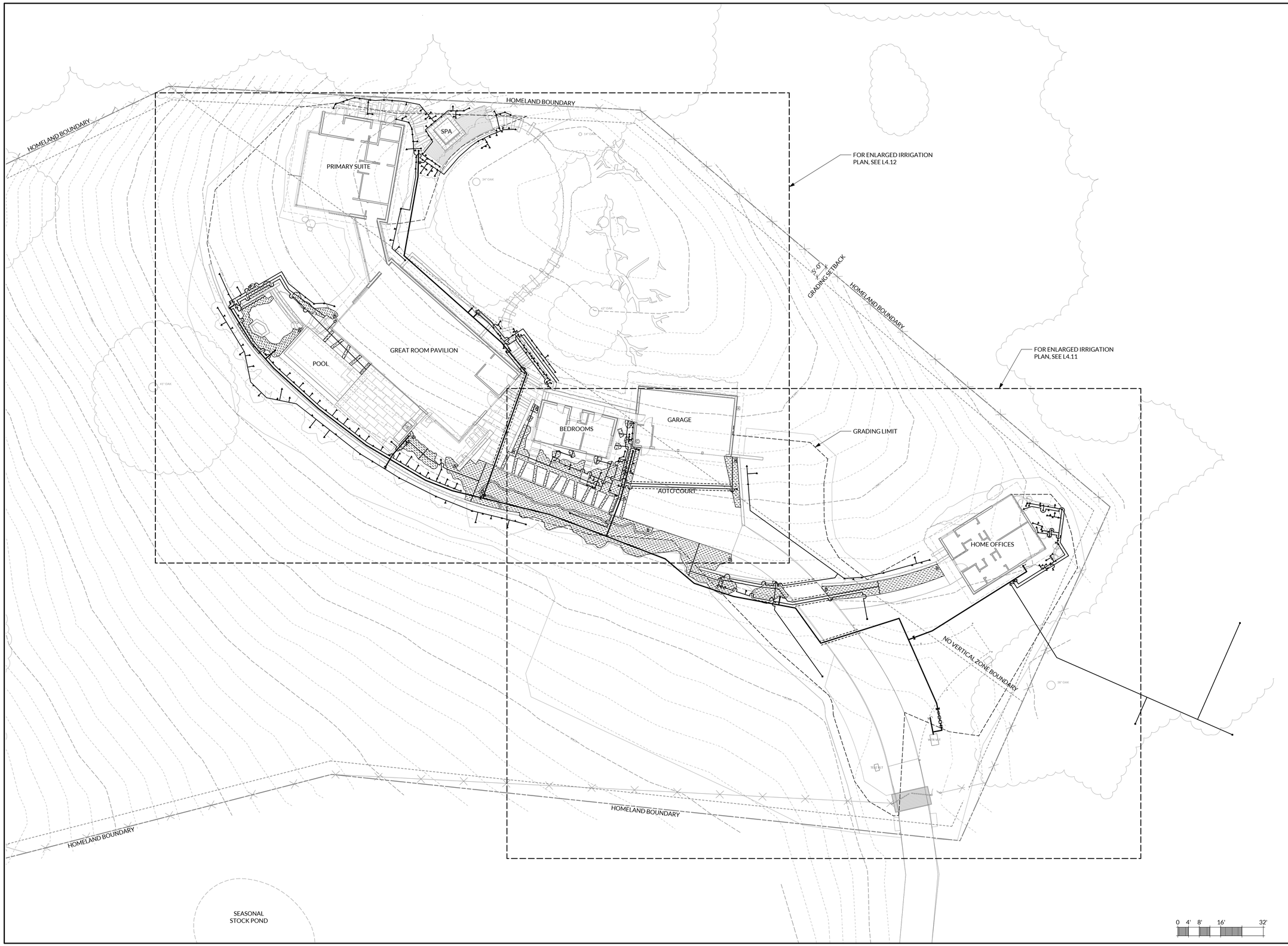
PLANTING DETAILS

L3.20



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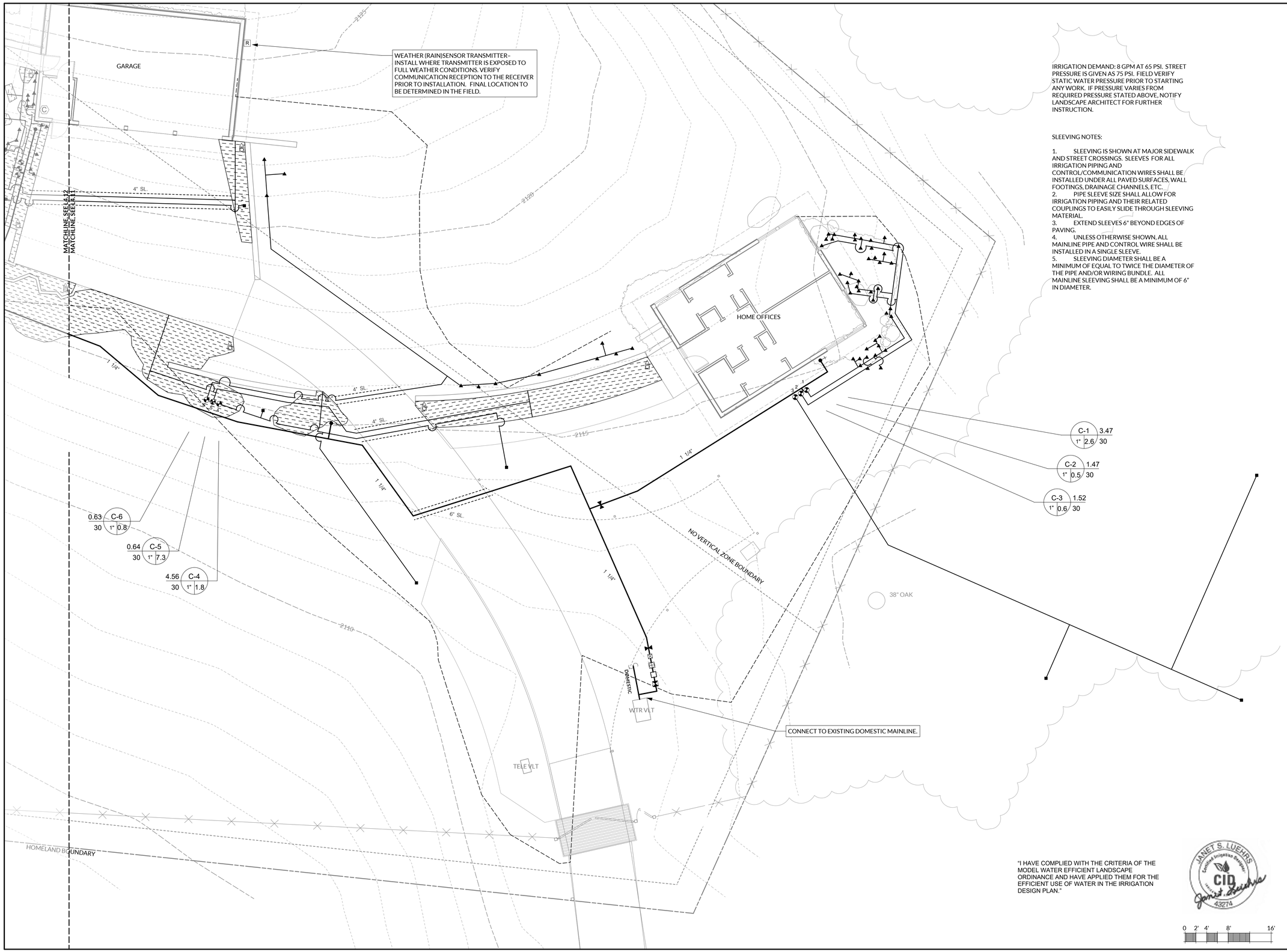
HOMELAND - IRRIGATION PLAN

L4.10



IRRIGATION DEMAND: 8 GPM AT 65 PSI. STREET PRESSURE IS GIVEN AS 75 PSI. FIELD VERIFY STATIC WATER PRESSURE PRIOR TO STARTING ANY WORK. IF PRESSURE VARIES FROM REQUIRED PRESSURE STATED ABOVE, NOTIFY LANDSCAPE ARCHITECT FOR FURTHER INSTRUCTION.

SLEEVING NOTES:

1. SLEEVING IS SHOWN AT MAJOR SIDEWALK AND STREET CROSSINGS. SLEEVES FOR ALL IRRIGATION PIPING AND CONTROL/COMMUNICATION WIRES SHALL BE INSTALLED UNDER ALL PAVED SURFACES, WALL FOOTINGS, DRAINAGE CHANNELS, ETC.
2. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL.
3. EXTEND SLEEVES 6" BEYOND EDGES OF PAVING.
4. UNLESS OTHERWISE SHOWN, ALL MAINLINE PIPE AND CONTROL WIRE SHALL BE INSTALLED IN A SINGLE SLEEVE.
5. SLEEVING DIAMETER SHALL BE A MINIMUM OF EQUAL TO TWICE THE DIAMETER OF THE PIPE AND/OR WIRING BUNDLE. ALL MAINLINE SLEEVING SHALL BE A MINIMUM OF 6" IN DIAMETER.

"I HAVE COMPLIED WITH THE CRITERIA OF THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE AND HAVE APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN."

JANET S. LUEHRS
Certified Irrigation Designer
CID
43274

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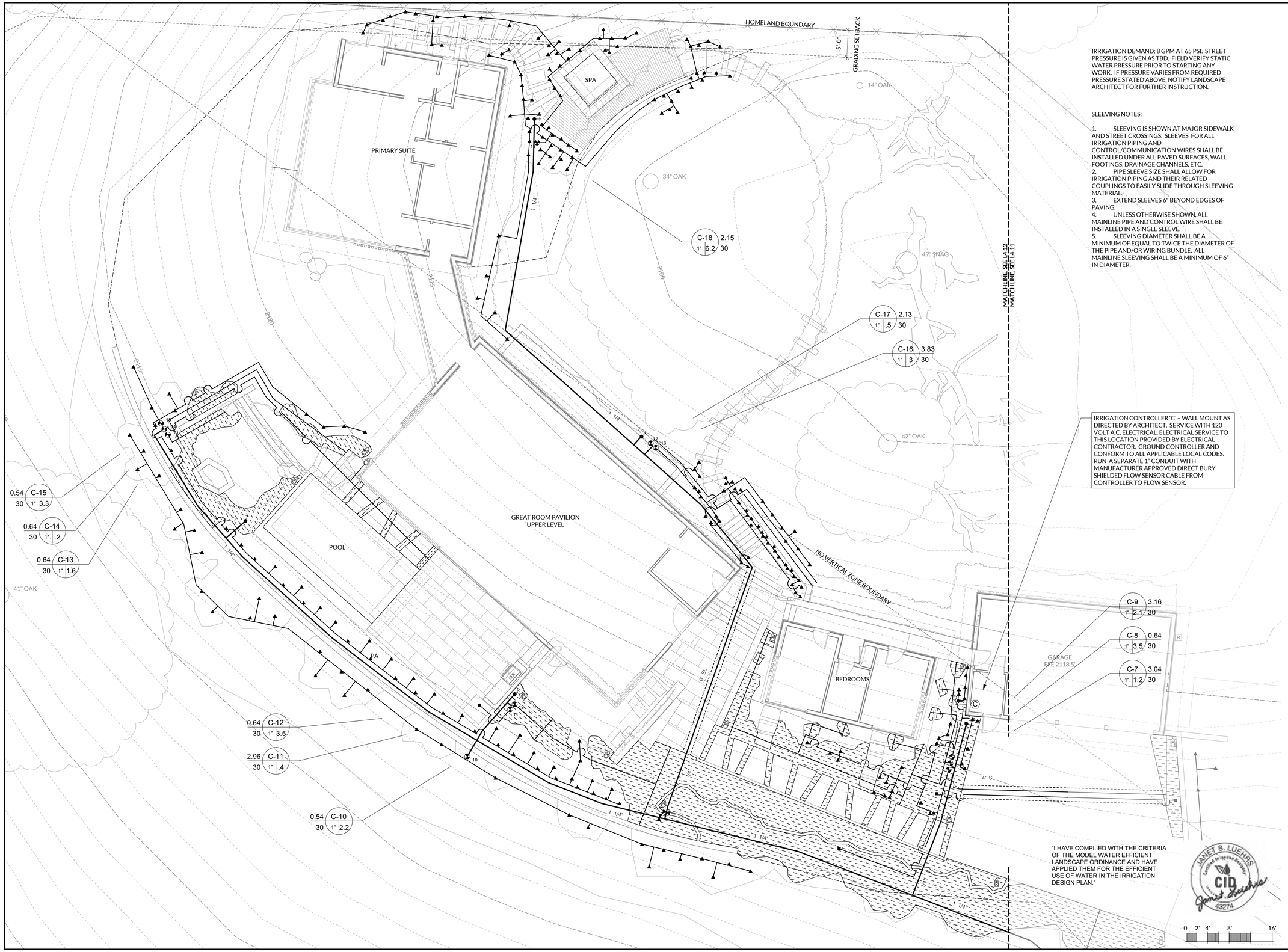
ENLARGED IRRIGATION PLAN

L4.11



IRRIGATION DEMAND: 8 GPM AT 65 PSI. STREET PRESSURE IS GIVEN AS TBD. FIELD VERIFY STATIC WATER PRESSURE PRIOR TO STARTING ANY WORK. IF PRESSURE VARIES FROM REQUIRED PRESSURE STATED ABOVE, NOTIFY LANDSCAPE ARCHITECT FOR FURTHER INSTRUCTION.

SLEEVING NOTES:

1. SLEEVING IS SHOWN AT MAJOR SIDEWALK AND STREET CROSSINGS. SLEEVES FOR ALL IRRIGATION PIPING AND CONTROL/COMMUNICATION WIRES SHALL BE INSTALLED UNDER ALL PAVED SURFACES, WALL FOOTINGS, DRAINAGE CHANNELS, ETC.
2. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL.
3. EXTEND SLEEVES 6" BEYOND EDGES OF PAVING.
4. UNLESS OTHERWISE SHOWN, ALL MAINLINE PIPE AND CONTROL WIRE SHALL BE INSTALLED IN A SINGLE SLEEVE.
5. SLEEVING DIAMETER SHALL BE A MINIMUM OF EQUAL TO TWICE THE DIAMETER OF THE PIPE AND/OR WIRING BUNDLE. ALL MAINLINE SLEEVING SHALL BE A MINIMUM OF 6" IN DIAMETER.

IRRIGATION CONTROLLER 'C' – WALL MOUNT AS DIRECTED BY ARCHITECT. SERVICE WITH 120 VOLT A.C. ELECTRICAL. ELECTRICAL SERVICE TO THIS LOCATION PROVIDED BY ELECTRICAL CONTRACTOR. GROUND CONTROLLER AND CONFORM TO ALL APPLICABLE LOCAL CODES. RUN A SEPARATE 1" CONDUIT WITH MANUFACTURER APPROVED DIRECT BURY SHIELDED FLOW SENSOR CABLE FROM CONTROLLER TO FLOW SENSOR.

"I HAVE COMPLIED WITH THE CRITERIA OF THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE AND HAVE APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN."

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DATE:	ISSUE:
05.16.2025	Combo Permit Set

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

ENLARGED IRRIGATION PLAN

L4.12

IRRIGATION NOTES

1. THE CONTRACTOR SHALL REVIEW RELATED DRAWINGS AND SHALL ENSURE COORDINATION WITH ALL APPLICABLE TRADES PRIOR TO SUBMITTING BID.

2. THE IRRIGATION SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES BY LICENSED CONTRACTORS AND EXPERIENCED WORKERS. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND FEES RELATING TO THEIR WORK.

3. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE. AVOID ANY CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING AND ARCHITECTURAL FEATURES.

4. PARALLEL PIPES MAY BE INSTALLED IN COMMON TRENCH. PIPES ARE NOT TO BE INSTALLED DIRECTLY ABOVE ONE ANOTHER. TRENCHES SHALL BE AMPLE SIZE TO PERMIT THE PIPES TO BE LAID AT THE ELEVATIONS INTENDED AND TO PERMIT SPACE FOR JOINING.

5. CONTRACTOR SHALL RESTORE SURFACES, EXISTING UNDERGROUND INSTALLATIONS, ETC., DAMAGED OR CUT AS A RESULT OF EXCAVATIONS, TO ORIGINAL CONDITIONS IN A MANNER APPROVED BY THE OWNER'S REPRESENTATIVE.

6. DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.

7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BECOME FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, ETC. COORDINATE WORK WITH THE GENERAL CONTRACTOR AND OTHER SUBCONTRACTORS FOR THE LOCATION AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, PAVING, STRUCTURES, ETC. CONTRACTOR TO VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO THE EXCAVATION OF TRENCHES. CONTRACTOR IS TO REPAIR ANY DAMAGE CAUSED BY THEIR WORK AT NO ADDITIONAL COST TO THE OWNER.

8. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC., WHICH MAY BE REQUIRED. CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL WORK AND PLAN WORK ACCORDINGLY, FURNISHING SUCH FITTINGS, ETC., AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. THE WORK SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID CONFLICTS BETWEEN IRRIGATION SYSTEMS, PLANTING, AND ARCHITECTURAL FEATURES.

9. ELECTRICAL CONTRACTOR TO SUPPLY 120 VAC (2.5 AMP) SERVICE TO CONTROLLER LOCATION. IRRIGATION CONTRACTOR TO MAKE FINAL CONNECTION FROM ELECTRICAL STUB-OUT TO CONTROLLER. IRRIGATION CONTROL WIRE SHALL BE #14, U.L. APPROVED FOR DIRECT BURIAL. COMMON WIRE SHALL BE #12 U.L. APPROVED AND SHALL BE WHITE IN COLOR. WIRING TO INDIVIDUAL REMOTE CONTROL VALVES SHALL BE COLOR OTHER THAN WHITE.

10. EACH CONTROLLER SHALL HAVE ITS OWN INDEPENDENT GROUND WIRE.

11. REMOTE CONTROL VALVES SHALL BE WIRED TO CONTROLLER IN SEQUENCE AS SHOWN ON PLANS. RUN WIRE FROM EACH RCV TO THE CONTROLLER. SPLICING WIRES TOGETHER OUTSIDE OF VALVE BOXES WILL NOT BE PERMITTED. ATTACH A LABEL TO CONTROL WIRE AT THE CONTROLLER AND ATTACH AN ID TAG AT EACH REMOTE CONTROL VALVE INDICATING CONTROLLER AND STATION NUMBER.

12. SPLICING OF 24-VOLT WIRES WILL NOT BE PERMITTED EXCEPT IN VALVE BOXES. LEAVE A 36" COIL OF EXCESS WIRE AT EACH SPLICE AND 100 FEET ON CENTER ALONG WIRE RUN. TAPE WIRE IN BUNDLES 10 FEET ON CENTER. NO TAPING PERMITTED INSIDE SLEEVES.

13. WIRE CONNECTORS SHALL BE 3M-DBR/Y-6 DIRECT BURY UNLESS OTHERWISE NOTED.

14. INSTALL TWO (2) SPARE CONTROL WIRES ALONG THE ENTIRE MAIN LINE. SPARE WIRES SHALL BE THE SAME COLOR (ONE WITH A WHITE STRIPE) AND OF A DIFFERENT COLOR THAN OTHER CONTROL WIRES. LOOP 36" EXCESS WIRE INTO EACH SINGLE VALVE BOX AND INTO ONE VALVE BOX IN EACH GROUP OF VALVES.

15. VALVE LOCATIONS SHOWN ARE DIAGRAMMATIC. INSTALL IN GROUND COVER/SHRUB AREAS WHERE POSSIBLE.

16. INSTALL VALVE BOXES MINIMUM 12" FROM AND PERPENDICULAR TO WALK, CURB, BUILDING OR LANDSCAPE FEATURE. AT MULTIPLE VALVE BOX GROUPS, EACH BOX SHALL BE AN EQUAL DISTANCE FROM THE WALK, CURB, ETC. AND EACH BOX SHALL BE MINIMUM 12" APART. SHORT SIDE OF VALVE BOXES SHALL BE PARALLEL TO WALK, CURB, ETC.

17. PRESSURE REGULATING DEVICES ARE REQUIRED IF WATER PRESSURE EXCEEDS THE RECOMMENDED PRESSURE OF THE SPECIFIED IRRIGATION DEVICES.

18. LOCATE HOSE BIB 12" FROM HARDSCAPE AREA.

19. FOR DRIP OR BUBBLER CIRCUITS, INSTALL KING BROS. CV SERIES CHECK VALVES IN LATERAL LINES FOR EVERY 10' OF ELEVATION CHANGE.

20. ALL MAIN LINES SHALL BE FLUSHED PRIOR TO THE INSTALLATION OF IRRIGATION BUBBLERS AND DRIP TUBING. AT 30 DAYS AFTER INSTALLATION EACH SYSTEM SHALL BE FLUSHED TO ELIMINATE GLUE AND DIRT PARTICLES FROM THE LINES.

21. FOR PROPER SOLVENT WELD OF PVC A SUITABLE PRIMER AND SOLVENT CEMENT SHALL BE USED. APPLICATION PRACTICE AND TECHNIQUE SHALL BE IN ACCORDANCE WITH THE PRIMER/CEMENT MANUFACTURER'S RECOMMENDATIONS. THE JOINING SURFACES MUST BE SOFTENED (WITH PRIMER/CEMENT) AND THE PIPE AND FITTING MUST BE ASSEMBLED WHILE THE SURFACES ARE STILL WET AND FLUID.

22. NOTIFY ARCHITECT OF ANY ASPECTS OF LAYOUT THAT WILL PROVIDE INCOMPLETE OR INSUFFICIENT WATER COVERAGE OF PLANT MATERIAL AND DO NOT PROCEED UNTIL HIS/HER INSTRUCTIONS ARE OBTAINED.

23. LOCATE BUBBLERS ON UPHILL SIDE OF TREES. TREE BUBBLERS ARE FOR ESTABLISHMENT AND DROUGHT CONDITIONS. THEY ARE TO BE TURNED OFF AFTER TREES ARE ESTABLISHED AND TURNED ON DURING DROUGHT CONDITIONS.

24. IN ADDITION TO THE SLEEVES AND CONDUITS SHOWN ON THE DRAWINGS, THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF SLEEVES AND CONDUITS OF SUFFICIENT SIZE UNDER ALL PAVED AREAS.

25. ALL EXCAVATIONS ARE TO BE FILLED WITH COMPACTED BACKFILL. BACKFILL MATERIAL SHALL BE THE EARTH EXCAVATED FROM THE TRENCH AND FREE OF ROCKS AND OTHER FOREIGN COURSE MATERIAL. COMPACT BACKFILL TO A MINIMUM OF 90 PERCENT OF ORIGINAL SOIL DENSITY. REPAIR ALL SETTLED TRENCHES PROMPTLY, FOR A PERIOD OF 1 YEAR AFTER COMPLETION OF WORK.

26. CONTRACTOR SHALL WARRANT THAT THE IRRIGATION SYSTEM WILL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF 1 YEAR AFTER FINAL ACCEPTANCE OF WORK.

27. ALL CONSTANT PRESSURE PIPES SHALL BE TESTED AT A MINIMUM OF 125 PSI FOR TWO HOURS. CENTER LOAD PIPING WITH A SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING OR SLIPPING UNDER PRESSURE. NO FITTINGS SHALL BE COVERED. REPAIR FAULTY JOINTS WITH NEW MATERIALS. DO NOT USE CEMENT OR CAULKING TO REPAIR LEAKS.

28. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES, AND TREE ROOTS. EXCAVATION IN AREAS WHERE 2 INCH AND LARGER ROOTS OCCUR SHALL BE DONE BY HAND. ROOTS 2 INCHES AND LARGER IN DIAMETER SHALL BE WRAPPED IN A PLASTIC BAG AND SECURED WITH A RUBBER BAND. TRENCHES ADJACENT TO TREE SHOULD BE CLOSED WITHIN 24 HOURS; WHERE THIS IS NOT POSSIBLE, THE SIDE OF THE TRENCH ADJACENT TO THE TREE SHALL BE KEPT SHADED WITH BURLAP OR CANVAS.

29. THE IRRIGATION SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN ON THE IRRIGATION DRAWINGS. VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.

30. IRRIGATION DEMAND: REFER TO IRRIGATION POINTS OF CONNECTION.

31. CONTRACTOR SHALL VERIFY REMOTE AND WEATHER SENSOR RECEPTION TO THE RECEIVER PRIOR TO INSTALLING THE CONTROLLER. IF SIGNAL IS TOO WEAK, EXTEND THE RECEIVER OUT TO A MAXIMUM OF 10' FROM THE CONTROLLER USING A 6 PIN PHONE CABLE WITH FEMALE ADAPTER. IF RECEPTION IS STILL TOO WEAK, CONTACT THE LANDSCAPE ARCHITECT FOR FURTHER INSTRUCTION.

32. OPERATE IRRIGATION CONTROLLER(S) BETWEEN THE HOURS OF 10:00 PM AND 7:00 AM.

33. NOTIFY ALL LOCAL JURISDICTIONS FOR INSPECTION AND TESTING OF INSTALLED BACKFLOW PREVENTION DEVICE.

34. NOTIFY UNDERGROUND SERVICE ALERT AT 811 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.

35. AT LEAST 10 DAYS PRIOR TO COMPLETION OF CONSTRUCTION, PROVIDE THE OWNER WITH A MAINTENANCE MANUAL. DATA SHALL BE ON 8 1/2" X 11" SHEETS, IN A 3-RING BINDER AND SHALL INCLUDE:
- ☐ INDEX SHEET WITH CONTRACTOR'S CONTACT INFORMATION AND LIST OF EQUIPMENT WITH LOCAL MANUFACTURER'S REPRESENTATIVES.
- ☐ CATALOG AND PARTS SHEET OF ALL MATERIAL AND EQUIPMENT.
- ☐ COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL EQUIPMENT.
- ☐ COMPLETE AND DATED MANUFACTURER'S WARRANTIES.

36. AT COMPLETION OF MAINTENANCE PERIOD, PROVIDE OWNER WITH THREE (3) EACH OF ALL OPERATING AND SERVICING KEYS AND WRENCHES REQUIRED FOR COMPLETE MAINTENANCE AND OPERATION OF ALL VALVES. PROVIDE TWO (2) EACH OF KEYS TO CONTROLLER CABINETS.

37. A DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES SHALL BE KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT MANAGEMENT PURPOSES.

38. A CERTIFICATE OF COMPLETION SHALL BE FILLED OUT AND CERTIFIED BY EITHER THE DESIGNER OF THE LANDSCAPE PLANS, IRRIGATION PLANS, OR THE LICENSED LANDSCAPE CONTRACTOR FOR THE PROJECT.

39. AN IRRIGATION AUDIT REPORT SHALL BE COMPLETED AT THE TIME OF FINAL INSPECTION. THE IRRIGATION CONTRACTOR SHALL ARRANGE AND PAY FOR THE AUDIT. THE AUDIT MUST BE PERFORMED BY A THIRD PARTY CERTIFIED LANDSCAPE IRRIGATION AUDITOR.

IRRIGATION LEGEND

SYMBOL	MODEL NUMBER	DESCRIPTION	PSI	FLOW RATE (GPM)
■	HEB-60	HUNTER PRESSURE COMPENSATING DRIP BUBBLER INSTALL TWO BUBBLERS PER TREE	35	6 GPH (.1 GPM)
▲	HEB-40	HUNTER PRESSURE COMPENSATING DRIP BUBBLER INSTALL ONE BUBBLERS PER SHRUB	35	4 GPH (.07 GPM)
△	EBV-0500-S	NDS BALL VALVE FOR FLUSHING		
◙	ECO-ID	HUNTER OPERATION INDICATOR		
NOT SHOWN	PLD-ARV	HUNTER AIR VENT		
	ICZ-101-40 / 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 (5.1-20 GPM)		
	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)		
●+	363LF	ARROWHEAD-CHAMPION LEAD-FREE NO-KINK HOSE BIB WITH INTEGRAL VACUUM BREAKER		
⋈	T-113-LF	NIBCO LEAD FREE GATE VALVE (LINE SIZE)		
⊠	HFS-FCT-100	HUNTER FLOW SYNC FLOW SENSOR IN 1" PVC TEE		
⊡	3200100	SUPERIOR 1" MASTER CONTROL VALVE (NORMALLY CLOSED)		
⋈	975XL2-1"	WILKINS LEAD-FREE REDUCED PRESSURE BACKFLOW PREVENTER		
□	MODEL 70	BADGER 1" IRRIGATION SUB-METER		
R	WSS-SEN	HUNTER SOLAR SYNC WIRELESS WEATHER SENSOR		
C	IC-600-PL / ICM-600 (X2) ROAM-KIT	HUNTER I-CORE MODULAR CONTROLLER (18 STATIONS) - WALL MOUNT HUNTER MAINTENANCE REMOTE		
C-1 / 1" / 15	1.6 / 30	CONTROLLER AND STATION NUMBER APPLICATION RATE (INCHES) OPERATING PRESSURE (PSI) OR AIR RELIEF VALVE QUANTITY 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.		
		LATERAL LINE: 1120-CLASS 200 PSI PVC SOLVENT WELD PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS. 12" COVER.		
		SUB-SURFACE DRIPLINE: HUNTER HDL-06-12-CV DRIPLINE. USE ONLY 17mm BARB FITTINGS. 2" COVER. (12" EMITTER SPACING, 18" ROW SPACING; .6 GPH PER EMITTER)		
		SLEEVE (SL): 1120-CLASS 200 PVC PLASTIC PIPE. 24" COVER.		

DRIPLINE NOTES:

1. PLANS ARE DIAGRAMMATIC. INSTALL DRIPLINE AND COMPONENTS PER MANUFACTURERS INSTRUCTIONS AND INSTALLATION DETAILS.

2. INSTALL DRIPLINE A MAXIMUM OF 18" APART (12" IN BIORETENTION/TURF AREAS) WITH EMITTERS TRIANGULARLY SPACED. INSTALL 2" FROM PERIMETER OF PLANTED AREA. THERE SHOULD BE A MINIMUM OF TWO DRIPLINE LATERALS IN EACH PLANTED AREA. DRIPLINE SHALL BE INSTALLED AT A CONSISTANT DEPTH THROUGHOUT THE CIRCUIT.

3. PLACE AIR/VACUUM RELIEF VALVES AT THE HIGHEST POINTS OF EACH ZONE AND JUST BELOW CHECK VALVES ON SLOPES. INSTALL ONE AIR/VACUUM RELIEF VALVE FOR EVERY 750' OF TOTAL DRIPLINE PER ZONE.

4. PLACE FLUSH VALVES AT THE HYDRAULIC CENTER OF THE EXHAUST HEADER OR AT LOW POINT ON SLOPES. INSTALL MINIMUM OF ONE FOR EVERY 15 GPM.

5. INSTALL IN-LINE CHECK VALVES ON SLOPES GREATER THAN 3% AND WHERE LOW-LINE DRAINAGE COULD CAUSE WET AREAS IN THE LOWEST AREAS OF AN IRRIGATION ZONE. CHECK VALVES SHALL BE PLACED EVERY 4-5 FEET BETWEEN DRIPLINE LATERALS AND BEFORE THE FLUSH VALVE.

6. ON ALL SLOPES AND MOUNDS, PLACE THE DRIPLINE LATERALS PARALLEL TO THE SLOPE CONTOUR WHERE POSSIBLE. INCREASE THE LATERAL SPACING BY 25% ON THE LOWER ONE-THIRD OF THE SLOPE TO AVOID EXCESS DRAINAGE.

7. PVC SUPPLY AND FLUSH LINE SIZING GUIDE (ALL SUPPLY AND FLUSH LINES SHALL BE THE SAME SIZE FOR THE ENTIRE ZONE):
- 0-8 GPM 3/4"
- 8.1-15 GPM 1"
- 15.1-25 GPM 1 1/4"

8. FITTINGS SHALL BE OF THE SAME MANUFACTURER AS DRIPLINE. TO PREVENT LEAKING AND FITTING BLOW OUTS, CAREFULLY FOLLOW THE FITTING MANUFACTURER'S INSTALLATION INSTRUCTIONS.

9. STAPLE DRIPLINE TO GROUND EVERY 3 FEET. USE ADDITIONAL STAPLES OVER EACH TEE, ELBOW OR CROSS. USE U-SHAPED STAPLES TO AVOID PINCHING THE DRIPLINE.

10. THOROUGHLY FLUSH EACH INSTALLATION SEGMENT TO ENSURE NO DEBRIS CONTAMINATION OCCURS.

11. IN TURF OR NOW-MOW GRASS AREAS, A TEMPORARY OVERHEAD SPRAY SYSTEM WILL NEED TO BE PROVIDED UNTIL THE TURF SEED OR SOD IS ESTABLISHED. OVERHEAD WATERING CAN BE DISCONTINUED WHEN EDGES OF THE SOD CANNOT BE PULLED UP. RUN THE DRIPLINE SYSTEM SEVERAL TIMES DAILY IN ADDITION TO THE TEMPORARY OVERHEAD SYSTEM.

12. RUN THE DRIPLINE SYSTEM EVERY DAY OR EVERY OTHER DAY TO ESTABLISH PLANT MATERIAL. MAINTAIN A CONSISTENT MOISTURE BALANCE IN THE SOIL. IT IS IMPORTANT TO KEEP THE SOIL MOIST WITHOUT SATURATION.

LATERAL LINE SIZING CHART

SPRINKLER TYPE	GALLONS PER MINUTE	PIPE SIZE
SPRAYS & BUBBLERS	1-5	3/4"
	6-10	1"
	11-20	1 1/4"
	21-28	1 1/2"
	29-55	2"

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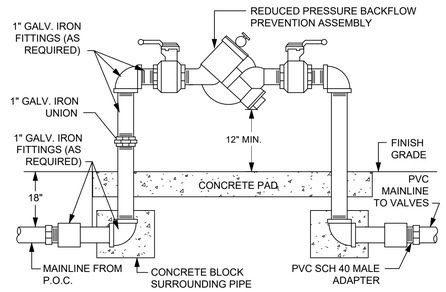
IRRIGATION NOTES & LEGEND

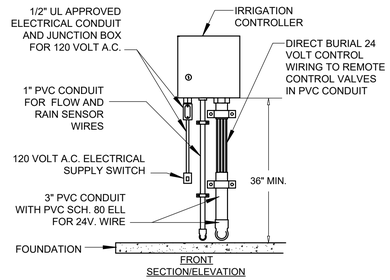
L4.20

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).



1 REDUCED PRESSURE BACKFLOW ASSEMBLY

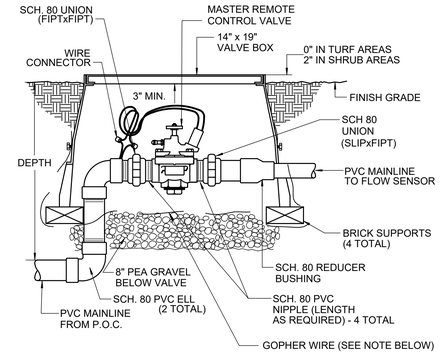
NOT TO SCALE



NOTE: CONDUIT FROM CONTROLLER TO LEVEL 1 REMOTE CONTROL VALVES AND TO LEVEL 2 STUB-OUT SHALL BE PROVIDED, ROUTED, AND INSTALLED BY ELECTRICAL CONTRACTOR.

2 INSIDE WALL MOUNT CONTROLLER DETAIL

NOT TO SCALE



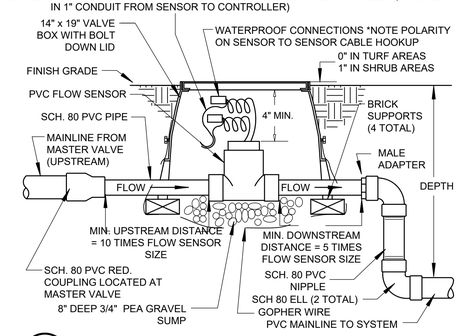
NOTE: INSTALL 1/4 INCH GALVANIZED MESH WIRE BELOW PEA GRAVEL AND WRAPPED UP THE OUTSIDE OF THE BOX. SECURE WITH SCREWS.

3 MASTER REMOTE CONTROL VALVE

NOT TO SCALE

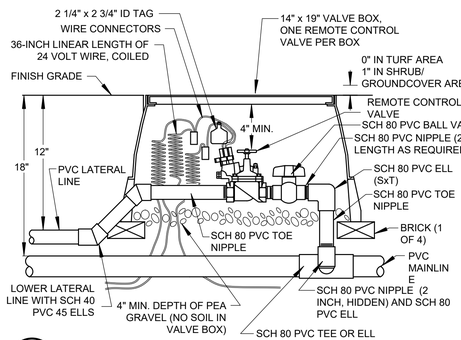
NOTE: FLOW SENSOR MUST BE INSTALLED WITH INSERT (TOP) VERTICAL AND BODY (TEE) POSITIONED HORIZONTALLY.

GAUGE GAUGE DIRECT BURIAL SENSOR CABLE, PROVIDE 36" EXTRA CABLE. (MUST BE RUN IN 1" CONDUIT FROM SENSOR TO CONTROLLER)



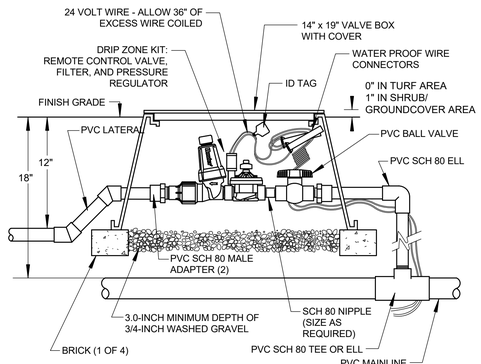
4 PVC FLOW SENSOR INSTALLATION DETAIL

NOT TO SCALE



5 REMOTE CONTROL VALVE & BALL VALVE

NOT TO SCALE



6 HUNTER DRIP ZONE KIT

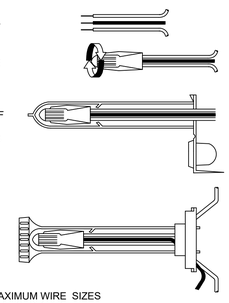
NOT TO SCALE

STEP 1: STRIP WIRES 1/2" FROM ENDS.

STEP 2: APPLY SCOTCHLOK Y SPRING CONNECTOR IN A CLOCKWISE DIRECTION.

STEP 3: INSERT SPLICE TO BOTTOM OF GEL-FILLED TUBE. CHECK TO MAKE SURE CONNECTOR HAS BEEN PUSHED PAST LOCKING FINGERS AND IS SEATED AT BOTTOM OF TUBE.

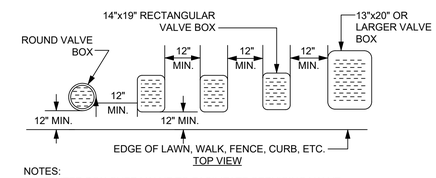
STEP 4: POSITION WIRES IN WIRE CHANNELS AND CLOSE INSULATOR TUBE COVER.



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

7 WIRE CONNECTION DETAIL

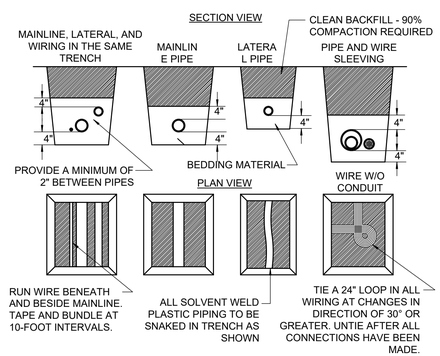
NOT TO SCALE



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 CARSON, APPLIED ENGINEERING, OR EQUAL.

8 VALVE BOX INSTALLATION DETAIL

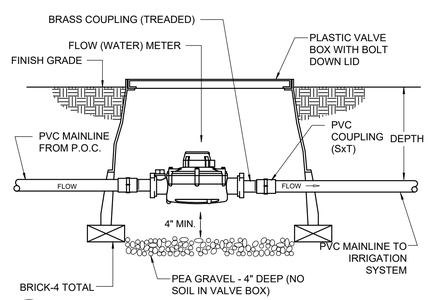
NOT TO SCALE



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.

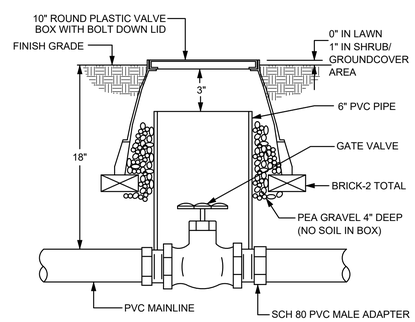
9 PIPE AND WIRE TRENCHING

NOT TO SCALE



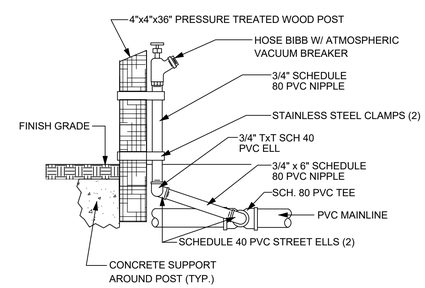
10 WATER METER (SUB-METER)

NOT TO SCALE



11 GATE VALVE DETAIL

NOT TO SCALE



12 HOSE BIBB DETAIL

NOT TO SCALE

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JANET S. LUEHRS Certified Irrigation Designer CID 43274

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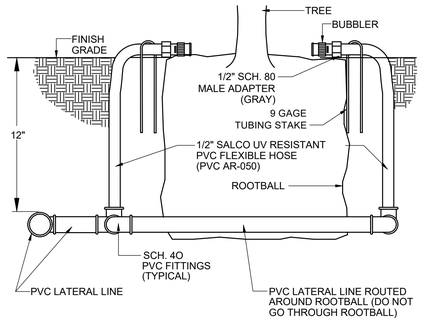
WARD RESIDENCE
23 VASQUEZ TRAIL
CARMEL, CALIFORNIA
APN: 239-121-010

DATE:	ISSUE:
05.16.2025	Combo Permit Set

SCALE: N/A

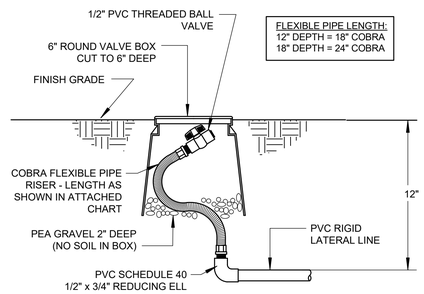
IRRIGATION DETAILS

L4.21



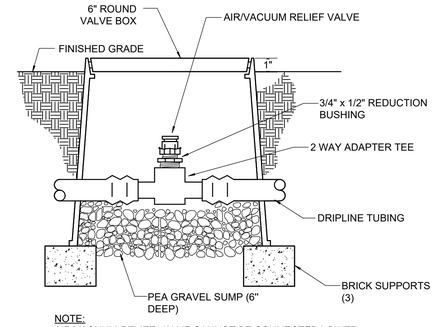
13 TREE BUBBLER DETAIL

NOT TO SCALE



14 MANUAL FLUSH VALVE DETAIL

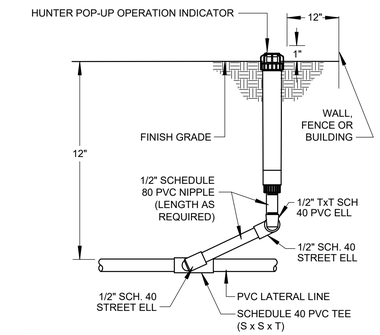
NOT TO SCALE



NOTE:
AIR/VACUUM RELIEF VALVE CANNOT BE CONNECTED LOWER THAN DRIPLINE LATERALS.

15 AIR/VACUUM RELIEF VALVE - PLUMBED TO TUBING

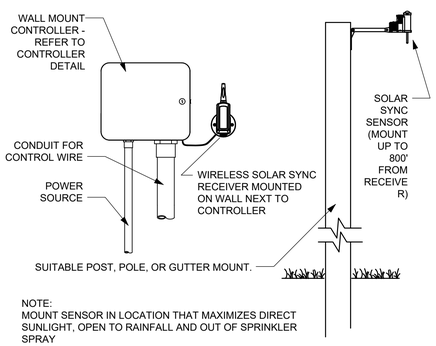
NOT TO SCALE



NOTE:
PRE-FABRICATED SWING JOINTS MAY BE USED.

16 HUNTER POP-UP OPERATION INDICATOR

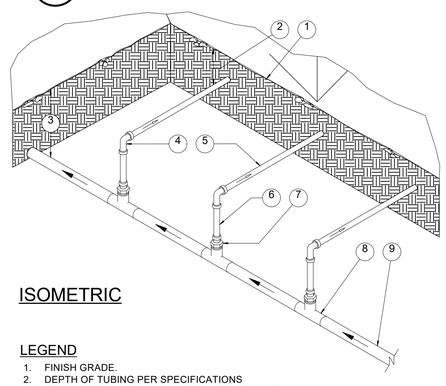
NOT TO SCALE



NOTE:
MOUNT SENSOR IN LOCATION THAT MAXIMIZES DIRECT SUNLIGHT, OPEN TO RAINFALL AND OUT OF SPRINKLER SPRAY

17 HUNTER SOLAR SYNC WEATHER SENSOR

NOT TO SCALE



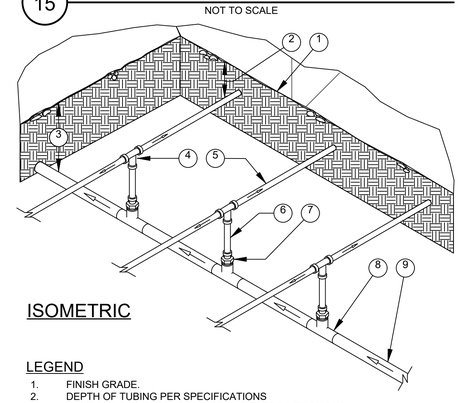
ISOMETRIC

LEGEND

1. FINISH GRADE.
2. DEPTH OF TUBING PER SPECIFICATIONS
3. DEPTH OF PVC SUPPLY MANIFOLD PER SPECIFICATIONS.
4. DRIPLINE ELL FITTING.
5. DRIPLINE LATERAL.
6. BLANK POLY TUBING, LENGTH AS NECESSARY.
7. DRIPLINE MPT ADAPTER.
8. PVC TEE (SxSxT) WITH 1/2" FPT OUTLET.
9. PVC SUPPLY MANIFOLD FROM REMOTE CONTROL VALVE ASSEMBLY.

18 END FEED MANIFOLD

NOT TO SCALE



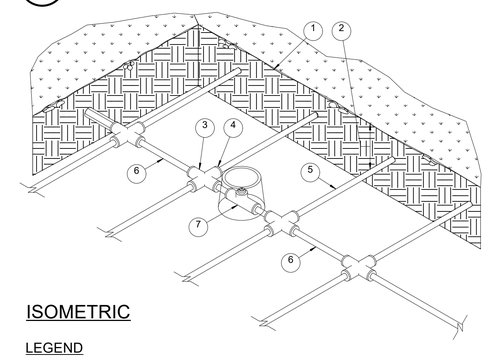
ISOMETRIC

LEGEND

1. FINISH GRADE.
2. DEPTH OF TUBING PER SPECIFICATIONS
3. DEPTH OF PVC SUPPLY MANIFOLD PER SPECIFICATIONS.
4. DRIPLINE TEE FITTING.
5. DRIPLINE LATERAL.
6. BLANK POLY TUBING, LENGTH AS NECESSARY.
7. DRIPLINE MPT ADAPTER.
8. PVC TEE (SxSxT) WITH 1/2" FPT OUTLET.
9. PVC SUPPLY MANIFOLD FROM REMOTE CONTROL VALVE ASSEMBLY.

19 CENTER FEED MANIFOLD

NOT TO SCALE



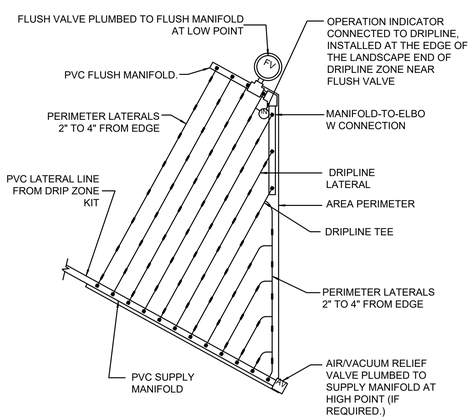
ISOMETRIC

LEGEND

1. FINISH GRADE.
2. DEPTH OF TUBING PER SPECIFICATIONS
3. PVC CROSS (SxSxSxS)
4. COMPRESSION ADAPER.
5. DRIPLINE LATERAL.
6. AIR/VACUUM RELIEF LATERAL, BLANK POLY TUBING CENTERED ON MOUND OR BERM
7. AIR/VACUUM RELIEF VALVE AT HIGH POINT. REFER TO AIR/VACUUM RELIEF VALVE DETAIL.

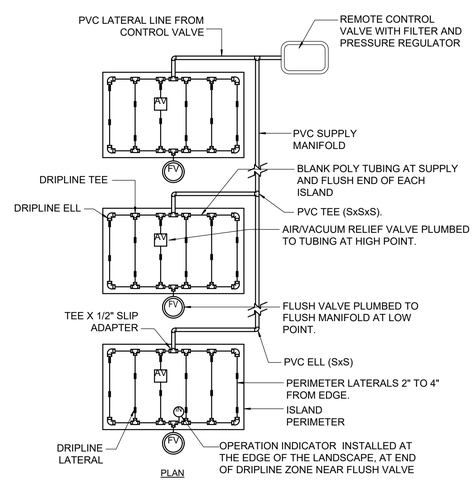
20 AIR/VACUUM RELIEF LATERAL

NOT TO SCALE



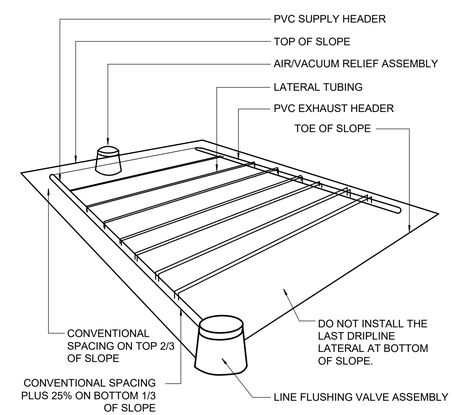
21 TYPICAL ISLAND LAYOUT END FEED

NOT TO SCALE



22 TYPICAL ISLAND LAYOUT

NOT TO SCALE



NOT
ALIGN DRIPLINE LATERALS PARALLEL TO THE CONTOURS OF THE SLOPE

23 INLINE DRIP SPACING LAYOUT ON SLOPE

NOT TO SCALE

"I HAVE COMPLIED WITH THE CRITERIA OF THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE AND HAVE APPLIED THEM FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN."

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WARD RESIDENCE
23 VASQUEZ TRAIL
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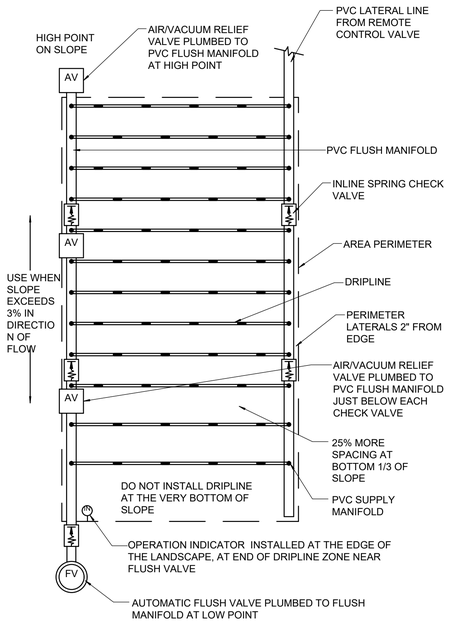
APN: 239-121-010

DATE:	ISSUE:
05.16.2025	Combo Permit Set

SCALE: N/A

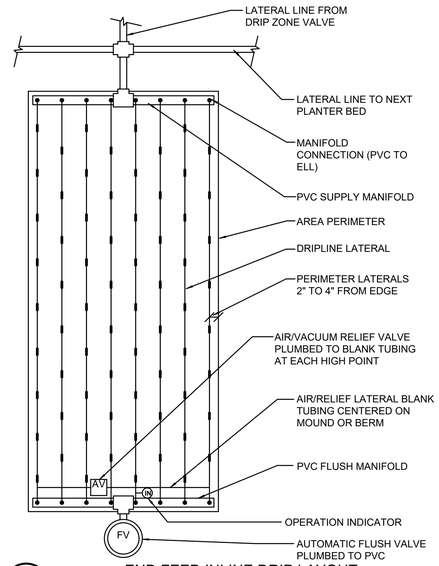
IRRIGATION DETAILS

L4.22



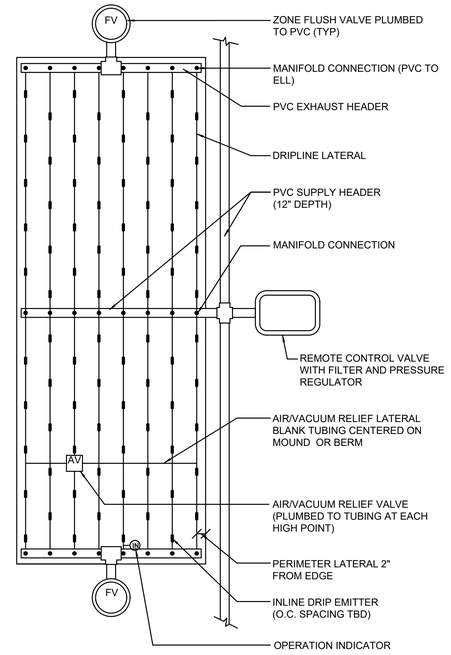
24 INLINE DRIP LAYOUT FOR SLOPES

NOT TO SCALE



25 END FEED INLINE DRIP LAYOUT

NOT TO SCALE



26 CENTER FEED INLINE DRIP LAYOUT

NOT TO SCALE

x

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APN: 239-121-010

DATE:	ISSUE:
05.16.2025	Combo Permit Set

SCALE: N/A

IRRIGATION DETAILS

L4.23

LANDSCAPE WATER USE STATEMENT

PROJECT NAME: **WARD RESIDENCE**

PROJECT ADDRESS: 23 VASQUEZ TRAIL
CITY: CARMEL

PROJECT TYPE: PRIVATE

PREPARED BY: JANET LUEHRS (CID, CLIA #43274)
BROOKWATER INC., IRRIGATION CONSULTANTS
1228 QUARRY LANE, SUITE E
PLEASANTON, CA 94566
925-855-0417
Janet@Brookwater.com (e-mail)

"I have complied with the criteria of the Water Efficient Landscape Ordinance and applied them accordingly for the efficient use of water in the irrigation design plan."

Signed: Janet Luehrs

PART ONE **MAXIMUM APPLIED WATER ALLOWANCE (MAWA)**

MAWA = ETo x .62 x [(ETAFx HA) + ((1-ETAF) x SLA)]

YEARLY ETo	46.3
CONVERSION FACTOR	0.62
ETAF	0.55
TOTAL IRRIGATED LANDSCAPE AREA (HA)	4,552 SQUARE FEET
SPECIAL LANDSCAPE AREA (SLA)	0 SQUARE FEET
LANDSCAPE WATER ALLOWANCE	**71,884 GALLONS PER YEAR**
TOTAL ACRE FEET	0.22 ACRE FEET

PART TWO **ESTIMATED TOTAL WATER USE (ETWU)**

(AVERAGE *ETAF* AND *ETWU* FROM WATER EFFICIENT LANDSCAPE WORKSHEET)

AVERAGE ETAF FOR REGULAR LANDSCAPE AREAS (TOTAL ETAF x AREA / TOTAL AREA)	0.43
ETWU FOR REGULAR LANDSCAPE AREAS	**56,317 GALLONS PER YEAR**
SITE WIDE ETAF	0.43
ETWU FOR ALL LANDSCAPE AREAS	**56,317 GALLONS PER YEAR**
TOTAL ACRE FEET	0.17 ACRE FEET

x

WARD RESIDENCE
WATER EFFICIENT LANDSCAPE WORKSHEET

Reference Evapotranspiration (Eto) **46.31**

ZONE NO.	PLANT TYPE	HYDROZONE* (PLANT WATER USE)	PLANT FACTOR (PF)	IRRIGATION METHOD**	IRRIGATION EFFICIENCY (IE)	ETAF (PF/IE)	HYDROZONE AREA (HA) (Sq Ft)	ETAF x HA	ESTIMATED TOTAL WATER USE (ETWU)	% LANDSCAPE AREA
REGULAR LANDSCAPE AREA										
C-1	SHRUB	LW	0.30	B	0.81	0.37	70	26	744	1.5%
C-2	SHRUB	MW	0.50	B	0.81	0.62	32	20	567	0.7%
C-3	TREE	LW	0.30	B	0.81	0.37	38	14	404	0.8%
C-4	TREE	VLW	0.20	B	0.81	0.25	38	9	269	0.8%
C-5	SHRUB	LW	0.30	DL	0.81	0.37	1,095	406	11,644	24.1%
C-6	SHRUB	LW	0.30	B	0.81	0.37	117	43	1,244	2.6%
C-7	TREE	MW	0.50	B	0.81	0.62	38	23	673	0.8%
C-8	SHRUB	LW	0.30	DL	0.81	0.37	512	190	5,445	11.2%
C-9	SHRUB	MW	0.50	B	0.81	0.62	64	40	1,134	1.4%
C-10	SHRUB	LW	0.30	B	0.81	0.37	390	144	4,147	8.6%
C-11	TREE	MW	0.50	B	0.81	0.62	13	8	230	0.3%
C-12	SHRUB	MW	0.50	DL	0.81	0.62	520	321	9,216	11.4%
C-13	SHRUB	MW	0.50	DL	0.81	0.62	230	142	4,076	5.1%
C-14	SHRUB	LW	0.30	DL	0.81	0.37	22	8	234	0.5%
C-15	SHRUB	LW	0.30	B	0.81	0.37	591	219	6,285	13.0%
C-16	SHRUB	LW	0.30	B	0.81	0.37	74	27	787	1.6%
C-17	SHRUB	MW	0.50	B	0.81	0.62	19	12	337	0.4%
C-18	SHRUB	LW	0.30	B	0.81	0.37	276	102	2,935	6.1%
POOL / SPA COVERED		WF	0.50		1.00	0.50	413	207	5,943	9.1%
TOTALS (REGULAR LANDSCAPE AREAS)							**4,552**	**1,961**	**56,317**	**100.0%**
SPECIAL LANDSCAPE AREA										
	0			0		1.00	0	0	0	0.0%
TOTALS (SPECIAL LANDSCAPE AREAS)							**0**	**0**	**0**	**0.0%**
TOTALS FOR ALL AREAS							***4,552***	***1,961***	***56,317***	***100%***

HYDROZONE SUMMARY		
***Hydrozone Description**	**Total Sq. Ft.**	**% of Landscape**
Cool Season Turf (CST)	0	0.0%
Warm Season Turf (WST)	0	0.0%
High Water Use Plants (HW)	0	0.0%
Bioretention Plants (BR)	0	0.0%
Medium Water Use Plants (MW)	916	20.1%
Low Water Use Plants (LW)	3,185	70.0%
Very Low Water Use Plants (VLW)	38	0.8%
Water Feature	413	9.1%
Special Landscape Area (SLA)	0	0.0%
TOTAL	4,552	100.0%

**Irrigation Method	Total Sq. Ft.	% of Landscape
Rotor (FC-R, PC-R)	0	0.0%
Multi-Stream Rotator (MR)	0	0.0%
Spray (S)	0	0.0%
Bubbler (B)	1,760	42.5%
Drip (D)	0	0.0%
In-Line Drip (DL)	2,379	57.5%
Micro Spray (MS)	0	0.0%
Other (O)	0	0.0%

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43274

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CARMEL, CALIFORNIA
APN: 239-121-010

DATE:	ISSUE:
05.16.2025	Combo Permit Set

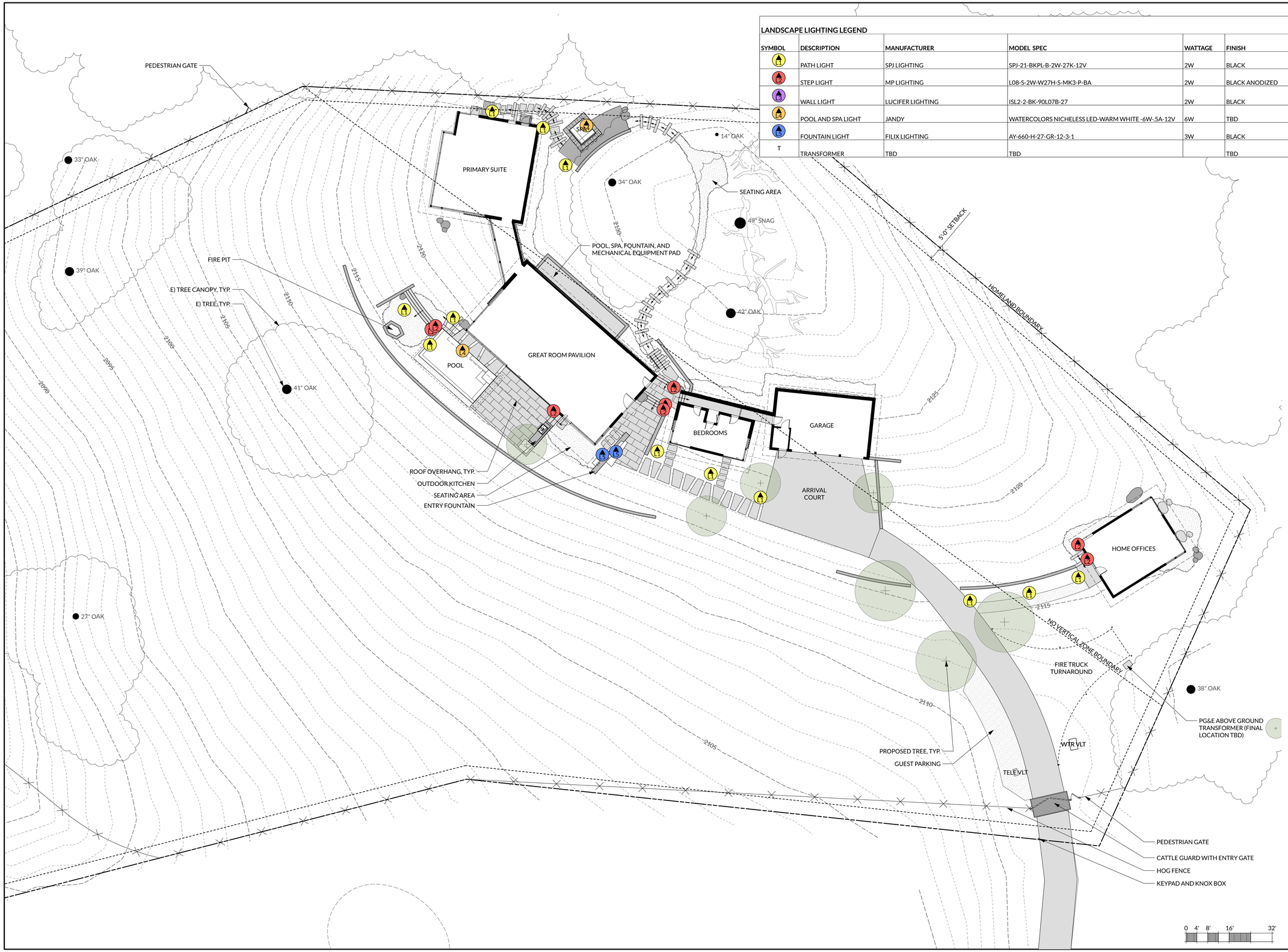
SCALE: N/A

IRRIGATION WATER CALCULATIONS

L4.30

LANDSCAPE LIGHTING LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL SPEC	WATTAGE	FINISH
L1	PATH LIGHT	SPJ LIGHTING	SPJ-21-BKPL-B-2W-27K-12V	2W	BLACK
L2	STEP LIGHT	MP LIGHTING	L08-S-2W-W27H-S-MK3-P-BA	2W	BLACK ANODIZED
L3	WALL LIGHT	LUCIFER LIGHTING	ISL2-2-BK-90L07B-27	2W	BLACK
L4	POOL AND SPA LIGHT	JANDY	WATERCOLORS NICHELESS LED-WARM WHITE -6W-.5A-12V	6W	TBD
L5	FOUNTAIN LIGHT	FILIX LIGHTING	AY-660-H-27-GR-12-3-1	3W	BLACK
T	TRANSFORMER	TBD	TBD		TBD



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REGISTERED LANDSCAPE ARCHITECT
KATHERINE B. STICKLEY
4252
SIGNATURE
05.16.2025
DATE
STATE OF CALIFORNIA

WARD RESIDENCE

23 VASQUEZ TRAIL
CARMEL, CALIFORNIA
APN: 239-121-010

DATE:	ISSUE:
05.15.2025	FINAL DESIGN REVIEW
05.16.2025	PRICING SET - 90% DD
05.16.2025	COMBO PERMIT SET

SCALE: AS NOTED

LIGHTING PLAN

L5.00

Technical Details

INCLUDED ACCESSORIES

Every light includes a construction cover, robust installation tool and white and gray cosmetic trim rings.

SMALLER SIZE, MORE FLEXIBILITY

Up to eight inches shorter than our previous models, HydroCool® lights are only 4½" (6W) or 5½" (12W and 24W) in length to fit even the narrowest walls for ultimate design flexibility.

MULTI-COLOR AND WHITE LIGHT OPTIONS

Color options for use with all major automation systems. In addition to Daylight White (5000K), Warm White (2700K) lights provide incandescent-like lighting that conforms with Dark Sky Community requirements for CCT.

WATTAGE SELECTOR GUIDE

POOL FINISH	ILLUMINATION DISTANCE Color Lights	White Lights	RECOMMENDED POWER (Watts)
Light	Up to 12 ft	Up to 16 ft	6
	12 – 20 ft	16 – 24 ft	12
	20 ft +	24 ft +	24
Medium	Up to 10 ft	Up to 14 ft	6
	10 – 16 ft	14 – 22 ft	12
	16 ft +	22 ft +	24
Dark	Up to 8 ft	Up to 12 ft	6
	8 – 12 ft	12 – 20 ft	12
	12 ft +	20 ft +	24

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4 / L5.10 — L4: POOL AND SPA LIGHT

[⌄] MP LIGHTING

L08

EXTERIOR | INTERIOR
In-grade | For ground, ceilings, walls, and stairs
• Wet, Damp, and Dry location

Ordering Information — Clear Form

Date : ____ Quantity : ____
Project : ____ Note : ____
Type : ____

Specifications

Luminaire | Example Code: L08-S-2-W30H-D-S-MK3-S6

Product	Aperture Height	Version	CCT & CRI [1]	Aperture	Mounting Kit [2] (optional)	Flange & Back Box [3]	Trim Finish [6]
L08	S standard (1.5mm) T tall (3mm)	1 1W 2 2W	Standard (80+) CRI: W22S 2200K 80+ High (90+) CRI: W27H 2700K 90+ W30H 3000K 90+ W35H 3500K 90+ W41H 4100K 90+	S single D double	MK1 vertical surface MK3 in-ground	Octagonal Aluminum Back Box with: S standard flange depth: 3-1/5" (89mm) P paving stone flange depth: 5-1/2" (138mm) [4] Pipe [5]: PIPE 1-5/8" PVC pipe length: 11-13/16" (300mm) NB no back box or flange	Aluminum Finishes: MA matte clear anodized BA black anodized BZ bronze powder coated Stainless Steel Finish: S6 stainless steel 316

System Components (Ordered Separately)

Remote Driver : ____ * Consult MP Lighting Website or Factory.

Important Notes

Specification
1. Refer to pg.2 - for Light Quality and Colour Consistency.
2. Mounting kit is ordered separately. Please consult factory.
3. For components included, refer to Luminaire Construction section. See pg.3 for back box and flange options.
4. Paving stone flange is also recommended for a better cement/concrete flow.
5. Factory set length of 11-13/16" (300mm). Visit PIPE-C for details.
6. Different finish options are only applicable to trim ring and not for LED module housing. Refer to Appendix or MP Lighting website for complete look of luminaire with different trim finish options.

Warranty Notes & Disclaimer
Malfunction and damage to product due to incompatible dimming system or misuse will not be covered under warranty. Consult MP Lighting for recommended drivers. If the fixture has an option to be installed with a dimming control system, consult a dimming system manufacturer with minimum load before installing. MP Lighting reserves the right, at its sole discretion, at any time and without notice, to make design changes to any of our products. Consult MP Lighting website for most updated documentation.

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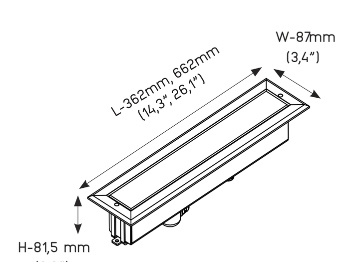
2 / L5.10 — L2: STEP LIGHT

FILIX — FILIX LIGHTING

Arpool Style
Specification Sheet



UL STD 676 swimming pool rated
CSA C22.2#89 swimming pool rated
IP68

LUMINAIRE FEATURES

Design and Application
- Installation depth max. up to 5m (16')
- Max tile thickness 25mm (1")
- Trim flange overlap 10mm (0,4")
- DMX, DALI, 0-10V compatible (remote)
- Wall and floor installation
- Infinity pools and swimming pool complexes
- Fountains and water features

Performance
- IK10, Tempered glass, crystal clear
- Chlorine and saline environment
- Stainless Steel type 316L, marine grade
- Galvanic current protection (installation housing)
- Thermal fold back technology
- Lifetime TM-21 @85C L80(14K)=81600h
- Supplied with oil and water resistant 3m (10') feed cable as standard
- CRI: > 85
- 2 Step MacAdam

Safety
- Remote power supply
- Low voltage operation
- Recessed installation

Sustainabilty
- Recyclable material

Installation housing
- AR413 - Housing Arpool Style L360
- AR415 - Housing Arpool Style L660
- AR413NSF – Housing Arpool Style Narrow L360 Side Feed
- AR415NSF – Housing Arpool Style Narrow L660 Side Feed
- AR413NBF – Housing Arpool Style Narrow L360 Back Feed
- AR415NBF – Housing Arpool Style Narrow L660 Back Feed

Power suplies
- List of proposed power supplies that are to be ordered separately.
- Click here for list of available drivers.
- Click here for voltage drop and distances.

Note:

Underwater luminaire – must be constantly submersed.

Click here to download fixure instalation manual.
Click here to download housing instalation manual.
Click here to download CAD file.
Click here to download IES-LTD data.

FILIX — filixlighting.com info@filixlighting.com
Filix reserves the right to make technical changes without notice.

Arpool Style
ORDERING INFORMATION

MODEL	
AY	
LENGHT	
360	• 362mm (14,3")
660	• 662mm (26,1")
POWER	
H	• H - 67W/m, 3000K - 4000K, 1208lm/m
	• H - 67W/m, RGBW (4000K)
COLOR TEMP.	
27	• 27 - 2700K
30	• 30 - 3000K
40	• 40 - 4000K
TW	• TW - Tunable white (2200-4000K)
RGBW	• RGBW (W 4000K)
OPTICS	
GR	• GR - Graze - 10° x 50°
VOLTAGE	
12	• 12 - 12VDC fixture voltage
24	• 24 - 24VDC fixture voltage
OPTIONS	
3	• 3' - standard feed cable 3m (10')
6	• 6 - luminaire supplied with 6m (20') feed cable
9	• 9 - luminaire supplied with 9m (30') feed cable
20	• 20 - luminaire supplied with 20m (65') feed cable
GLARE CONTROL	
1	• 1 - Half moon

FILIX

5 / L5.10 — L5: FOUNTAIN LIGHT

PATHLIGHTS
DOUBLE IMPACT®

PROJECT NAME:	TYPE:

Low glare path lights lead the way through the out of doors, as built-ins or from freestanding bollards.

ORDERING INFORMATION AND DRAWINGS - FIXTURE

FIXTURE	RATING	FLANGE FINISH	CRI / WATTAGE PACKAGE	CCT
ISL2				
ISL2 Double Impact Steplight	1 Dry / Damp (Non-Locking) 2 Wet (Locking)	POWDER COAT FINISH: WH White; BK Black; AG Satin Silver; AB Architectural Bronze; CF Custom Finish* *(Consult Factory) NATURAL FINISH: IG Industrial Gray; SS Brushed Stainless Steel; BR Brushed Bronze; NB Natural Bronze PLATED FINISH: CH Chrome* *(Increased lead time); PB Polished Oil-Rubbed Bronze* *(Increased lead time, not available for wet location); MB Matte Oil-Rubbed Bronze* *(Increased lead time, not available for wet location)	90L07B 90+ CRI, 6.9 Watts ISL2 Delivered Lumens - 242	27 2700K 30 3000K 35 3500K 40 4000K CC Custom Color (gel)* Color Temp: ____K *(Custom gels assigned unique suffix upon receipt of order. Contact Product Support for guidance.)

A LED
Regressed DC LED with slot aperture for glare-free, energy-efficient path and step lighting; suitable for dry / damp or wet applications. Dimming by power supply.

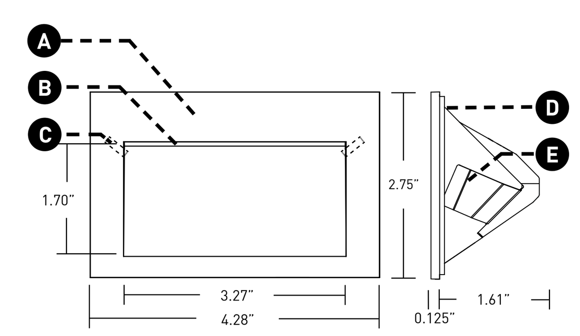
B MEDIA
Provided with sealed polycarbonate linear diffusion lens; consult factory for availability of color gels, which may achieve custom color temperatures.

C LOCKING
Discreetly hidden tamper-resistant set screws. Included with IP65 Wet location luminaire.

D GASKET
Foam gasket provided. Required for IP65 wet location applications only.

E RETENTION
Torsion spring clips secure fixture into back box, mounting plate, or appropriately sized cut-out.

- Available with Bollard mounting, please visit WEBSITE for additional information.
- Stealth SSL1 and Impact ISL1 pathlights available, please visit WEBSITE for additional information.



LUCIFER® LIGHTING COMPANY — luciferlighting.com
[DATE OF REV: 06272024]

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As part of its policy of continuous research and product development, the company reserves the right to change or withdraw specifications without prior notice.

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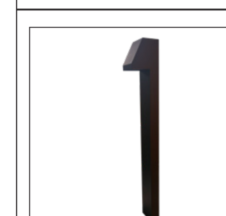
[FAX] +1-210-227-4967 — pg. 1

3 / L5.10 — L3: WALL LIGHT

SPJ LIGHTING Inc.
ARCHITECTURAL LANDSCAPE & OUTDOOR LIGHTING

SPECIFICATION SHEET

Contemporary Path Lights
SPJ-21-BKPL



MODEL: **SPJ-21-BKPL**
MATERIAL: **Solid Brass**
FINISH SHOWN: **Matte Bronze**
ELECTRICAL: **12V**
WATTAGE: **2W**
ENGINE: **FB-LS2**
LUMENS: **150**
MOUNTING: **1/2" NPT. Dual Fin Spike Included**

FINISHES
☐ Matte Bronze (MBR)
☐ Verde (V)
☐ Moss (M)
☐ Black (B)
☐ Rusty (R)
☐ Satin Brass (SB)
☐ Aged Brass (AG)
☐ Raw Copper (RC)
☐ Natural Copper (NC)

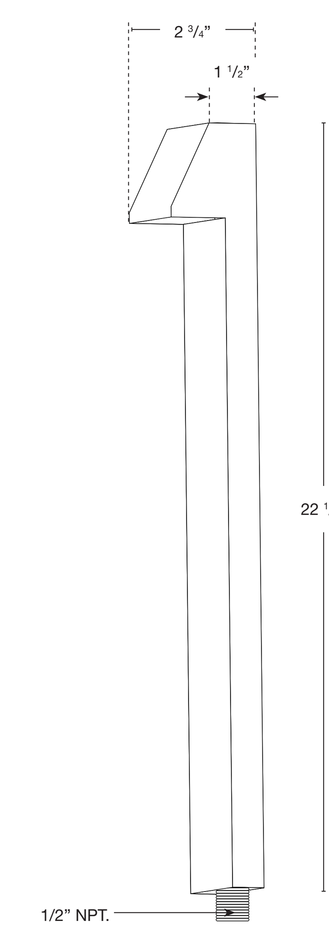
PVD PREMIUM
☐ PVD Polished (PVDP)
☐ PVD Satin (PVDS)
☐ PVD Graphite (PVDG)
☐ PVD Bronze (PVDBZ)
☐ PVD Black (PVDBL))

WATTAGE	LUMENS
☐ 2W	150

PLC Option

COLOR TEMPERATURE
☐ 2200K ☐ 5000K
☐ 2700K ☐ 6500K
☐ 3000K ☐ Amber (TF)
☐ 4000K ☐ RGBW
Custom options are available

ELECTRICAL
☐ 12V



c UL us LISTED
Wet Listed

Ordering Example	Customer Approval	Date
SPJ-21-BKPL-B-2W-27K-12V		

1 / L5.10 — L1: PATH LIGHT

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415.861.3100 arterrasf.com

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CARMEL, CALIFORNIA
APN: 239-121-010

DATE:	ISSUE:
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05.16.2025	COMBO PERMIT SET

SCALE: AS NOTED

LIGHTING CUT SHEETS

L5.10

MATERIALS LIST				
KEY	ITEM/LOCATION	SPECIFICATION	FINISH	VENDOR
S - SPA				
S-1	SPA PLASTER	TBD	TBD	WET EDGE
S-2	COPING	SYDNEY PEAK, 2" THICKNESS, RANDOM SIZING		PENINSULA BUILDING MATERIAL
S-3	COVER - AUTOMATIC	POOL COVERS INC	COLOR TBD	POOL COVERS INC
S-4	POOL TILE	MCINTYRE	TBD	MCINTYRE

POOL NOTES
Refer to General Landscape Notes

Refer to Civil Engineers drawings for Grading & Drainage.

All site civil engineering information is based on drawings prepared by:
WHITSON ENGINEERS

For structural engineering see drawings prepared by:
LENEHAN ENGINEERING

For geotechnical information see the Soils Report prepared by:
SOIL SURVEYS GROUP

For pool/spa mechanical design see plans prepared by:
TBD

A kickoff meeting with the Pool Contractor and their subs shall be held with LA, GC and all parties listed above prior to construction to coordinate construction questions and review expectations.

Pool contractor shall be responsible for the engineering, layout, excavation, construction, mechanical and plumbing, finishes and testing of swimming pool and spa as indicated in the drawings. Any discrepancies between pool contractor, structural, civil and landscape drawings must be brought to the attention of the LA prior to construction.

Construction to include installation of pool coping, automatic cover and track.

Pool Contractor shall be responsible for the securing building permits and coordinating all inspections and securing a final sign off for pool and spa construction.

The contractor shall paint out pool layout for review and approval by LA/Owner review prior to excavation and construction.

Verify that pool cover vault design conforms with landscape pool plans. Bring any discrepancy to LA prior to forming the vault.

POOL AND SPA SHALL COMPLY WITH MUNICIPAL CODE SECTION 51.032 AND THE 2001 CALIFORNIA PLUMBING CODE

Do all work in accordance with building codes in effect for _____including NEC 680.

All work will be in compliance with CA electrical codes including Article 114.

All electrical work will be bonded with GFI-protection, all steel will be bonded, pertaining to Article 680 of the NEC.

Pool/spa heating systems to comply with CA Title 24 requirements; pool & spa shall be in compliance with health & safety code section 11520-1527. See attached notes on the plan.

All equipment and pipes to be clearly labeled with direction of flow and shut off locations.

Provide 2) GFI outlets,10 – 20 ft. from pool edge, for sump pump, required for winter rains.

Pool/spa covers shall comply with all ASTM standard F1346-91 requirement.

Pool/spa covers shall be installed prior to plaster/filling with water, per uniform building codes

Pool and Spa main drains shall be separated by 3 ft. and drains shall be of anti-entrapment type.

Confirm location of skimmer(s) with LA.

Pool sub-panel shall have 30" width + 36" working clearance in front. Landscape Architect to approve location.

Provide water level controller that automatically replenishes water lost to evaporation and carries away excess water from rain. Confirm final location with LA, prior to installation

All pool equipment will be anchored per manufacturer specifications or CA State seismic loads, whichever is greater.

All work, materials and equipment to have a one-year warranty commencing on the date of the final project acceptance.

Pool and spa are to be delivered water tight, covered and filled with clear and balanced water.

SUBMITTALS
A. Provide manufacturer's catalog cut sheet information for all equipment and fittings (including color samples for fittings, pool cover…) for approval by LA

B. Confirm water treatment system options with LA/owner prior to construction. Confirm equipment location with LA.

C. Paint out pool layout on site and string line finish elevation for review with LA.

D. Confirm locations for cover switch, skimmers, spa and swim jets, fittings, spa control pad and, pool cleaner outlet prior to construction.

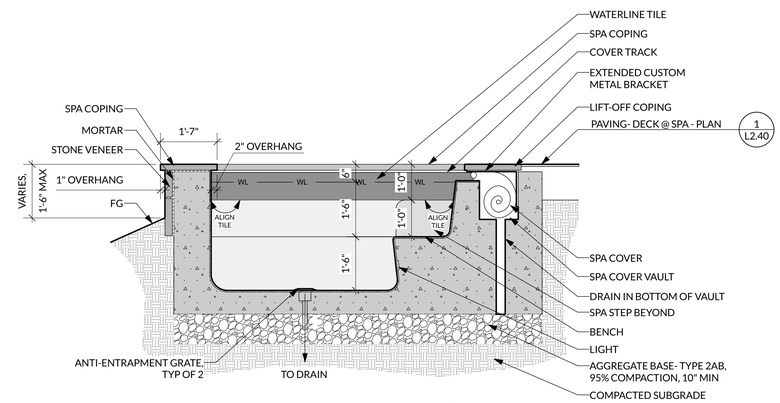
E. Confirm final materials, colors and finishes for anything visible with LA prior to purchase. (Skimmers, covers, jets...)

AT COMPLETION
Contractor to provide (digitally and in project binder) the following documents, prior to final acceptance and completion of work:

As built drawings for pool and spa, showing pipe runs, direction of flow, shut off valves, electrical service, drainage, etc,

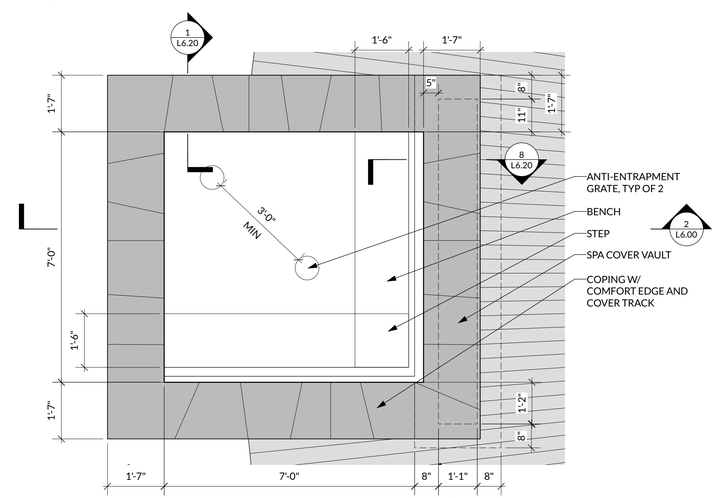
All manufacturer's information, cut sheets, instructions and warranties for all equipment.

Written Instructions on proper maintenance of feature, including recommended schedule for maintenance, emergency shut offs and find tune adjusting.



NOTE:
CONFIRM ALL DIMENSIONS AND REINFORCEMENT WITH POOL STRUCTURAL DETAILS

2 L6.00 SPA- SECTION
Scale: 1/2" = 1'-0"



NOTE:
CONFIRM ALL DIMENSIONS AND REINFORCEMENT WITH POOL STRUCTURAL DETAILS

1 L6.00 SPA- PLAN
Scale: 1/2" = 1'-0"

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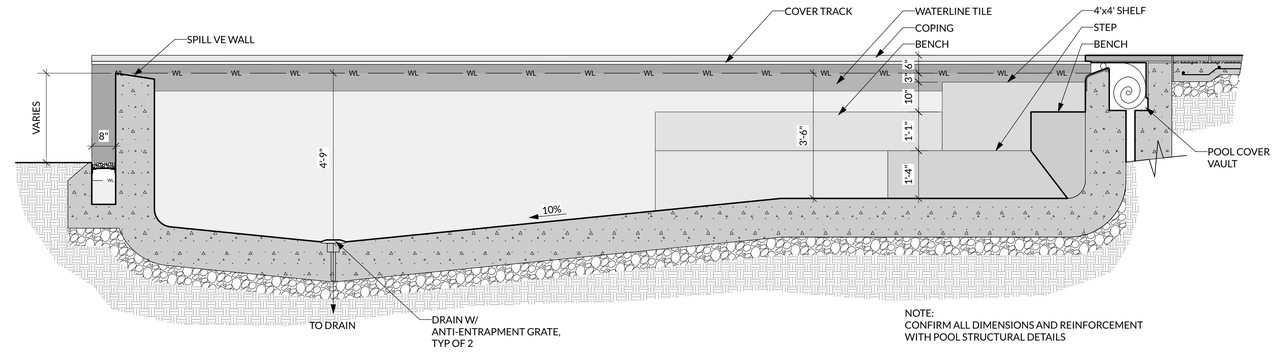
05.16.2025	COMBO PERMIT SET

SCALE: AS NOTED

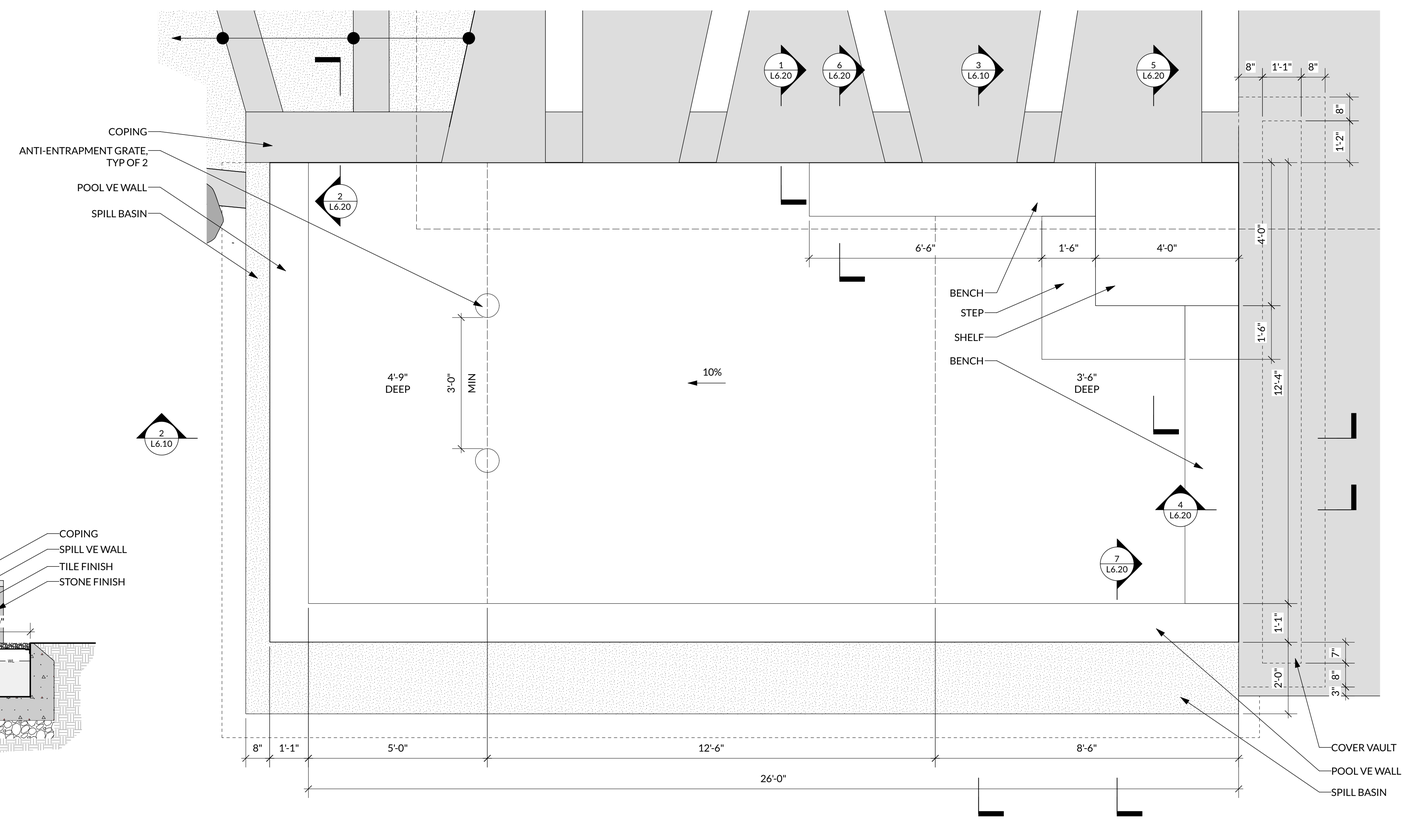
SPA
PLAN & SECTION

L6.00

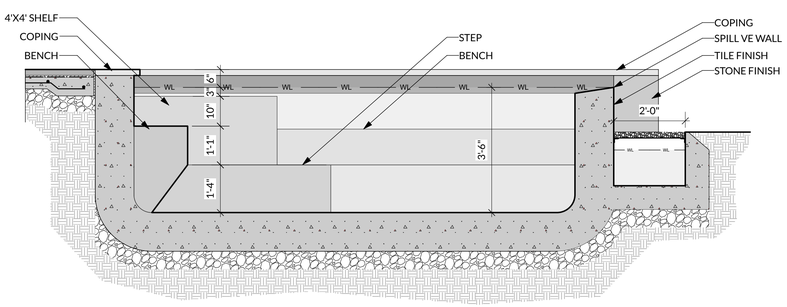
MATERIALS LIST				
KEY	**ITEM/LOCATION**	**SPECIFICATION**	**FINISH**	**VENDOR**
P - POOL				
P-1	POOL PLASTER	TBD	TBD	WET EDGE
P-2	COPING	SYDNEY PEAK, 2" THICKNESS, RANDOM SIZING		PENINSULA BUILDING MATERIAL
P-3	COVER - AUTOMATIC	POOL COVERS INC	COLOR TBD	POOL COVERS INC
P-4	POOL TILE	MCINTYRE	TBD	MCINTYRE



2 L6.10 POOL- SECTION A
Scale: 1/2" = 1'-0"



1 L6.10 POOL- PLAN
Scale: 1/2" = 1'-0"



3 L6.10 POOL- SECTION B
Scale: 1/2" = 1'-0"

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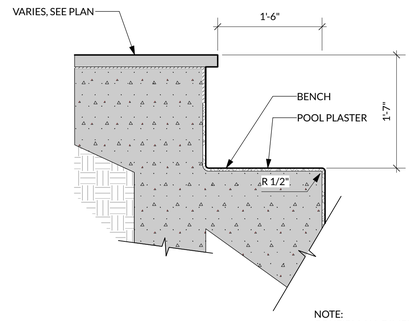
05.16.2025	COMBO PERMIT SET

SCALE: AS NOTED

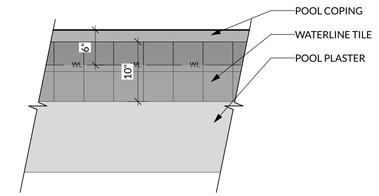
POOL
PLAN & SECTIONS

L6.10

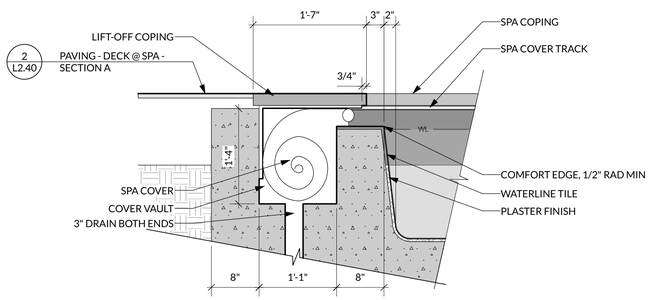


NOTE:
CONFIRM ALL DIMENSIONS
AND REINFORCEMENT WITH
POOL STRUCTURAL DETAILS

P 6 L6.20 POOL- BENCH
Scale: 1" = 1'-0"

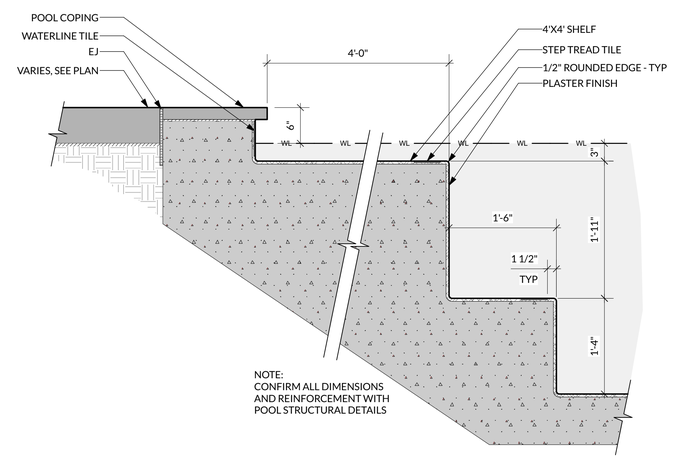


S P 3 L6.20 POOL- WATERLINE TILE
Scale: 1" = 1'-0"



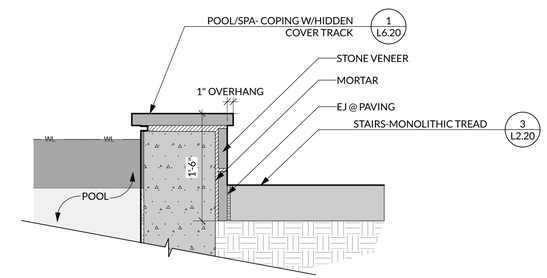
NOTE:
CONFIRM ALL DIMENSIONS
AND REINFORCEMENT WITH
POOL STRUCTURAL DETAILS

S 8 L6.20 SPA- COPING WITH COMFORT EDGE
Scale: 1" = 1'-0"



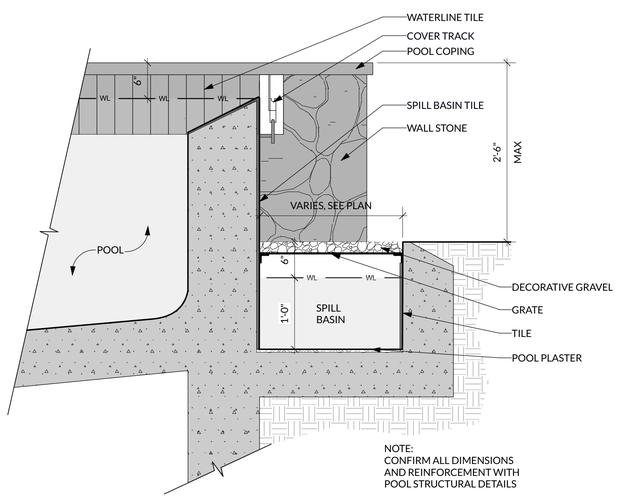
NOTE:
CONFIRM ALL DIMENSIONS
AND REINFORCEMENT WITH
POOL STRUCTURAL DETAILS

P 5 L6.20 POOL- STAIRS
Scale: 1" = 1'-0"



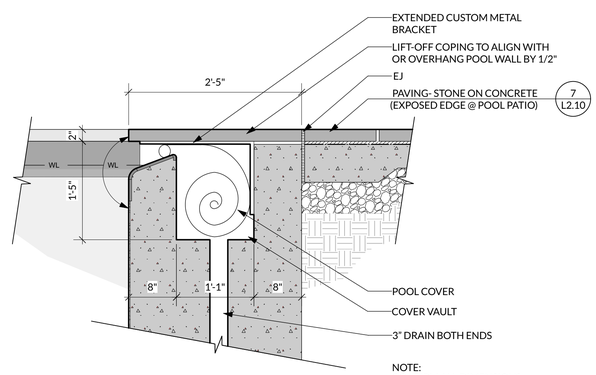
NOTE:
CONFIRM ALL DIMENSIONS
AND REINFORCEMENT WITH
POOL STRUCTURAL DETAILS

P 2 L6.20 POOL- BOND BEAM WITH STONE VENEER
Scale: 1" = 1'-0"



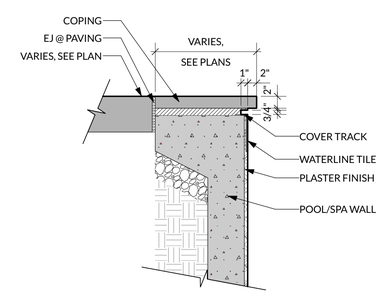
NOTE:
CONFIRM ALL DIMENSIONS
AND REINFORCEMENT WITH
POOL STRUCTURAL DETAILS

P 7 L6.20 POOL- SPILL WEIR SECTION
Scale: 1" = 1'-0"



NOTE:
CONFIRM ALL DIMENSIONS
AND REINFORCEMENT WITH
POOL STRUCTURAL DETAILS

P 4 L6.20 POOL- COVER VAULT, COMPACT DRIVE
Scale: 1" = 1'-0"



NOTE:
CONFIRM ALL DIMENSIONS
AND REINFORCEMENT WITH
POOL STRUCTURAL DETAILS

S P 1 L6.20 POOL/SPA- COPING W/HIDDEN COVER TRACK
Scale: 1" = 1'-0"

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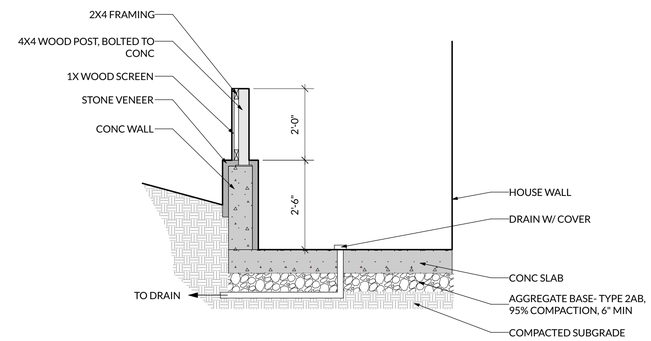
SCALE: AS NOTED

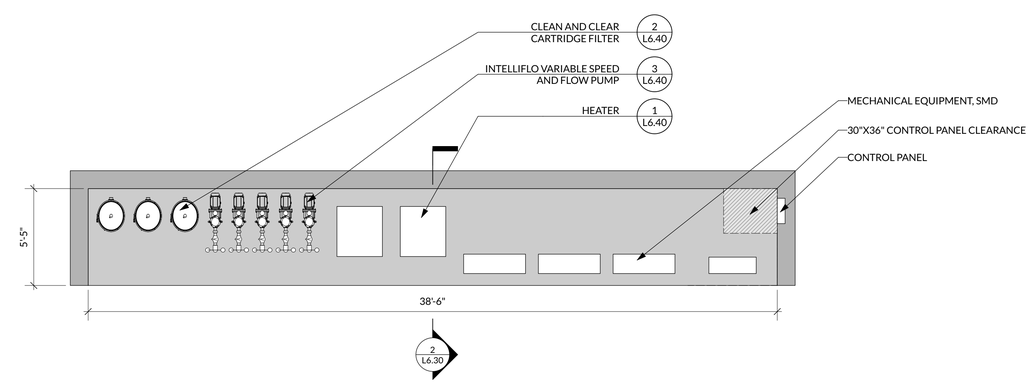
POOL & SPA DETAILS

L6.20



NOTE:
CONCRETE DIMENSIONS, REINFORCEMENT, AND DRAINAGE, SSD, SCD

J 2 L6.30 EQUIPMENT PAD- SECTION
Scale: 1/2" = 1'-0"



J 1 L6.30 EQUIPMENT PAD- PLAN
Scale: 1/4" = 1'-0"

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SCALE: AS NOTED

POOL & SPA DETAILS

L6.30

LBX 1302 Key Switch

Box Height = 2 7/8"

Box Width = 2 7/8"

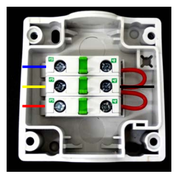
Box Depth = 1 7/8"

Key Cylinder = + 1"

Left Top Terminal = Blue Directional

Left Middle Terminal = Yellow Relay—Motor

Left Bottom Terminal = Red Directional



Any Right Terminal with Jumpers = Black

Uses #455 Key

BACO® CONTROLS

8431 Loop Road • Baldwinsville, NY 13027
Tel. 315.635.2500 • Fax 800.358.3981 • www.bacocontrols.com

Declaration of Conformity

July 31, 2017

Part Number	Description
T13644	3 position rotary cam switch
BPP301	Polycarbonate enclosure

Rated Characteristics:

We declare that the T13644 rotary cam switch complies with the IP55 rating per IEC standard 60529 when installed in an enclosure of equivalent or greater rating.

We declare that the BPP301 enclosure complies with the IP55 rating per IEC standard 60529 when fitted with a switch and cable gland of equivalent or greater rating.

Best Regards,

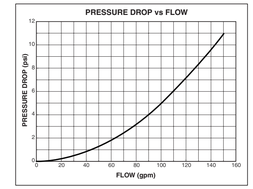
Thomas Rogers
President
Baco Controls, Inc.

5 L6.40 POOL COVER LOCK KEY SWITCH

12

TECHNICAL DATA

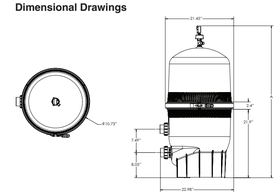
Flow Rates



Clean and Clear® Plus Cartridge Filters						
Recommended Flow Rate						
Model #	Filter Area (Sq. Ft.)	Vertical Clearance*	Flow Rate (GPM)	Turnover Capacity (Gallons)		
				6 Hours	8 Hours	12 Hours
CCP240	240	56 in.	90	32,400	43,200	64,800
CCP320	320	62 in.	120	43,200	57,600	86,400
CCP420	420	68 in.	150	54,000	72,000	108,000
CCP520	520	74 in.	150	54,000	72,000	108,000

NOTE: Actual system flow will depend on plumbing size and other system components.
* Required Clearance to remove filter elements and lid.

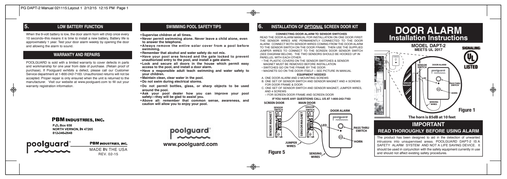
Dimensional Drawings



MODEL	DIM "A"
CCP 240	37"
CCP 320	43"
CCP 420	49"
CCP 520	56"

CLEAN AND CLEAR® PLUS Cartridge Filter Installation and User's Guide

2 L6.40 CLEAN AND CLEAR CARTRIDGE FILTER

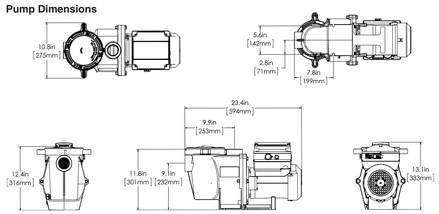


4 L6.40 POOL SAFETY FEATURE - DOOR ALARM

29

TECHNICAL DATA

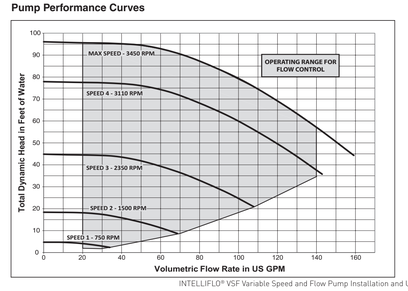
Pump Dimensions



Electrical Specifications

Circuit Protection: Two-pole 20 AMP device at the Electrical Panel.
Input: 230 VAC, 50/60 Hz, 3200 Watts Maximum, 1 phase

Pump Performance Curves



INTELLIFLO® VSF Variable Speed and Flow Pump Installation and User's Guide

3 L6.40 INTELLIFLO VARIABLE SPEED AND FLOW PUMP

Section 3. Installation Instructions 11

SPECIFICATIONS

These installation instructions are designed for use by qualified personnel only, trained especially for installation of this type of heating equipment and related components. Some states require installation and repair by licensed personnel. If this applies in your state, be sure your contractor bears the appropriate license. See Figure 2 for Outdoor and Indoor Installations.

DIMENSIONS IN INCHES

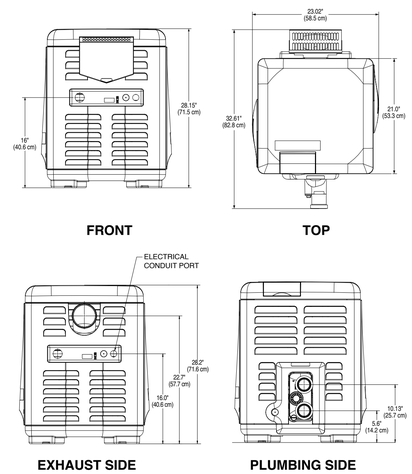


Figure 2.

Rev. N 10/2018 MASTERTEMP Pool and Spa Heater Installation and User's Guide

1 L6.40 MASTER TEMP POOL AND SPA HEATER

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415.861.3100
arterrasf.com

REGISTERED LANDSCAPE ARCHITECT
KATHERINE B. STICKLEY
4252
SIGNATURE
05.16.2025
DATE
STATE OF CALIFORNIA

WARD RESIDENCE

23 VASQUEZ TRAIL
CARMEL, CALIFORNIA
APN: 239-121-010

DATE:	ISSUE:
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05.16.2025	PRICING SET - 90% DD
05.16.2025	COMBO PERMIT SET

SCALE: AS NOTED

POOL SPECIFICATIONS

L6.40

POOL COVERS, INC.

Employee-Owned Since 1984

Save Lives, Save Water, Save Heat, Save Money

Home | Company - | Products - | Cover Options - | Color Choices | Product Benefits - | Gallery | Request Info | Contact Us | Resources -

Automatic Safety Pool Covers

Electric and Hydraulic Infinity Automatic Safety Pool Cover System

The company's Infinity 4000™ automatic pool cover is a state-of-the-art, high-tech automatic pool cover system. The Infinity features bi-directional, anti-reversing auto-stops, a remote-located, low-voltage key switch, and power options that include a flood resistant manufacturer sealed motor. For installations suited for hydraulic application, the system is also available with a hydraulic power pack.

The hydraulic automatic swimming pool cover system works exactly like our electric model, and is used most often on larger pools where more power is needed, builder or pool owner preference, or if you are unable to get electricity to the pool.

The Infinity 4000™ is simply the easiest to operate, easiest to maintain, and most consumer friendly automatic swimming-pool cover on the market. And with over 37 years of automatic swimming-pool-cover- experience, we know how to help you choose the system that is right for your pool.

An Infinity 4000™ automatic swimming pool cover has Return on Investment. This means that the money you save each year on your heated pool by having an Infinity 4000™ pool cover, will pay for the entire pool-cover system, typically within 3 years...there is simply nothing you can put on your pool that will return so much...not just in energy savings and money back in your pocket...but your family's safety as well.

All Infinity 4000™ pool-cover systems exceed A.S.T.M. safety standards and are considered the superior pool cover in the industry.

WBAHLE171044 - Covers for Swimming Pools and Spas | UL Product iQ https://iq.ulprospector.com/en/profile?c=1333414

UL Product iQ®

UL Solutions

Note: We are enhancing our systems and you may notice duplicate entries/missing/outdated data. During this interim period, please contact our Customer Service at https://www.ul.com/about/locations.

Covers for Swimming Pools and Spas

COMPANY

POOL COVERS INC
4825 Fulton Dr
Fairfield, CA 94534-1640 United States

E171044

Trademark and/or Tradename: "BE-LITE"
Note: For additional marking information, refer to the Guide Information Page.

Manual safety covers, maximum 100 inches by 200 inches , Classified in Accordance with ASTM F1346-91, Model(s): Deluxe Edition

Last Updated on 2023-01-17

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL Solutions' Follow - Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL Solutions' Follow - Up Service. Always look for the Mark on the product.

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1 of 1 5/16/24, 6:18 PM

CERTIFICATE OF COMPLIANCE

Certificate Number 20190911-E164833
Report Reference E164833-19970303
Issue Date 2019-SEPTEMBER-11

Issued to: Latham Pool Products Inc
1795 W 200 N
LINDON UT 84042-1661

This certificate confirms that representative samples of SWIMMING POOL AND SPA COVER OPERATORS, ELECTRIC; COVERS FOR SWIMMING POOLS AND SPAS
"See Addendum Page"

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: ASTM F1346-91 - Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Poos, Spas and Hot Tubs
Subject UL 2452 - Outline of Investigation for Electric Swimming Pool and Spa Cover Operators
CSA C22.2 No. 218.1-13 - Standard for Spas, Hot Tubs, and Associated Equipment

Additional Information: See the UL Online Certifications Directory at https://iq.ulprospector.com for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.

Bruce Mahrenholz, Director North American Certification Program
UL LLC

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Page 1 of 2

CERTIFICATE OF COMPLIANCE

Certificate Number 20190911-E164833
Report Reference E164833-19970303
Issue Date 2019-SEPTEMBER-11

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Pool Cover Operator and Power Safety Cover,
Models CS 1800, CS 1800 AT, CS 1800 CL, CS 1800 LO, CS 1800 SS, CS 1800 SW and Infinity 40000.

Bruce Mahrenholz, Director North American Certification Program
UL LLC

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Page 2 of 2

2 L6.50 POOL SAFETY MEASURE - POOL COVER
Scale: NTS

1 L6.50 ANTI ENTRAPMENT DRAIN
Scale: NTS

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SCALE: AS NOTED

POOL SPECIFICATIONS

L6.50

FOUNTAIN NOTES
Refer to General Landscape Notes

Review Architectural, Civil and Structural Documents.

Review Geotechnical Report and Arborist Reports.

All building information is based on drawings prepared by:
FELDMAN ARCHITECTURE

All site civil engineering information is based on drawings prepared by:
WHITSON ENGINEERS

For geotechnical information see the Soils Report prepared by:
SOIL SURVEYS GROUP

For structural engineering see drawings prepared by:
ZFA STRUCTURAL ENGINEERS & LENEHAN ENGINEERING

For tree information see the Arborist Report prepared by:
THOMPSON WILDLAND MANAGEMENT

For Fountain mechanical design and notes see fountain plans prepared by:
TBD

Contractor is responsible for the construction, installation, and operation of ONE fountain and all associated pumps, filters, water level controllers, mechanical vault, service and equipment, as indicated on the Drawings.

Fountain is shown in approximate location. Confirm all final dimensions on site with LA, prior to commencing with construction.

All fountain work to be performed in accordance with all state and local codes in effect.

All water and electrical penetrations though any concrete element to be red brass pipe or copper tube approved for the applications and shall be flashed to prevent leakage.

Interconnecting piping between the water feature and pump room/vault may be copper, steel, cast iron or plastic as selected and installed with the same material fittings in accord with manufacturers recommendations. Hot dip galvanizing is recommended for steel and C.I. piping.

Suction eye of pump must be located below water feature basin floor elevation.

Suction line must be a straight run into the pump suction at least 8 pipe diameters with no loop or high points.

Use long radius elbows in suction line. Make all runs as direct as possible, using a minimum number of fittings. Slope all lines down to pump.

On suction lines use butterfly or gate valves, space permitting.

On discharge lines use butterfly, throttling globe, ball or other low loss infinitely variable valves.

Provide adequate overflow, drain and fill lines.

Electrical service to be performed by licensed electrician. Confirm all electrical connection locations with LA to ensure minimum visible impact.

Locate water level controller in discrete planting area. Hide lid in planting. Confirm location with LA.

Deliver fountain in a clean, watertight and working order. Adjust flow and display patterns so that there is no overspray and all water is contained within the shell of the feature.

Fountain to operate on independent timers. Locate timers in close proximity to feature, easily accessible but screened from view. Coordinate with L.A. and owner.

Install pumps, filters and accompanying valves in a manner, such that they are easily accessible, but also well hidden from view. Coordinate on site. Install equipment with sufficient give in piping and cords to facilitate cleaning and servicing of equipment from above.

Install fountain equipment according to specification and mechanical design by TBD. Should there be any question or concern about intended installation/operation, clarify with LA prior to commencing with work.

Provide adequate drainage in pump vault/room to prevent flooding of equipment.

All Fountain work and materials and equipment to be warranted for one year, from date of accepted completion.

Instruct owners in maintenance of the fountain.

SUBMITTALS
A. Provide manufacturer's cut sheet information for all equipment, to be approved by LA

B. Mock-ups as outlined in kickoff meeting

C. Paint out plan on site and string line finish elevation for review and approval by LA

D. Confirm water level controller location with LA.

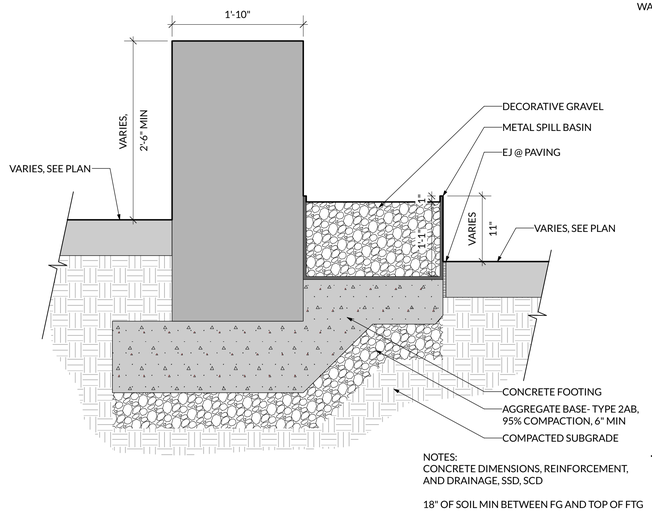
AT COMPLETION
Contractor to provide (digitally and in project binder) the following documents, prior to final acceptance and completion of work

All manufacturer's information, cut sheets, instructions and warranties for all equipment.

As built drawings for water features, showing pipe runs, direction of flow, shut off valves, electrical service, drainage, etc.

Written Instructions on proper maintenance of feature, including recommended schedule for maintenance, emergency shut offs and find tune adjusting.

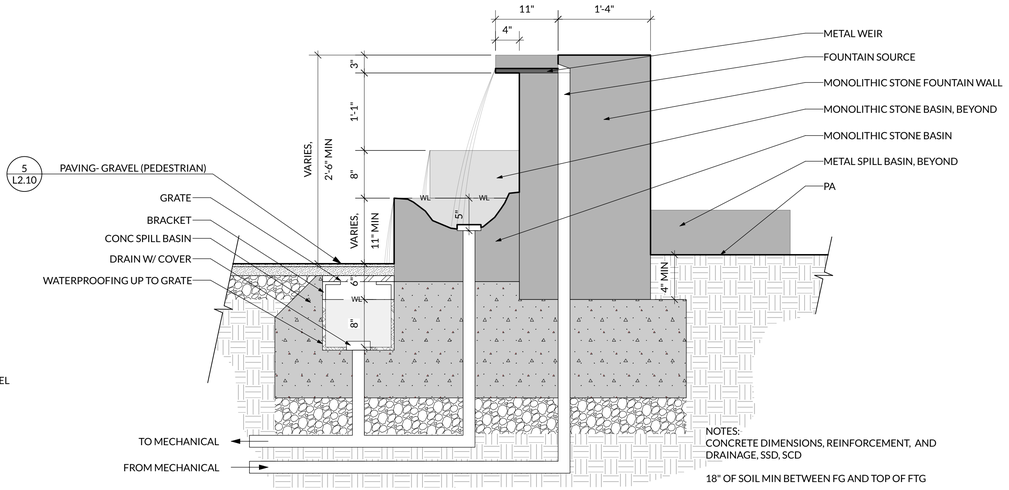
MATERIALS LIST				
KEY	ITEM/LOCATION	SPECIFICATION	FINISH	VENDOR
H - FOUNTAIN				
H-1	STONE FOUNTAIN WALL	WALNUT TRAVERTINE		PBM
H-2	METAL WEIR - ENTRY	OREQ, CUSTOM CASCADE, OPEN TOP SHEETFALL	TBD	TBD
H-3	METAL SPILL WALL	OREQ, CUSTOM CASCADE, SHEETFALL	TBD	
H-4	METAL SPILL BASIN	ARCHITECTURAL BRONZE, 1/4"	NATURAL	
H-5	METAL TRIM WALL	ARCHITECTURAL BRONZE, 1/8"	NATURAL	
H-6	METAL WEIRS - LIBRARY	OREQ, CUSTOM CASCADE, OPEN TOP SHEETFALL	TBD	TBD
H-7	STONE FOUNTAIN BASIN	WALNUT TRAVERTINE		PBM
H-8	DECORATIVE GRAVEL	MEXICAN PEBBLES, 1-2"	BLACK	LYNGSO
H-9	PLUMBING AND MECHANICAL	BY WATER FEATURES CONTRACTOR (TBD)		
H-10	GRATE	FIBERGRATE		



NOTES:
CONCRETE DIMENSIONS, REINFORCEMENT, AND DRAINAGE, SSD, SCD

18" OF SOIL MIN BETWEEN FG AND TOP OF FTG

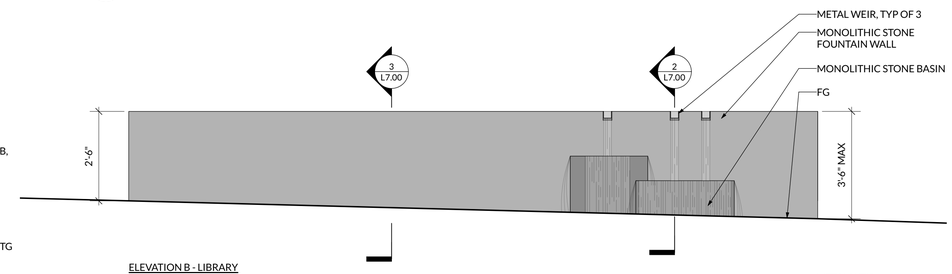
H 4 L7.00 ENTRY FOUNTAIN - SECTION 3, FRONT BASIN
Scale: 1" = 1'-0"



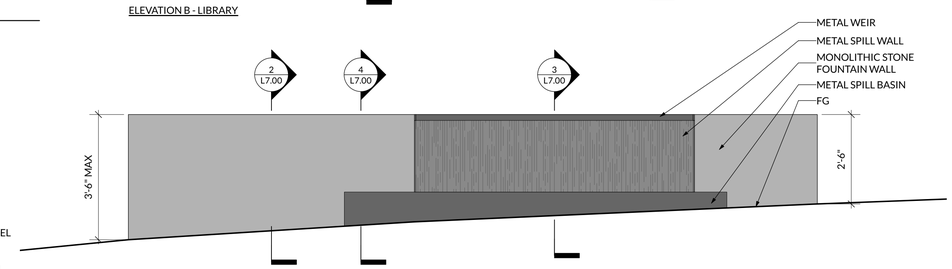
NOTES:
CONCRETE DIMENSIONS, REINFORCEMENT, AND DRAINAGE, SSD, SCD

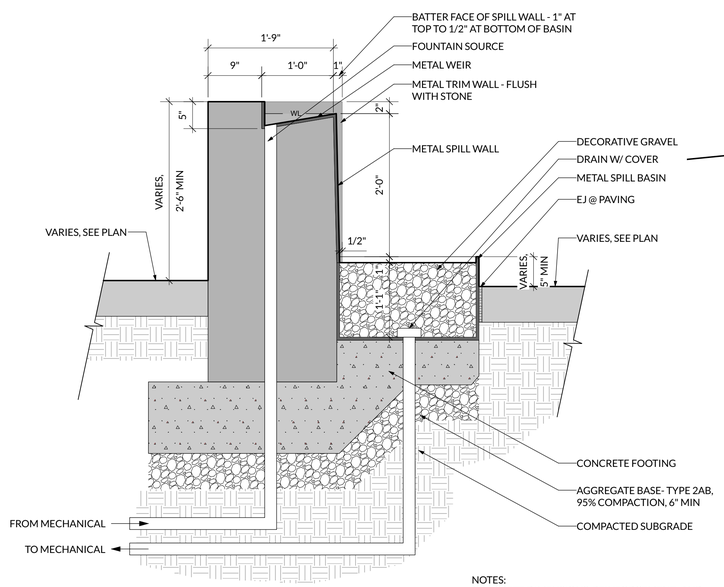
18" OF SOIL MIN BETWEEN FG AND TOP OF FTG

H 2 L7.00 ENTRY FOUNTAIN - SECTION B, REAR WEIR
Scale: 1" = 1'-0"



ELEVATION B - LIBRARY



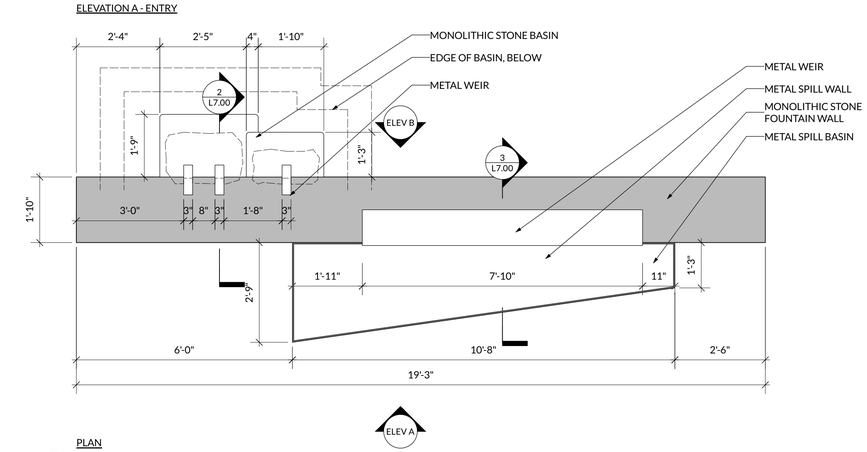


NOTES:
CONCRETE DIMENSIONS, REINFORCEMENT, AND DRAINAGE, SSD, SCD

18" OF SOIL MIN BETWEEN FG AND TOP OF FTG

H 3 L7.00 ENTRY FOUNTAIN - SECTION A, FRONT WEIR
Scale: 1" = 1'-0"

ELEVATION A - ENTRY



PLAN

H 1 L7.00 ENTRY FOUNTAIN
Scale: 1/2" = 1'-0"

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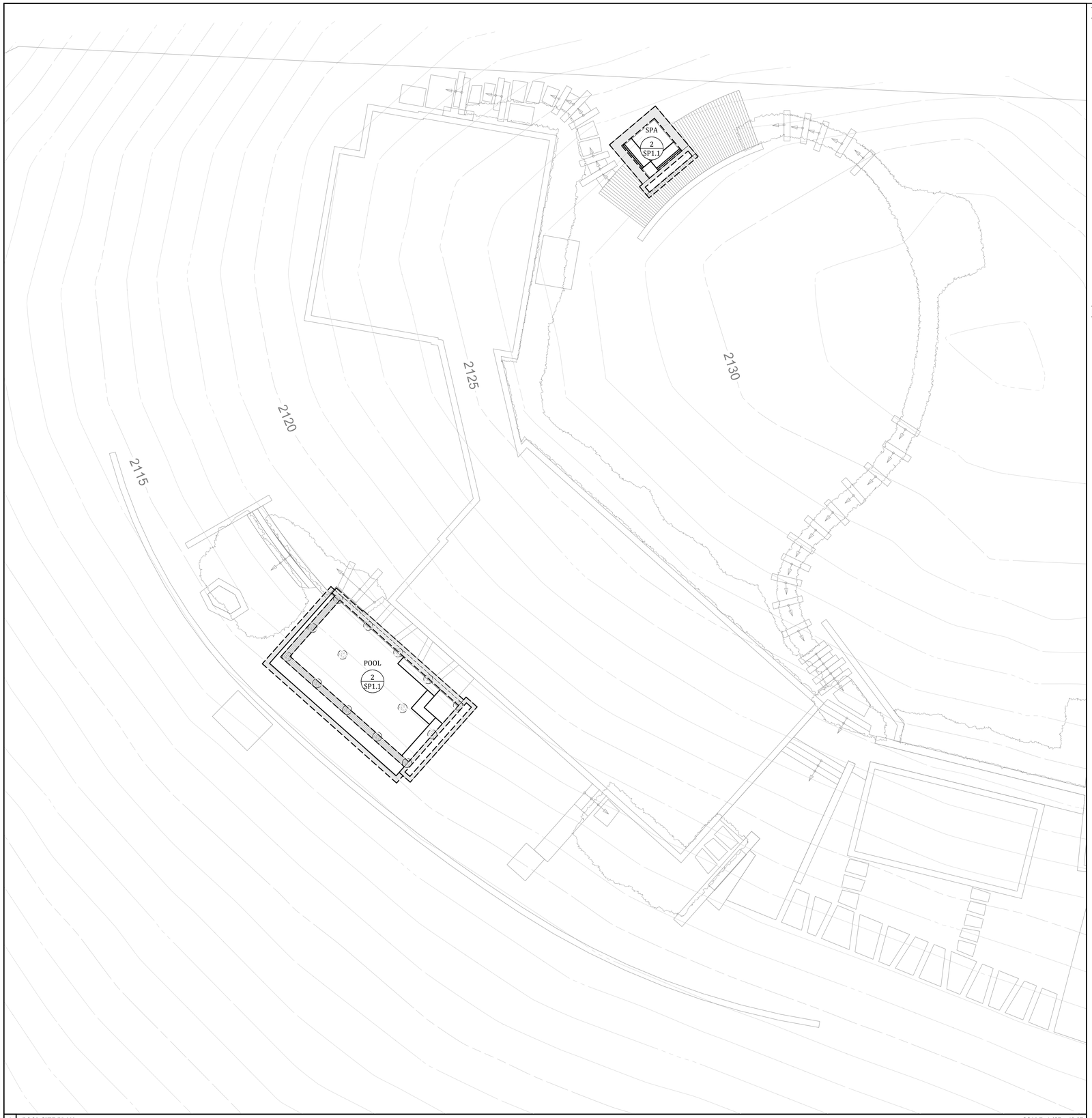
SCALE: AS NOTED

FOUNTAIN DETAILS

L7.00



1 POOL SITE PLAN

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

GENERAL

1. ALL DIMENSIONS SHOULD BE FIELD VERIFIED PRIOR TO STARTING WORK. REFER TO LANDSCAPE ARCHITECTURAL PLANS FOR POOL LOCATION AND DIMENSIONS. NOTIFY LENEHAN ENGINEERING OF ANY DISCREPANCIES.
2. ALL APPLICABLE STATE, LOCAL LAWS, AND CODES SHALL BE FOLLOWED.
3. STRUCTURAL DECKS ARE NOT TO BE SUPPORTED, OR STRUCTURALLY CONNECTED, TO THE POOL STRUCTURE. POOL WALLS ARE NOT DESIGNED WITH ADDITIONAL LOADING FROM NEARBY STRUCTURES OTHER THAN STRUCTURES SHOWN IN THESE DRAWINGS. IF POOL WALLS NEED TO SUPPORT DECKING, OR OTHER STRUCTURES, NOTIFY LENEHAN ENGINEERING.
4. DECKING: EXPANSION JOINT OF MASTIC OR OTHER SEPARATOR SHOULD BE PLACED BETWEEN CONCRETE DECKS AND COPING AND SHOULD EXTEND THE FULL DEPTH OF THE DECK.
   CANTILEVER DECKS: PLACE A BOND BREAK AT THE TOP OF THE POOL WALL AND BELOW THE CANTILEVER DECK SUCH AS 30# ROOF FELT, HEAVY BROWN PAPER OR OTHER EQUIVALENT.
5. ANY FIELD CONDITIONS THAT ARE NOT CONSISTENT WITH THIS PLAN SHOULD BE BROUGHT TO THE ATTENTION OF LENEHAN ENGINEERING.
6. IF A RAMP IS CUT TO REMOVE SOIL FROM THE EXCAVATION, INCREASE VERTICAL REINFORCEMENT TO #4@6"O.C. IN THE RAMP AREA. INCREASE HORIZONTAL REINFORCEMENT TO #4@6"O.C. AND EXTEND THE REINFORCEMENT AT LEAST 3 FEET BEYOND THE EDGE OF THE RAMP.

BASIS OF DESIGN

7. 2022 CALIFORNIA BUILDING CODE; ACI 318
8. PROJECT GEOTECHNICAL REPORT SHALL BE USED FOR ANY SOILS RELATED CRITERIA SUCH AS GRADING, SUBGRADE PREPARATION AND PIER DEPTHS.
9. GEOTECHNICAL INVESTIGATION: "PROPOSED SINGLE FAMILY RESIDENCE WITH ATTACHED GARAGE, POOL AND ADU", SOIL SURVEYS GROUP, DATED: JANUARY 25, 2022, PROJECT NUMBER: 7993
10. GEOTECHNICAL ADDENDUM: "ALTERNATIVE FOUNDATION DESIGN CRITERIA", SOIL SURVEYS GROUP, DATED: APRIL 9, 2025, PROJECT NUMBER: 7993-2
    A. LATERAL EARTH PRESSURE: 52 PCF
    B. PIER SKIN FRICTION:
       125 PSF (FROM 2 TO 5 FEET OF DEPTH);
       500 PSF (NEGLECT UPPER 5 FEET)
    C. PASSIVE PRESSURE:
       300 PCF, OVER 2 PIER DIA. (NEGLECT UPPER 2 FEET)
    D. CREEP FORCES:
       75 PCF, OVER 2 PIER DIA. (APPLIED TO UPPER 2 FEET)
    E. PIER DEPTHS TO BE DETERMINED BY GEOTECHNICAL ENGINEER OF RECORD AND SHALL EXTEND TO A MINIMUM DEPTH OF 5 FEET INTO COMPETENT SOILS, OR THE MINIMUM STRUCTURAL DEPTHS CONTAINED ON SP1.0, WHICHEVER IS GREATER. THE NEAREST GEOTECHNICAL EXPLORATION TO THE PROPOSED POOL LOCATION ESTIMATES THE DEPTH TO COMPETENT SOIL AT 5 FEET BELOW EXISTING GROUND SURFACE.
    F. POOL FLOOR SHALL BE UNDERLAIN BY A 4-INCH GRAVEL LAYER CONSISTING OF 3/4" CRUSHED GRAVEL OR CLASS II PERMEABLE BASE. A 4-INCH SCHEDULE 40 PERFORATED PIPE SHOULD BE INSTALLED IN THE DEEPEST PORTION OF THE POOL FLOOR AND DISCHARGE TO DAYLIGHT OR EXISTING DRAINAGE.
    G. A HYDROSTATIC RELIEF VALVE SHALL BE INSTALLED IN THE DEEPEST PORTION OF THE SWIMMING POOL TO ALLOW THE DISSIPATION OF HYDROSTATIC PRESSURES.

CONCRETE

10. CONCRETE: FOR USE IN THE DRILLED PIERS.
11. CEMENT SHALL CONFORM TO CBC SECTION 1903.1, ACI 318 CHAPTER 19, ACI 336, ASTM C 150.
12. NORMAL WEIGHT CONCRETE SHALL BE MIXED AND PROPORTIONED IN ACCORDANCE WITH ACI 301. CEMENT TO AGGREGATE, IN DRY WEIGHT, SHALL NOT BE LESS THAN 1 TO FIVE.
13. MINIMUM COMPRESSIVE STRENGTH, F'c = 3,000 PSI @ 28 DAYS (BASED ON 2,500 PSI DESIGN STRENGTH, NOT REQUIRING SPECIAL INSPECTIONS).
14. AGGREGATE: $\frac{3}{4}$" MAX.; W/C RATIO: 0.60 WITH 6" SLUMP
15. CEMENT CONTENT: 500 LBS/YDS MIN (2,500 PSI CONCRETE), 550 LBS/YDS MIN (3,000 PSI CONCRETE).
16. CONCRETE TO BE PLACED ON OR AGAINST FIRM UNDISTURBED SOIL.
17. FLY ASH MAY BE USED PROVIDED THE FLY ASH CONTENT DOES NOT EXCEED 15% OF THE CEMENTITIOUS MATERIAL CONTENT. FLY ASH SHALL BE ASTM C618, CLASS C OR F.

SHOTCRETE (GUNITE)

18. SHOTCRETE (GUNITE): FOR USE IN THE SWIMMING POOL. GUNITE IS A COMMON TERM THAT REFERS TO THE SHOTCRETE DRY MIX PROCESS AND IS ACCEPTABLE TO USE WITH THIS PLAN.
19. GUNITE CEMENT TO AGGREGATE PROPORTIONS SHOULD NOT BE LESS THAN 1 TO 5 AND SHOULD CONFORM TO CBC 1908 AND ACI 506R.
20. MINIMUM COMPRESSIVE STRENGTH, F'c = 2,500 PSI @ 28 DAYS.
21. MINIMUM WALL THICKNESS IS 8 INCHES.
22. KEEP GUNITE DAMP CONTINUOUSLY FOR 14 DAYS.
23. GROUND ALL ELECTRICAL ELEMENTS PRIOR TO PLACING GUNITE.
24. REBOUND IS NOT TO BE USED WITHIN THE POOL STRUCTURE.

REINFORCEMENT

25. REINFORCEMENT SHOULD BE PLACED IN ACCORDANCE WITH CBC 1908 AND ACI 318 CHAPTER 25 AND BE ASTM A615 GRADE 40 OR BETTER FOR #3 AND #4 BARS, GRADE 60 FOR #5 AND GREATER.
26. SPLICES ARE TO BE LAPPED A MINIMUM OF 48 BAR DIAMETERS WITH A 2½-INCH MINIMUM CLEARANCE BETWEEN PARALLEL BARS. CONTACT SPLICING MAY BE USED PROVIDED SPLICED BARS ARE IN THE SAME PLANE AND PARALLEL TO THE DIRECTION OF THE GUNITE SHOOTING. SPLICES ARE TO BE LAPPED A MINIMUM OF 24 INCHES.
27. ALL BENDS ARE TO BE SHARP.
28. 3 INCH MINIMUM CLEARANCE IS REQUIRED BETWEEN REINFORCEMENT AND SOIL AND A 2 INCH CLEARANCE BETWEEN REINFORCEMENT AND WATER OR EXPOSED TO AIR. PIER REINFORCEMENT CAGES SHOULD BE COMPLETELY ENCASED IN CONCRETE USING APPROPRIATE SPACERS AS NECESSARY.
29. PLUMBING SHALL MAINTAIN A 1 INCH MINIMUM CLEARANCE FROM REINFORCEMENT.
30. DO NOT STRUCTURALLY TIE THE BOND BEAM AND CONCRETE DECK TOGETHER.

DRILLED PIER PLACEMENT

31. DRILLED PIER EXCAVATION SHOULD BE INSPECTED AND APPROVED BY THE SOILS ENGINEER OF RECORD.
32. AFTER DRILLED PIERS HAVE BEEN APPROVED, PIERS SHOULD BE FILLED WITH CONCRETE IMMEDIATELY. DO NOT ALLOW THE TOP OF THE PIER TO MUSHROOM. THE USE OF A SONOTUBE TO CREATE A STRAIGHT SHAFT IS ACCEPTABLE.
33. CONCRETE SHOULD NOT BE ALLOWED TO FREE FALL MORE THAN 6 FEET AND SHOULD BE CENTERED IN THE REINFORCEMENT CAGE TO AVOID SEPARATION OF THE CONCRETE. PLACE CONCRETE CONTINUOUSLY FOR EACH PIER.
34. IF WATER IS ENCOUNTERED IN THE PIER EXCAVATION, CONCRETE MUST BE PLACED BY TREMIE METHOD. AS WITH OTHER METHODS, THE TREMIE PLACEMENT SHOULD NOT BE INTERRUPTED AND PLACED CONTINUOUSLY FOR EACH PIER.

ABBREVIATION LEGEND

TYP	TYPICAL	MIN	MINIMUM
EMBED	EMBEDMENT	MAX	MAXIMUM
CLR	CLEARANCE	VERT	VERTICAL
CNTR	CENTER	HORIZ	HORIZONTAL
O.C.	ON CENTER	TRANS	TRANSVERSE
E.W.	EACH WAY	LONG	LONGITUDINAL
S.A.D.	SEE ARCHITECT DETAILS	REINF	REINFORCEMENT

REQUIRED SPECIAL INSPECTIONS

1. DRILLED PIER EXCAVATION INSPECTION BY SOILS ENGINEER.
2. DRILLED PIER REINFORCEMENT INSPECTION BY BUILDING DEPARTMENT-APPROVED INSPECTION & TESTING AGENCY.

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LENEHAN ENGINEERING

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23 VASQUEZ TRAIL
CARMEL, CA

Client: SARAH AND RICHARD WARD
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CARMEL, CA

REGISTERED PROFESSIONAL ENGINEER GERRY R. LENEHAN No. 71469 CIVIL STATE OF CALIFORNIA

VALID ONLY WHEN DIGITAL SIGNATURE

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STRUCTURAL ENGINEERING
PIER POOL PLAN & DETAILS

Sheet: SP1.0
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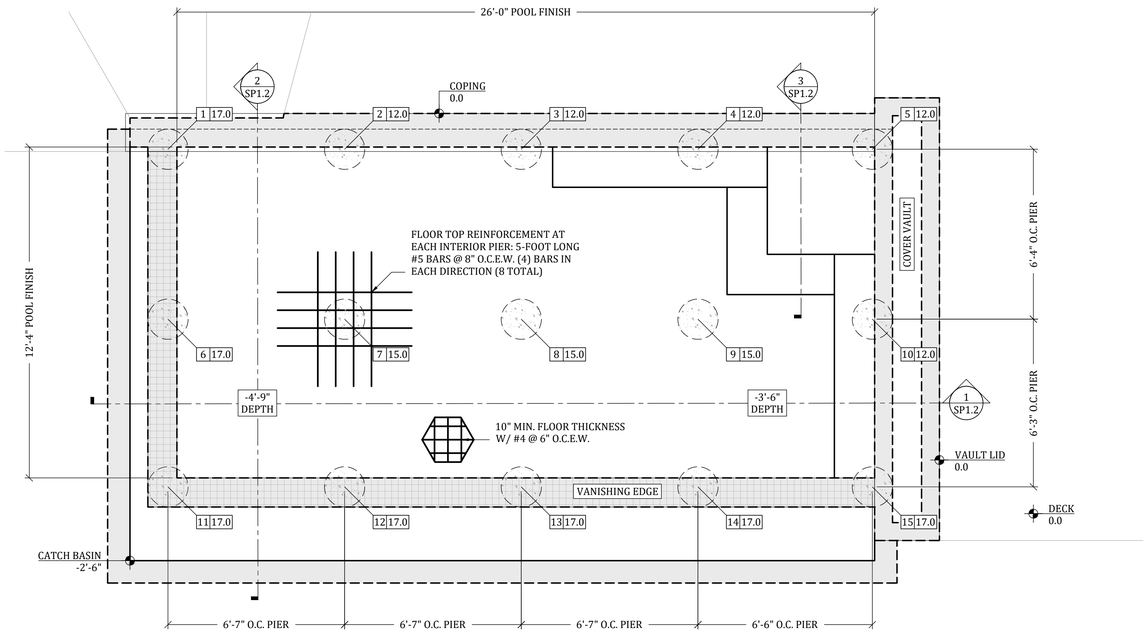
Scale: AS NOTED
Project #: SE25-068
Date: MAY 16, 2025
Engineer: G. LENEHAN

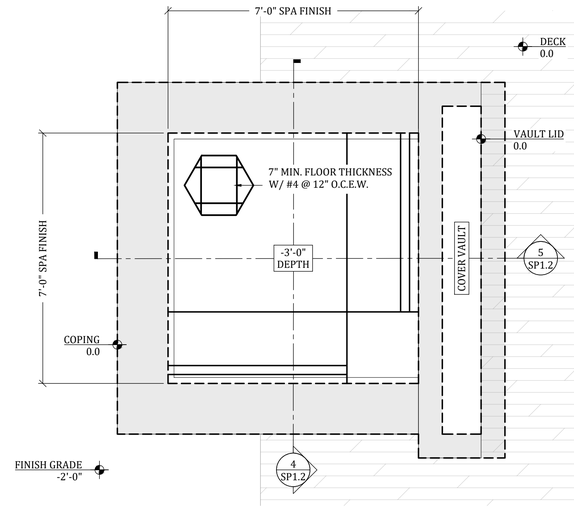


PIER CALLOUT KEY

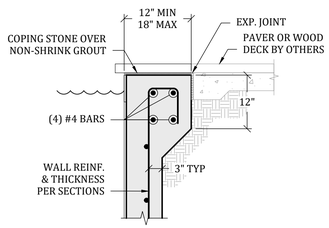
PIER NUMBER — # # — REQUIRED PIER DEPTH INTO BEDROCK (FT)

DEPTHS INDICATED AT EACH PIER CALLOUT ARE DEPTHS INTO BEDROCK DESCRIBED IN THE GEOTECHNICAL REPORT; TO BE DETERMINED BY SOILS ENGINEER OF RECORD. FINAL DEPTHS MAY EXCEED THE MINIMUM DEPTHS INDICATED.

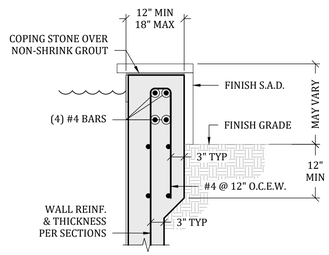
1 POOL PLAN — SCALE: 1/4" = 1'-0"



2 SPA PLAN — SCALE: 1/2" = 1'-0"

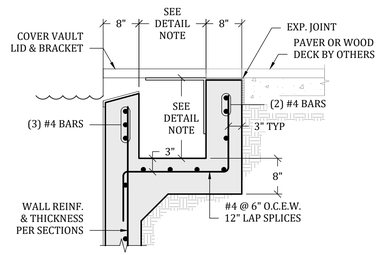


3 BOND BEAM AT DECK — NOT TO SCALE

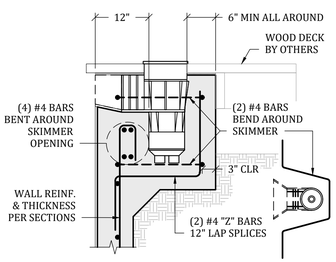


4 EXPOSED BOND BEAM — NOT TO SCALE

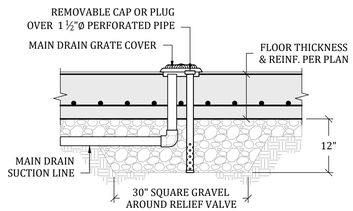
DETAIL NOTE: COVER VAULT WIDTH & DEPTH MAY VARY BASED ON POOL COVER MANUFACTURER RECOMMENDATIONS.



5 POOL COVER VAULT — NOT TO SCALE

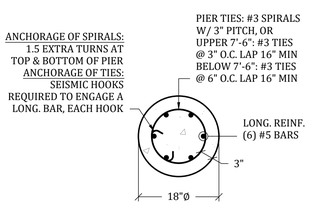


6 SKIMMER — NOT TO SCALE

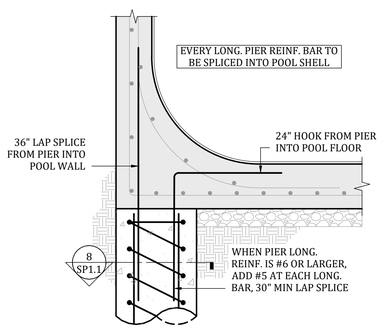


NOTE: A HYDROSTATIC RELIEF VALVE SHALL BE INSTALLED IN THE DEEPEST PORTION OF THE SWIMMING POOL TO ALLOW THE DISSIPATION OF HYDROSTATIC PRESSURES.

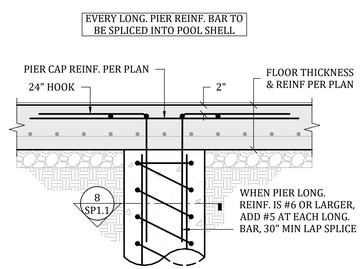
7 HYDROSTATIC PRESSURE RELIEF — NOT TO SCALE



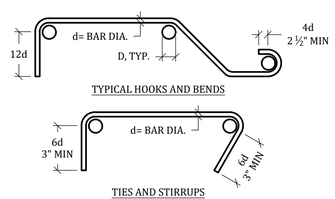
8 CAST-IN-PLACE PIER — NOT TO SCALE



9 PIER AT POOL WALL — NOT TO SCALE

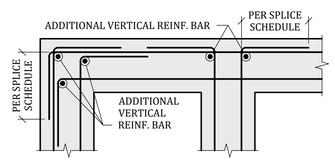


10 INTERIOR PIER — NOT TO SCALE

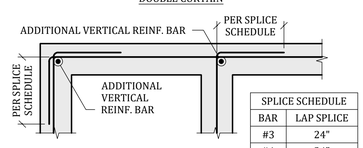


BAR	MAIN REINF. BARS D =	TIES & STIRRUPS D =
#3	6d	1½"
#4	6d	2"
#5	6d	2½"
D = MINMUM INSIDE BEND DIAMETER		

11 REINFORCEMENT BENDS — NOT TO SCALE



DOUBLE CURTAIN



SINGLE CURTAIN

SPLICE SCHEDULE	
BAR	LAP SPLICE
#3	24"
#4	24"
#5	30"

12 REINFORCEMENT CORNERS — NOT TO SCALE

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STRUCTURAL ENGINEERING
POOL & SPA PLANS

Project #: SE25-068
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Engineer: G. LENEHAN
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Page: 2 OF 3
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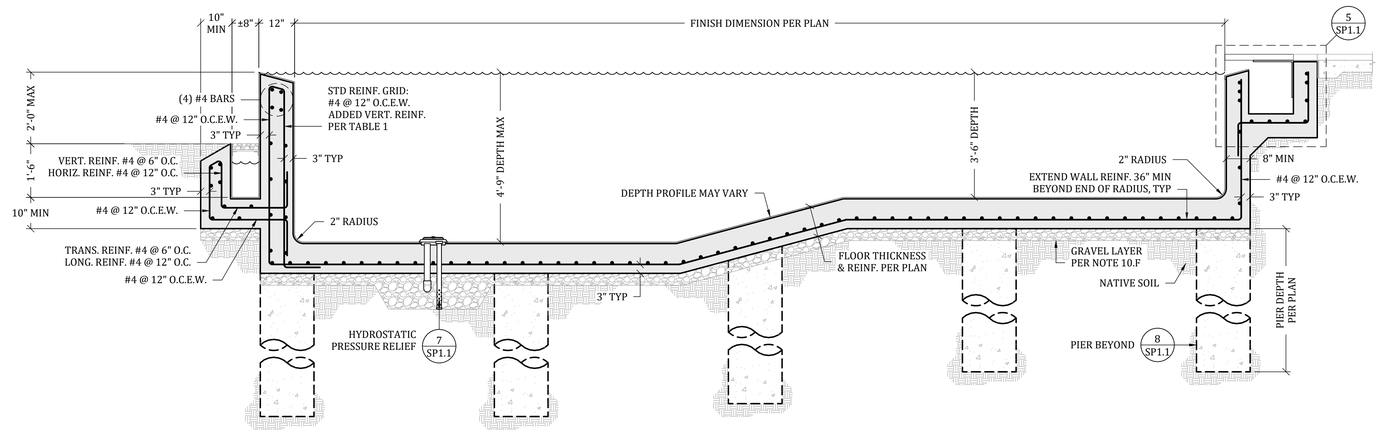


1 POOL SECTION

SCALE: 1/2" = 1'-0"

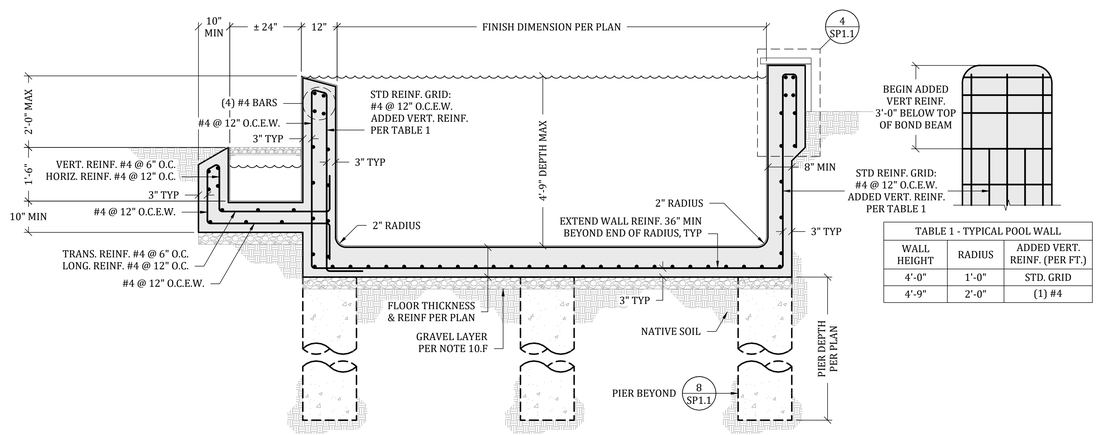
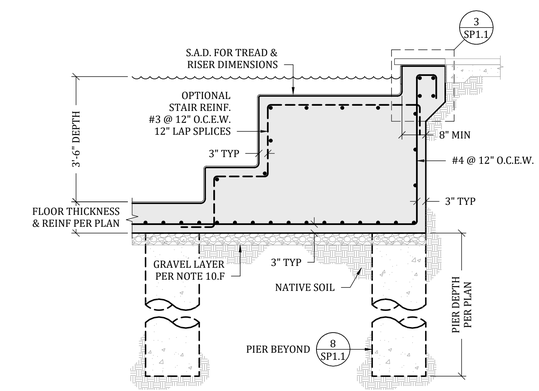


TABLE 1 - TYPICAL POOL WALL		
WALL HEIGHT	RADIUS	ADDED VERT. REINF. (PER FT.)
4'-0"	1'-0"	STD. GRID
4'-9"	2'-0"	(1) #4

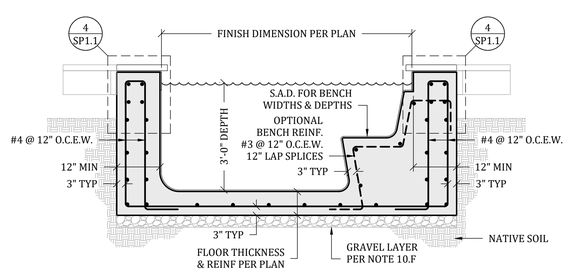
2 POOL SECTION

SCALE: 1/2" = 1'-0"



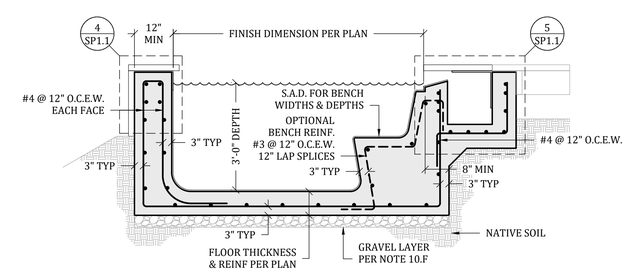
3 POOL STAIR ENTRY

SCALE: 1/2" = 1'-0"



4 SPA SECTION

SCALE: 1/2" = 1'-0"



5 SPA SECTION

SCALE: 1/2" = 1'-0"

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POOL & SPA SECTIONS

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